27th

le Chéribourg
September 2-4, 1995

Annual Meeting

Canadian Association of Paediatric Surgeons
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Abstracts #1-61
Twenty-seventh Annual Meeting

CANADIAN ASSOCIATION of
PAEDIATRIC SURGEONS

Saturday-Monday, September 2-4, 1995
le Chéribourg
Salon Memphrémagog
Magog, Quebec
J1X 3WP
tel. 819 843-3308
fax 819 843-2639
toll free 800 567-6132

please bring this program to the meeting
### SCIENTIFIC and SOCIAL PROGRAM

**Friday, 1st September, 1995**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00-17:00</td>
<td>Meeting of CAPS Council, room Grande Coupée</td>
</tr>
<tr>
<td>16:00</td>
<td>Bus leaves Hôpital Sainte-Justine for Chéribourg</td>
</tr>
<tr>
<td>17:00</td>
<td>Registration</td>
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<table>
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<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>19:00-22:00</td>
<td>Welcoming Reception, Orford Arts Centre</td>
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**Saturday, 2nd September, 1995**

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<tr>
<td>07:00-17:00</td>
<td>Registration</td>
</tr>
<tr>
<td>07:00-08:00</td>
<td>Continental Breakfast</td>
</tr>
<tr>
<td>07:45</td>
<td>Welcome and Opening Ceremony</td>
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<tr>
<td></td>
<td>Salon Memphrémagog</td>
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<tr>
<td>08:00-10:00</td>
<td>Scientific Session One</td>
</tr>
<tr>
<td>10:00-10:30</td>
<td>Break</td>
</tr>
<tr>
<td>10:30-11:25</td>
<td>Scientific Session Two</td>
</tr>
<tr>
<td>11:30-12:30</td>
<td>Fred MacLeod Lecture</td>
</tr>
<tr>
<td>12:30-13:45</td>
<td>Lunch</td>
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<tr>
<td>13:45-15:30</td>
<td>Scientific Session Three</td>
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<tr>
<td>15:30-16:00</td>
<td>Break</td>
</tr>
<tr>
<td>16:00-17:15</td>
<td>Scientific Session Four</td>
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**Sunday, 3rd September, 1995**

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<td>Registration</td>
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<tr>
<td>07:00-08:00</td>
<td>Continental Breakfast</td>
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<tr>
<td>08:00-10:00</td>
<td>Scientific Session Five</td>
</tr>
<tr>
<td>10:00-10:30</td>
<td>Break</td>
</tr>
<tr>
<td>10:30-12:30</td>
<td>Scientific Session Six</td>
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<tr>
<td>12:30-14:30</td>
<td>Lunch and CAPS Members' Annual Business Meeting</td>
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<tr>
<td></td>
<td>Remainder of afternoon is free</td>
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<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>19:00</td>
<td>Presidential Reception</td>
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<tr>
<td>19:30</td>
<td>Presidential Dinner</td>
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<td></td>
<td>Black Tie preferred but not essential</td>
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**Monday, 4th September, 1995**

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<td>07:00-12:15</td>
<td>Registration</td>
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<tr>
<td>07:00-08:00</td>
<td>Continental Breakfast</td>
</tr>
<tr>
<td>08:00-09:50</td>
<td>Scientific Session Seven</td>
</tr>
<tr>
<td>10:00-10:30</td>
<td>Break</td>
</tr>
<tr>
<td>10:30-12:00</td>
<td>Scientific Session Eight</td>
</tr>
<tr>
<td>12:00</td>
<td>Meeting Adjourns and lunch</td>
</tr>
<tr>
<td>14:15</td>
<td>Bus returns to the Montreal Airports</td>
</tr>
<tr>
<td></td>
<td>Your flight should depart after 17:00 if you are taking the bus; book bus on Registration form.</td>
</tr>
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</table>
PRESIDENT'S WELCOME

Bienvenue! Welcome! Our annual meeting is a time of good fellowship, of renewing acquaintances, welcoming new members and guests, socializing, enjoying the planned social events, and most important, the opportunity to exchange clinical and scientific information at both formal and informal gatherings.

The local arrangements organized by Salam and Diane Yazbeck ensures an enjoyable social time together. We look with anticipation to the excellent program selected by Geoff Blair and the Program Committee members.

As a clinical Pediatric Surgeon in a small population based practice, I have looked forward each and every year for the past 27 years to our CAPS reunion.

Enjoy! Participate! Join in the fun and the information exchange.

A.W. Juckes MD
President
Canadian Association of Paediatric Surgeons
ABOUT THE
CANADIAN ASSOCIATION OF PAEDIATRIC SURGEONS

The Canadian Association of Paediatric Surgeons was granted its charter in 1967. Its main aim is to improve the surgical care of infants and children in Canada.

There are three main areas, diagnosis, treatment and research, which are of special concern to the members.

Infants Born With Congenital Abnormalities

Even though the majority of newborn infants who have severe congenital abnormalities can be treated successfully by a surgical operation, often the condition is either not recognized, or if it is diagnosed, the local physician may be unaware of the possibilities for surgical cure. In this situation most of these babies die, or some survive to live a life crippled by their deformity.

Malignancy in Childhood

Cancer is the second most common cause of death in childhood. Surgical removal of the tumor, combined with x-ray, radiation and chemotherapy provided by an aggressive team utilizing new techniques can achieve a cure in over 50% of these patients.

Trauma

Finally, the number one killer of children in North America is accidents. Here again, with modern methods of first aid, transportation, resuscitation, intensive care, and specialized surgical team effort, many of these seriously injured children can be saved.

Education Program

To accomplish an improvement in surgical care for babies and children, the Canadian Association of Paediatric Surgeons has launched an educational program for doctors, nurses and others working in the paediatric health field. To support this program, an educational fund has been established.
The Education Fund underwrites the visit of a distinguished paediatric surgeon each year to visit and teach at medical centers in Canada, provides a speaker on Paediatric Surgery at the Annual Meeting of the Canadian Paediatric Society, enables the Association to sponsor a session of scientific papers at the Meeting of the Royal College of Physicians and Surgeons of Canada and supports the Annual Scientific Meeting of the Association. Financing for the Education Fund has been obtained from individuals and groups, both medical and non-medical, interested in the surgical care of children, and from foundations. It is the intent of the Association to increase the capital funding to a level where the annual interest will fully support the Education Program. The Education Fund of the Canadian Association of Paediatric Surgeons is registered with the Federal Government and all contributions are fully tax deductible. The Fund is audited annually.

Donations may be sent to:
Ray Postuma , MD.
C.A.P.S. Secretary/Treasurer
AE 201-840 Sherbrook St
Winnipeg, MB, R3A 1S1
Canada
Telephone 1-204-787-4203
Fax: 1-204-787-4618
E-mail: capsule@caps.ca
CAPS COUNCIL 1994-95
EXECUTIVE

President: A. Juckes  Director (3rd year): A. Bensoussan
Past-President: S. Ein  Director (2nd year): J-M Laberge
President-Elect: J.G. Desjardins  Director (1st year): J.C. Donald
Secretary/Treas.: R. Postuma  Secr. Treas. elect: S. Yazbeck

COMMITTEES  as of 95.5.16

1 Archives:
  B. Shandling
  S. Ein
2 Bilingual:
  P. Soucy
  R. Cloutier
  R. Eccles
  S. Mercer
  S. Yazbeck
3 Congenital Anomalies:
  M. Di Lorenzo
  D. Price
  P. Soucy
4 Constitution and Bylaws:
  D. Gilvan
  G. Fraser
  P. Soucy
5 Education:
  J-M. Laberge
  M. Evans
  H. Lau
  A. Winthrop
  P. Wolfson
  A. Wong
6 Ethics, Moral and Legal Issues:
  B. Shandling
  T.J. Baesl
  J. Desjardins
  R. Sonino
7 Finance:
  D. Girvan
  A. Bensoussan
  S. Ein
  A. Juckes
  Treasurer (R. Postuma)
8 Future Meetings:
  President (A. Juckes)
  Secretary (R. Postuma)
  Local arrangements :
  S. Yazbeck 1995
  M. Giacomantonio 1996
  A. Wong 1997
9 Liaison with American College:
  B. Shandling
10 Liaison with Trauma Assoc. of Canada:
  G. Blair
11 Liaison with World Federation:
  Secr. Treas., R. Postuma
12 Membership and Credentials:
  J. Desjardins
  Secretary (R. Postuma)
  H. Blanchard
  LA. Scott
  N. Wiseman
13 Nominating:
  S. Ein(Past President)
  A. Bensoussan (Director)
  3 Members-at-Large:
  J. Bass
  S. Chou
  M. Giacomantonio
14 Program:
  G. Blair
  D. Girvan
  A. Hayashi
  K. Heiss
  J-M. Laberge
  R. Pearl
15 Publication:
  S. Yazbeck
  A. Bensoussan
  G. Blair
  E. Grisoni
  I. Kransna
  P. Soucy
16 Research:
  R. Cloutier
  J-M. Laberge
  J. Langer
  R. Superina
7 Specialty Committee for Pediatric General Surgery of the Royal

underlined name indicates chair of committee
Please contact the President or Secretary-treasurer if you are able to serve on any of the above committees or if corrections are necessary in the above information (Secretary: tel.(204)787-4203 or fax: 787-4618 or e-mail: capsule@caps.ca)
## CANADIAN ASSOCIATION OF PAEDIATRIC SURGEONS

### PRESIDENTS

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>City</th>
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<tbody>
<tr>
<td>1967-1973</td>
<td>Harvey Beardmore</td>
<td>Montreal</td>
</tr>
<tr>
<td>1973-1975</td>
<td>Colin Ferguson*</td>
<td>Winnipeg</td>
</tr>
<tr>
<td>1975-1977</td>
<td>Jim Simpson*</td>
<td>Toronto</td>
</tr>
<tr>
<td>1977-1979</td>
<td>Sam Kling</td>
<td>Edmonton</td>
</tr>
<tr>
<td>1979-1981</td>
<td>Pierre Paul Collin</td>
<td>Montreal</td>
</tr>
<tr>
<td>1981-1983</td>
<td>Barry Shandling</td>
<td>Toronto</td>
</tr>
<tr>
<td>1983-1985</td>
<td>Gordon Cameron</td>
<td>Hamilton</td>
</tr>
<tr>
<td>1985-1987</td>
<td>Stanley Mercer</td>
<td>Ottawa</td>
</tr>
<tr>
<td>1987-1989</td>
<td>Alex Gillis</td>
<td>Halifax</td>
</tr>
<tr>
<td>1991-1993</td>
<td>Sigmund Ein</td>
<td>Toronto</td>
</tr>
<tr>
<td>1993-1995</td>
<td>Angus Juckes</td>
<td>Regina</td>
</tr>
<tr>
<td>1995-</td>
<td>Jean Desjardins</td>
<td>Montreal</td>
</tr>
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* indicates deceased

### SECRETARY-TREASURERS

<table>
<thead>
<tr>
<th>Year</th>
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<th>City</th>
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<tbody>
<tr>
<td>1967-1974</td>
<td>Barry Shandling</td>
<td>Toronto</td>
</tr>
<tr>
<td>1974-1978</td>
<td>Gordon Cameron</td>
<td>Hamilton</td>
</tr>
<tr>
<td>1978-1983</td>
<td>Frank Guttman</td>
<td>Montreal</td>
</tr>
<tr>
<td>1989-1995</td>
<td>Ray Postuma</td>
<td>Winnipeg</td>
</tr>
<tr>
<td>1995-</td>
<td>Salam Yazbeck</td>
<td>Montreal</td>
</tr>
</tbody>
</table>
FOUNDING MEMBERS

CANADIAN ASSOCIATION OF PAEDIATRIC SURGEONS

Michael ALLEN
Phillip ASHMORE
Harvey BEARDMORE
Gordon CAMERON
Pierre-Paul COLLIN
Jean DESJARDINS
Jacques DUCHARME
Frederick DUVAL
James FALLIS
Colin FERGUSON*
Alex GILLIS
Frank GUTTMAN
Angus JUCKES
Gordon KARN*
Richard KENNEDY
Murray KLIJN
Samuel KLING
Donald MARSHALL
Russell MARSHALL
Stanley MERCER
David MURPHY
Herbert OWEN*
Barry SHANDING
Israel SHRAGOVOITCH*
James SIMPSON*
Clinton STEPHENS*
Jacques TURCOT*

* indicates deceased

1st ANNUAL MEETING was held January 22, 1969 in VANCOUVER
FUTURE C.A.P.S MEETINGS:

28 th ANNUAL MEETING:
Sunday, August 18-20, 1996,
the Sheraton, HALIFAX

29 th ANNUAL MEETING:
Friday, October 3-7, 1997
The Rimrock Hotel, BANFF

30 th ANNUAL MEETING:
Friday, SEPT. 25-27, 1998,
TORONTO*

31 th ANNUAL MEETING:
Friday, SEPT. 24-26, 1999
MONTREAL*

32 th ANNUAL MEETING:
Friday, SEPT. 22-24, 2000
OTTAWA*

*dates and locations are those of the Royal College Annual Meeting
CAPS dates and location to be determined
IMPORTANT ANNOUNCEMENT
FROM THE PUBLICATION COMMITTEE

RE: 1996 PAPERS
28th Annual Meeting in
HALIFAX
August 18-20, 1996

Papers presented at the 1996 annual CAPS meeting may be selected for publication in the Journal of Pediatric Surgery. The publication committee requires SIX (6) copies of the manuscript to be submitted FOUR WEEKS before presentation to:

Chairman, Publication Committee
c/o Dr. SALAM YAZBECK
Canadian Association of Paediatric Surgeons
Hôpital Ste. Justine
3175 Côte Ste. Catherine
Montreal, PQ, H3T 1C5

All manuscripts must adhere strictly to the "Information for Contributors" which appears in the Journal of Pediatric Surgery. Failure to do so will of necessity invalidate consideration of the manuscript for publication.
Dr. J. A. Tovar

We are very pleased that Dr. Juan A. Tovar accepted our invitation to be the Guest Lecturer for this Annual Meeting of CAPS. Dr. Tovar is no stranger to Pediatric Surgeons, particularly those in Europe and South America.

Juan is a cum laude graduate from the Facultad de Medicina of the Universidad de Salamanca, his hometown. His Ph.D. work on Osteoporosis in Children was carried out at the University of Valladolid, again cum laude. Dr. Tovar's pediatric and pediatric training took place at his home university, then in Paris under Professors Fevre and Pellerin, at la Paz Children's Hospital in Madrid and at the Children's Hospital of Los Angeles. His surgical appointments include chief of pediatric surgery in San Sebastian, 1977-1991 and since 1992, chief of pediatric surgery at La Paz Children's Hospital in Madrid. Professor Tovar's teaching appointments include the
University of Valladolid, the University of the Basque Country and the Autonomous University of Madrid where currently he is Professor of Pediatrics and Surgery. Dr. Tovar's CV includes 71 international and 146 national publications, 25 book chapters and 26 Research topics. His areas of publication include appendicitis, rectal prolapse, teratoma, gastroesophageal reflux and pH studies, pyloric stenosis, tracheoesophageal fistula, Hirschsprung disease, diaphragmatic and inguinal herniae, anorectal anomalies, neurofibromatosis, cryptorchidism, omphalocele, pancreatic adenoma, neuroblastoma, liver transplantation and biliary atresia.

His areas of experimental research include osteoporosis, parenteral nutrition, the chick embryo model for investigating spina bifida, intestinal atresia, gastroschisis, nutrition, alpha-fetoprotein, the rat model for investigating diaphragmatic hernia and its effect on lung development and intestinal malrotation, neural tube defects, short bowel syndrome, nutrition and experimental esophagitis. Other areas of research include computer assisted diagnosis of the acute abdomen and pH - manometric studies in gastroesophageal reflux and gastrointestinal motility.

Dr. Tovar is member of national and international societies and editorial boards in pediatrics and pediatric surgery.

Dr. Tovar will be the Visiting Professor to the Pediatric Surgical Centres in Toronto, Ottawa, Quebec and Montreal before the meeting and will be accompanied by his spouse, Annick. The Tovars have two children, Daniel and Clara. It's indeed an honor to have Dr. Tovar as the 1995 CAPS Guest Lecturer. Please join us in welcoming the Tovars to the CAPS "fold"!

CAPS is also pleased to acknowledge that

**Dr. J. A. Tovar**  
is the  
**Speaker**  
of the  
**Royal College of Physicians and Surgeons of Canada**
RESIDENT PAPERS

The papers presented by Surgical Residents are adjudicated by a panel of members from the Publication and/or Program Committees. There are two award categories: the best Clinical paper and the best Experimental paper. Selection will be made only from the Original Papers Category. Each award is $250. The Program Committee normally tries to schedule the Resident papers during the first two days of the meeting to enable the awarding of the Resident Prizes during the Presidential Dinner.

WINNERS OF THE 1994 RESIDENT BEST PAPER AWARDS:

Best Clinical Paper: Dr. J. F. Bealer
for the paper:
"THE INCIDENCE AND SPECTRUM OF NEUROLOGIC INJURY FOLLOWING OPEN FETAL SURGERY FOR CONGENITAL ANOMALIES"
John F Bealer, Erik D Skarsgard, Walter E Finkbeiner, N Scott Adzick, Michael R Harrison, The Fetal Treatment Center, USCF, San Francisco, USA

Best Experimental Paper: Dr. D. Major
for the paper:
"COMBINED VENTILATION AND PERFLUOROCHEMICAL (PFC) TRACHEAL INSTILLATION AS AN ALTERNATIVE TREATMENT FOR NEAR-DEATH CONGENITAL DIAPHRAGMATIC HERNIA"
D Major, M Cadenas, R Cloutier, L Fournier, TH Shaffer, MR Wolfson
Unité de recherche en pédiatrie, Centre Hospitalier de l'Université Laval, Saint-Foy, Québec.
Temple University School of Medicine, Philadelphia, USA

Congratulations Dr. Bealer and Dr. Major !!!

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THE COAT OF ARMS
OF THE
CANADIAN ASSOCIATION OF PAEDIATRIC SURGEONS
L'ASSOCIATION CANADIENNE DE CHIRURGIE PÉDIATRIQUE

Heraldic Blazon

Per pale gules and purpure, dexter a scalpel erect entwined
by a serpent, sinister a child standing, all argent.
Crest: On three maple leaves slipped gules and backed purpure, the
date 1967.
Motto: "Je le pensay, Dieu le guarit."

Description

The red and purple of the arms are also the colours of the
Royal College of Physicians and Surgeons of Canada and represent
the blood met in surgery - arterial and venous. The scalpel with the
healing serpent of Æsculapius, and the figure of a well child combine
to symbolize the practice of Paediatric Surgery.
The crest is the Canadian maple leaf and the founding date of
the Association (1967).
The Motto is a quotation from Ambroise Pare, a father of
modern surgery. The sixteenth-century French translates, "I treated
him, God cured him."

INSTRUCTIONS for the SCIENTIFIC PROGRAM
abbreviations used in following pages:

O-Original, 10 minute paper, followed by 5 minute discussion
R-Resident paper presentation, eligible for Resident Paper Prize
   Competition
C-Case presentation, Special technique or Methods; 5 minute
   presentation followed by 5 minute discussion
Case Presentation; not eligible for Resident Paper Prize Competition
Underlined name indicates the Presenter

Authors are reminded to submit SIX copies of their paper
FOUR weeks before the meeting

to :
Chair, CAPS Publication Committee
c/o Dr. Salam Yazbeck
Hôpital Ste. Justine
3175 Cote Ste. Catherine
Montreal, PQ, H3T 1C5

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programme détaillé

programme schedule

Saturday-Monday, September 2-4, 1995

le Chéribourg

Salon Memphrémagog
## Scientific Program
### Saturday, September 2, 1995
#### le Chéribourg

**07:00-08:00**
- Continental Breakfast

**07:45**
- Welcome and Opening Ceremony
  - President, Dr. Angus W. Juckes
  - Salon Memphrémagog

**08:00-10:00**
- **SCIENTIFIC SESSION ONE**
  - Co-Chairmen / Les Co-Présidents:
    - Dr. G. Blair and Dr. M. Di Lorenzo

<table>
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<tr>
<th>#</th>
<th>CL.</th>
<th>TIME</th>
<th>TITLES/AUTHORS/CENTRE</th>
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</table>
| 1  | OR  | 08:00-08:15 Sat., Sep 2 | NONSPECIFIC ABDOMINAL COMPLAINTS IN THE PEDIATRIC POPULATION: THE QUEST FOR HELICOBACTER PYLORI  
N.R. Yoshida, E. Webber, M. Giacomantonio  
Izaak Walton Killam Children's Hospital, Halifax, NS |
| 2  | OR  | 08:15-08:30 Sat., Sep 2 | CHANGING PATTERNS OF PAEDIATRIC PEPTIC ULCER DISEASE  
K. Azarow, P. Kim, B. Shandling, S. Ein  
The Hospital for Sick Children, University of Toronto, Toronto, ON |
| 3  | OR  | 08:30-08:45 Sat., Sep 2 | GASTROINTESTINAL INJURY IN CHILDREN FOLLOWING BLUNT ABDOMINAL TRAUMA  
R.S. Ronson, M.C. Stovroff, K.F. Heiss, R.R. Ricketts  
Egleston Children's Hospital at Emory University, Atlanta, GA |
| 4  | OR  | 08:45-09:00 Sat., Sep 2 | A REVIEW OF CT SCAN IN THE DIAGNOSIS OF INTESTINAL AND MESENTERIC INJURY IN PEDIATRIC BLUNT ABDOMINAL TRAUMA  
J. Graham, A. Wong  
Alberta Children's Hospital, University of Calgary, Calgary, AB |
| 5  | CR  | 09:00-09:10 Sat., Sep 2 | TRAUMATIC GASTRIC TRANSECTION COMPLICATED BY TRAUMATIC VAGOTOMY - A CASE REPORT  
M.H. Kimmings, D. Ponnani, I. Kamal  
Kingston General Hospital, Kingston, ON |
| 6  | CR  | 09:10-09:20 Sat., Sep 2 | THE SPLIT NOTOCHORD SYNDROME  
THERAPEUTIC OPTIONS  
S. Al Shanafey, A. Al-Rabeaah, A. Al-Bassam, D.A. Gillis, M. Hassonah  
King Faisal Specialist Hospital and Research Center, Riyadh, Saudi Arabia |
| 7  | CR  | 09:20-09:30 Sat., Sep 2 | THE MANAGEMENT OF CHOLEDOCHOLITHIASIS IN THE PEDIATRIC POPULATION  
E. Hwang, D. Wesson  
Department of Surgery, Cornell University Medical College and the New York Hospital, New York, NY |
| 8  | CR  | 09:30-09:40 Sat., Sep 2 | HIRSCHSPRUNG'S DISEASE, IMPERFORATE ANUS AND DOWN'S SYNDROME  
H. Flageole, A. Fecteau, J-M Laberge, F.M. Gutman  
Montreal Children's Hospital, Montreal, QC |
| 9  | CR  | 09:40-09:50 Sat., Sep 2 | EXTENDED HIRSCHSPRUNG'S DISEASE: A REPORT OF 3 CASES  
The Montreal Children's Hospital, Montreal, QC |
| 10 | C   | 09:50-10:00 Sat., Sep 2 | HYDROPS FETALIS AND PULMONARY SEQUESTRATION  
M.G. Evans  
Hospital of Western Ontario, University of Western Ontario, London, ON |

### 10:00-10:30 Refreshment break

O=original, 10 minute paper; R=Resident paper; C=5 minute case
<table>
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<th>CL</th>
<th>TIME</th>
<th>TITLES/AUTHORS/CENTRE</th>
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<tr>
<td>11</td>
<td>O</td>
<td>1030-1045</td>
<td>OPTIMAL SURGICAL MANAGEMENT OF PATENT DUCTUS ARTERIOSUS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sat., Sep 2</td>
<td>T.L. Forbes, M.G. Evans</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Children's Hospital of Western Ontario, University of Western Ontario, London, ON</td>
</tr>
<tr>
<td>12</td>
<td>C</td>
<td>1045-1055</td>
<td>CHALLENGING THE EMBRYOGENESIS OF CLOACAL EXSTROPHY</td>
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<td>Sat., Sep 2</td>
<td>S.W. Bruch, N.S. Adzick, R.B. Goldstein*</td>
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<td>M.R. Harrison, The Fetal Treatment Center, Dept. of Radiology, UCSF, San Francisco, CA</td>
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<td>13</td>
<td>O</td>
<td>1055-1110</td>
<td>MANAGEMENT OF THE GASTROINTESTINAL TRACT AND NUTRITION IN</td>
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<td>PATIENTS WITH CLOACAL EXSTROPHY</td>
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<td>A. Davidoff, A. Hebra, D. Balmer, J. Templeton, L. Schnaufer</td>
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<td>Departments of Surgery and Nutrition Services, Children's Hospital of Philadelphia, PA</td>
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<td>14</td>
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<td>1110-1125</td>
<td>IS EARLY RESPONSE TO PORTOCENTESIS PREDICTIVE OF LONG-TERM OUTCOME</td>
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<td>N.L. Yanchar, A.M.J. Shapiro, D.L. Sigalet</td>
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<td>University of Alberta, Edmonton, AB</td>
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**Fred MacLeod Lecture**  
**Dr. J.A. Tovar**  
"Fetal Rat Models of Surgical Disease"

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<td>15</td>
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<td>1345-1400</td>
<td>INDENTIFICATION OF RISK FACTORS CHARACTERISTIC AND PREDICTIVE OF COLONIC NECROTISING ENTEROCOLITIS (NEC)</td>
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<td>Sat., Sep 2</td>
<td>J. Baerg, M. Giacomantonio, P. Pahwa, L. Tan, R. Keith University of Saskatchewan, Saskatoon, SK and Dalhousie University, Halifax, NS</td>
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<tr>
<td>16</td>
<td>O</td>
<td>1400-1415</td>
<td>DIAGNOSTIC LAPAROSCOPY IN CHILDHOOD CROHN'S DISEASE</td>
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<td>Sat., Sep 2</td>
<td>G.G. Miller, G.K. Blair, J.J. Murphy Department of Surgery, University of British Columbia's Children Hospital, Vancouver, BC</td>
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<td>17</td>
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<td>1415-1430</td>
<td>NOSOCOMIAL INFECTIONS IN THE GENERAL SURGICAL NEONATE</td>
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<td>Sat., Sep 2</td>
<td>A. Sandler, S. Olde Damuik, R. Gold, R. Filler, R. Pearl The Hospital for Sick Children, University of Toronto, Toronto, ON</td>
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<td>18</td>
<td>O</td>
<td>1430-1445</td>
<td>GERMINE MUTATIONS OF THE RET PROTO-ONCOGENE IN PEDIGREE WITH MEN TYPE 2A: DNA ANALYSIS AND ITS IMPLICATIONS FOR PEDIATRIC SURGERY</td>
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<td>Sat., Sep 2</td>
<td>T. Shimotake, N. Iwai, J. Yanagihara, K. Inoue, J. Inazawa, I. Nishino Division of Surgery, Children's Research Hospital, *Dept. of Hygiene, Kyoto prefectural University of Medicine, Kyoto, Japan **Dept. of Medical Genetics, Biomedical Research Center, Osaka University Medical School, Osaka, Japan</td>
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<tr>
<td>19</td>
<td>O</td>
<td>1445-1500</td>
<td>SURGICAL SEQUELAE OF CONGENITAL PANCREATICO-BILIARY ANOMALIES</td>
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<td>Sat., Sep 2</td>
<td>N. Spigland, R. Greco UMDNJ-Robert Wood Johnson Medical School, New Brunswick, NJ</td>
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<tr>
<td>20</td>
<td>C</td>
<td>1500-1510</td>
<td>REPAIR OF CONGENITAL BRONCHIOBILIARY FISTULA: DIAGNOSTIC AND SURGICAL TECHNIQUE</td>
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<td>Sat., Sep 2</td>
<td>S. Egardi, M. Krishnamoorthy, C. Yee, H. Applebaum Departments of Surgery and Nuclear Medicine, Kaiser Permanente Medical Center, Los Angeles, CA</td>
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<td>21</td>
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<td>1510-1520</td>
<td>COMPLICATIONS OF SURGICAL JEJUNOSTOMY TUBES IN CHILDREN</td>
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<td>P. Soucy, D. Smith Children's Hospital of Eastern Ontario, Ottawa, ON</td>
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<td>22</td>
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<td>1520-1530</td>
<td>ROUX-EN-Y JEJUNOSTOMY IN PEDIATRIC PATIENTS</td>
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<td>Sat., Sep 2</td>
<td>N.R. Yoshida, E. Webber, D.A. Gillis, M. Giacomantonio Izaak Walton Killam Children's Hospital, Halifax, NS</td>
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15:30-16:00 Refreshment break

O=original, 10 minute paper; R=Resident paper; C=5 minute case
# | CL. | TIME | TITLES/AUTHORS/CENTRE
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23 | O | 1600-1615 Sat. Sep 2 | ABNORMAL INTERNAL ANAL SPHINCTER INNERVATION IN PATIENTS WITH HIRSCHSPRUNG'S DISEASE AND ALLIED DISORDERS  
H. Kobayashi, H. Hirakawa, P. Puri  
Children's Research Centre, Our Lady's Hospital for Sick Children, Crumlin, Ireland
24 | O | 1615-1630 Sat. Sep 2 | NITRIC OXIDE SYNTHESIS INHIBITOR ACTION ON THE RABBIT PYLORIC MUSCLE  
E. Grisendi, D. Dusleag, D. Super  
Case Western Reserve, University School of Medicine, Cleveland, Ohio
25 | O | 1630-1645 Sat. Sep 2 | CONGENITAL CYSTIC ADENOMATOID MALFORMATION (CCAM) IN THE FETUS: NATURAL HISTORY AND PREDICTORS OF OUTCOME  
J.A. Miller, J.E. Courtville, J.C. Langer  
Depts. of Surgery and Obstetrics/Gynecology, Washington University, St. Louis, MO
26 | C | 1645-1655 Sat. Sep 2 | POSTPNEUMONECTOMY SYNDROME IN CHILDREN: USE OF INTRATHORACIC TISSUE EXPANDER  
J.B. Pietsch, P.W. Campbell  
Vanderbilt University, Nashville, TN
27 | C | 1655-1705 Sat. Sep 2 | MULTIPLE ENTERO-ENTERO FISTULAE: AN UNUSUAL COMPLICATION OF HENOCH-SCHÖNLEIN PURPURA  
K.W. Gow, J.J. Murphy, G.K. Blair  
British Columbia's Children's Hospital, University of British Columbia, Vancouver, BC
28 | C | 1705-1715 Sat. Sep 2 | SPLANCHNIC ARTERY PSEUDONEURYSMS SECONDARY TO BLUNT ABDOMINAL TRAUMA IN CHILDREN  
K.W. Gow, J.J. Murphy, G.K. Blair  
British Columbia's Children's Hospital, University of British Columbia, Vancouver, BC

O=original, 10 minute paper; R=Resident paper; C=5 minute case
### Scientific Program
Sunday, September 3, 1995
Le Chêribourg

#### 07:00-08:00
Continental Breakfast

#### 08:00-10:00
**SCIENTIFIC SESSION FIVE**
Salon Memphrémagog

**Co-Chairmen / Les Co-Présidents:**
Dr. D. Girvan and Dr. A. Bensoussan

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| 29 | O  | 0800-0815 Sun. Sep 3 | **ANTICOAGULATION WITHOUT CATHETER REMOVAL IN CHILDREN WITH CATHETER RELATED CENTRAL VEIN THROMBOSIS**
B.D. Kenney, M. David, A.L. Bensoussan
Hôpital Sainte-Justine, Montreal, QC |
| 30 | O  | 0815-0830 Sun. Sep 3 | **THE ABDOMINAL EVALUATION FOLLOWING ACUTE CARDIORESPIRATORY COLLAPSE IN INFANTS: THE ROLE OF BEDSIDE ULTRASOUND**
K. Azarow, P. Babyn, B. Connelly, S. Shemie, S. El, R. Pearl
The Hospital for Sick Children, University of Toronto, Toronto, ON |
| 31 | O  | 0830-0845 Sun. Sep 3 | **THAL FUNDUPLICATION IN NEUROLOGICALLY HANDICAPPED CHILDREN**
V. Rashmeha, K.W. Ashcraft, R.P. Murphy, C.L. Snyder, G.K. Gittles, S.W. Bickler
The Children's Mercy Hospital, Kansas City, MO |
| 32 | O  | 0845-0900 Sun. Sep 3 | **NEUROLOGICALLY IMPAIRED CHILDREN WHO REQUIRE A GASTROSTOMY: PROPHYLACTIC ANTI-REFLUX PROCEDURE OR NOT?**
Montreal Children's Hospital, Montreal, QC |
| 33 | O  | 0900-0915 Sun. Sep 3 | **CAN CARDIAC WEIGHT PREDICT LUNG WEIGHT IN CDH?**
H.L. Karamanoukian, S.J. O'Toole, J.R. Rossman, A. Sharma, B.A. Holm, R.G. Azizkhan, P.L. Glick
Buffalo Institute of Fetal Therapy (BIFT), Depts. of Surgery, Pediatrics, and Physiology, School of Medicine and Biomedical Sciences, SUNY-AB, Buffalo, NY |
| 34 | C  | 0915-0925 Sun. Sep 3 | **THE BIANCHI PROCEDURE IN A PATIENT WITH JEJUNAL ATRESIA**
H. Flageole, V.R. Adolph, D. Sigalet, A. Fectou,
J-M Laberge
Montreal Children's Hospital, Montreal, QC |
| 35 | O  | 0925-0940 Sun. Sep 3 | **BALLOON OCCLUSION OF THE TRACHEA IN FETAL LAMBS: EFFECT OF ONE WEEK OBSTRUCTION ON LUNG GROWTH**
G. Ghitiu, J-M Laberge, M.F. Chen, A. Manika, E. Hashin
Montreal Children's Hospital, Montreal, QC |
| 36 | C  | 0940-0950 Sun. Sep 3 | **THE OOPS PROCEDURE (OPERATION ON PLACENTAL SUPPORT): IN UTERO AIRWAY MANAGEMENT OF THE FETUS WITH PRENATALLY DIAGNOSED TRACHEAL OBSTRUCTION**
E.D. Skarsgard, U. Chikara, E. Krane, E.T. Riley
Division of Pediatric Surgery, Dept. of Surgery, Dept. of Obstetrics and Gynecology, and Dept. of Anesthesia, Stanford University School of Medicine, Stanford, CA |
| 37 | C  | 0950-1000 Sun. Sep 3 | **HARLEQUIN ENTERAL GENITALIA AND ITS MANAGEMENT**
S. Al-Jadran, S. Chou
Children's Hospital of Eastern Ontario, Ottawa, ON |

**10:15-10:45** Refreshment break

O=original, 10 minute paper; R=Resident paper; C=5 minute case
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<tr>
<td>38</td>
<td>OR</td>
<td>1030-1045</td>
<td>UNDER WATER - ND: YAG LASER - COAGULATION OF BLOOD VESSELS IN THE RAT MODEL</td>
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<td>Sun. Sep 3</td>
<td>V. Evard, P. Van Ballaer, J. Deprest, T. Lerut, K. Vandenberghhe, I. Brosens</td>
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<td>Center for Surgical Technologies, Faculty of Medicine, Katholieke University Leuven, Belgium</td>
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<td>39</td>
<td>OR</td>
<td>1045-1100</td>
<td>PYLORIC STENOSIS IN THE AGE OF ULTRASONOGRAPHY: FADING SKILLS, BETTER PATIENTS?</td>
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<td>Division of Pediatric Surgery, Hasbro Children’s Hospital, Brown University School of Medicine, Providence, RI</td>
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<td>1100-1110</td>
<td>BALLOON PYLOROPLASTY IN CHILDREN WITH DELAYED GASTRIC EMPTYING</td>
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<td>Sun. Sep 3</td>
<td>P.L. Skarsgard, G.K. Blair, G.Culham</td>
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<td>Department of Surgery &amp; Radiology, British Columbia’s Children’s Hospital, Vancouver, BC</td>
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<td>OR</td>
<td>1110-1125</td>
<td>RECURRENT INTUSSUSCEPTION: SAFE USE OF BARIUM ENEMA REDUCTION</td>
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<td>Montreal Children’s Hospital, Montreal, QC</td>
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<td>O</td>
<td>1125-1140</td>
<td>CHROMOSOMAL ANOMALIES AND SURVIVAL IN NEWBORN WITH OMPHALOCELE</td>
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<td>Sun. Sep 3</td>
<td>D. St-Vil, K.S. Shaw, M. Lallier, S. Yazbeck, M. Di Lorenzo, A. Grignon, H. Blanchard</td>
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<td>43</td>
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<td>1140-1155</td>
<td>RESULTS OF LIVER TRANSPLANTATION IN CHILDREN WITH UNRESECTABLE LIVER TUMOURS</td>
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<td>R. Suprina, R. Billik</td>
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<td>Department of Surgery, Hospital for Sick Children, Toronto, ON</td>
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<td>44</td>
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<td>1155-1205</td>
<td>ORTHOTOPIC LIVER TRANSPLANT FOR FIBROHISTIOCYTIC PSEUDOTUMOR OF THE LIVER HILUM</td>
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<td>Department of Surgery, The Children’s Hospital of Philadelphia and the University of Pennsylvania School of Medicine, Philadelphia, PA</td>
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<td>INFANTILE FIBROSARCOMA: A RARE TUMOR</td>
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<td>1215-1230</td>
<td>LEFT VERTEBRAL ARTERY FLOW INVERSION AFTER COARCTATION REPAIR</td>
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<td>S. Vohecky, J. Dubois, D. Johnson, A. Fournier, C. Chartrand</td>
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<td>Cardiac Surgery and Radiology Dept., Ste-Justine Hôpital, University of Montreal, Montreal, QC</td>
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| 47 | O   | 0800-0815  | IS SINGLE STAGE ENDORECTAL PULL-THROUGH SAFE AND DESIRABLE?? J.T. Momoh, J. Ige  
Jos University Teaching Hospital, Jos, Nigeria                                           |
| 48 | O   | 0815-0830  | INTERNAL SPHINCTEROTOMY IN POST-PULL-THROUGH HIRSCHSPRUNG’S DISEASE  
G.K. Blair, J.J. Murphy, G.C. Fraser  
Division of Pediatric General Surgery, British Columbia’s Children’s Hospital, Vancouver, BC |
| 49 | O   | 0830-0845  | THE EFFECT OF ELECTROMAGNETIC FIELDS STIMULATION ON LIVER REGENERATION INHIBITED WITH ACTINOMYCINE-D FOLLOWING 70% HEPATECTOMY IN RATS  
Department of Pediatric Surgery, Ankara University School of Medicine, Dikmen, 06100 Ankara / Turkey |
| 50 | O   | 0845-0900  | HEPATIC OVEREXPRESSION OF MCH CLASS II ANTIGENS AND MACROPHAGE ASSOCIATED ANTIGENS (CD68) IN PATIENTS WITH BILIARY ATRESIA WITH BAD PROGNOSIS  
H. Kobayashi, R. Surana, T. Miyano, P. Puri  
Children's Research Centre, Our Lady's Hospital for Sick Children, Crumlin, Ireland and Jutendo University School of Medicine, Tokyo, Japan |
| 51 | O   | 0900-0915  | HOW DO WE (JPS) COMPARE?: THE PEER REVIEW PROCESS (PRP) IN PEDIATRIC SURGERY (PS)  
P.L. Gluck, R.G. Azizkhan  
Children's Hospital of Buffalo, Buffalo, NY                                               |
| 52 | C   | 0915-0925  | INITIAL EXPERIENCE WITH THE LATERAL APPROACH FOR LAPAROSCOPIC SPLENECTOMY IN THE PEDIATRIC AGE GROUP  
P. Fitzgerald, J. Langer, B. Cameron, A. Park, M. Marcaccio, M. Walton, M. Skinner  
Children's Hospital at Checko-McMaster, Hamilton, ON, St. Louis  
Children's Hospital at Washington University Medical Center, St. Louis Missouri and Geisinger Clinic, Danville, PA |
| 53 | C   | 0925-0935  | USE OF DOPPLER SONOGRAPHY IN THE EVALUATION OF LIVER BLOOD FLOW DURING SILO REDUCTION OF A GIANT OMPHALOCELE  
E.D. Skarsgard, R.A. Barth*  
Division of Pediatric Surgery, Dept. of Surgery, Dept. of Radiology*, Stanford University School of Medicine, Stanford, CA |
| 54 | O   | 0935-0950  | THE NITROGEN-RAT MODEL: IS THE LUNG THE PRIMARY TARGET?  
D. Kluth, R. Hoffman, D. Tander, W. Lambrecht  
Dept. of Pediatric Surgery, University Hospital, Hamburg, Germany |

09:50-10:30  Refreshment break

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| 55 | O  | 1030-1045 Mon. Sep 4 | PHOSPHOLIPASE A2 SECRETION DURING INTESTINAL GRAFT ISCHEMIA  
R.E. Sonnino, R. Franson, A. Schrama, L. Pigatt,  
S. Buchelt  
Medical College, of Virginia, Richmond, VA |
| 56 | O  | 1045-1100 Mon. Sep 4 | IS INTERVAL APPENDECTOMY AFTER APPENDECEAL ABSCESS NECESSARY?  
S.H. Ein, B. Shandler  
Hospital for Sick Children, Toronto, ON |
| 57 | O  | 1100-1115 Mon. Sep 4 | CHEST WALL AND SPINAL DEFORMITIES IN ADULT PATIENTS WITH  
CONGENTIAL DIAPHRAGMATIC DEFECTS  
K. Vanamo, J. Peltonen, J. Rintala, H. Lindahl, I. Louhimo  
Children's Hospital, University of Helsinki, Finland |
| 58 | O  | 1115-1130 Mon. Sep 4 | NEC OR MICROCOLON OF PREMATURITY OR MECONIUM PLUG? A  
DILEMMA IN THE TINY PREMATURE INFANT  
I. Krasna, D. Rosenfeld, P. Salomo  
UMDNJ-Robert Wood Johnson Medical School, New Brunswick, NJ |
| 59 | C  | 1130-1140 Mon. Sep 4 | ANTEGRADE ENEMA THERAPY FOR CHILDREN WITH FAECAL  
INCONTINENCE - EARLY LESSONS LEARNED  
G.K. Blair, J.J. Murphy, J. Penner  
British Columbia's Children's Hospital, Vancouver, BC |
| 60 | C  | 1140-1150 Mon. Sep 4 | PARAUMBILICAL INTESTINAL REMNANT, CLOSED ABDOMINAL WALL  
AND MIDGUT LOSS IN A NEONATE  
L. Anveden-Hertzberg, K.L. Mura, M.W.L. Gauderer  
Rainbow Babies and Children's Hospital, Cleveland, OH |
| 61 | C  | 1150-1200 Mon. Sep 4 | ESOPHAGEAL ATRESIA AND TRACHEOESOPHAGEAL FISTULA  
ASSOCIATED WITH BRONCHOPULMONARY FOREGUT MALFORMATIONS  
N. Wiseman  
Pediatric Surgery, Children's Hospital, Winnipeg, MB |

12:00 Meeting Adjourns

O=original, 10 minute paper; R=Resident paper; C=5 minute case
Please note; the following papers were withdrawn on August 8, 1995 by the Authors from the program circulated in July 1995
(* indicates paper number in the original program of July 1995)

16*. **Session Three**, Saturday, 14:00-14:15; O, R
REGIONAL BLOOD FLOW RESPONSE TO EPINEPHrine INFUSION IN NORMOVOLEMIC AND HYPOVOLEMIC PIGLETS
D.L. Bigam, DW Jirsch, KJ Barrington, PY Cheung
Surgical Medical Research Institute, University of Alberta

54*. **Session Seven**, Monday, 09:35-09:45; C
SIRENOMELIA: UROLOGIC MANIFESTATIONS OF A SURVIVING MERMAID
British Columbia's Children Hospital
University of British Columbia, Vancouver

The resulting program changes affect the following papers in the final program as published herein: #16, #41, #51, #54, #59-#61
Authors of these papers are asked to note the change in their presentation time.

We regret the inconvenience caused by last minute withdrawal of papers.
ABSTRACTS

abbreviations:

O = original 10 minute paper and 5 minute discussion
R = resident paper, same time limits
C = 5 minute case/technique report and 5 minute discussion
1. Session One, Saturday, 08:00-08:15; O, R

NONSPECIFIC ABDOMINAL COMPLAINTS IN THE PEDIATRIC POPULATION: THE QUEST FOR HELICOBACTER PYLORI

N.R. Yoshida, E. Webber, M. Giacomantonio
Izaak Walton Killam Children's Hospital, Halifax, Nova Scotia

To evaluate the role of Helicobacter pylori associated gastritis as an explanation for non-specific abdominal complaints in children, the records of all children who underwent gastroscopy and biopsy for suspected Helicobacter pylori related gastritis over the past 4 years were reviewed. Thirty-seven children had non-specific abdominal complaints with Helicobacter pylori gastritis often considered a diagnosis to be excluded. Ten children had a documented history of acid-pepsin disease. Acid-pepsin disease for this report includes a documented (upper G.I. series or upper G.I. endoscopy) diagnosis of gastritis, gastric ulcer, duodenitis, or duodenal ulcer and consistent relief of symptoms with medical management. All patients had an upper G.I. endoscopy with antral biopsies looking specifically for gastritis and Helicobacter pylori infection.

One of the 37 (2.7%) children with non-specific abdominal complaints was positive for Helicobacter pylori gastritis. This 15 year old girl had a 5 year history of symptoms consistent with acid-pepsin disease with relief of abdominal pain with antacids. Three of the 10 (30%) children with documented acid-pepsin disease were positive for Helicobacter pylori infection. This significant difference (p=0.0273, Fisher's Exact Test) suggests that gastroscopy and antral biopsy for possible Helicobacter pylori infection is not helpful in the pediatric population in the work-up for non-specific abdominal complaints.

Dr. M. Giacomantonio
IWK Children's Hospital, 5850 University Ave.
Halifax, Nova Scotia  B3J 3G9
(902) 428-8114   FAX NUMBER: (902) 428-3260
CHANGING PATTERNS OF PAEDIATRIC PEPTIC ULCER DISEASE

K. Azarow, P. Kim, B. Shandling, S. Ein
The Hospital for Sick Children, University of Toronto, Toronto

Peptic ulcer disease (PUD) in children requiring surgical treatment has become rare with the availability of new medical management. A retrospective study of all patients who required operations for PUD between 1949 and 1994 was done, (n=43). These patients were classified into 3 groups: A. (n=38) pre H2 blocker era (1949-1975), B. (n=3) pre H-K ATPase blocker (1976-1988) and C. (n=2) H-K ATPase blocker era (1989-1994). Data analyzed included surgical indications, preoperative medical therapy, type of operation performed, postoperative medical therapy, and complications. The data were analyzed using Chi-Square analysis (p<.01). The indications for surgery in group A were bleeding (26), perforation (8) and obstruction (4); in group B obstruction (2) and perforation (1), and in group C obstruction (1) and bleeding (1). Obstruction as an indication for surgery was not different among the groups (p>.01). Two of the 3 patients who had surgery for obstruction in groups B and C had biopsy proven Helicobacter Pylori. The relative mortality among the groups did not change (p>.01); however, postoperative complications of recurrent bleeding and recurrent pain were significantly more common in group A as compared to groups B and C (p>.01).

Peptic ulcer disease in children can result in similar complications as in adults. Since the introduction of new generation of H2 antagonists, antibiotic-Bismuth, and H-K ATPase inhibitor, the incidence of operations for bleeding and perforation, and the incidence of postoperative complications for peptic ulcer disease have decreased dramatically. However, surgery for obstruction is as common as ever.

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GASTROINTESTINAL INJURY IN CHILDREN FOLLOWING BLUNT ABDOMINAL TRAUMA

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Hollow visceral injuries occur infrequently after blunt trauma. Their lack of distinct clinical features and the inaccuracy of diagnostic studies leads to a delay in both diagnosis and treatment resulting in complications and death. We reviewed our experience in the diagnosis and management of these injuries. In the last 5 years, we treated 23 children with blunt injuries to the gastrointestinal tract. Initial evaluation consisted of physical examination, laboratory studies, and routine trauma radiographs. CT scan with IV contrast (17), paracentesis (4), upper G.I. (4) and ultrasound (1) were used at the physician's discretion. The mechanisms of injury were MVA (15), bicycle crashes (4), and child abuse (4). The most common injury was small bowel perforation (8), followed by duodenal hematoma (5) or perforation (3), colonic laceration (2), small bowel devascularization (2), mesenteric hematoma (2), colonic perforation (1), and gastric perforation (1). Associated injuries included liver/spleen laceration (8), Chance fractures (5), closed head injuries (3), pulmonary contusions (3), pancreatic transection (1), and extremity fractures (4). All patients except for one required laparotomy. Treatment included primary repair (11), bowel resection (8), evacuation of a duodenal hematoma (4), repair of a small bowel injury and a colostomy, and a Whipple procedure. Seven patients underwent surgery within 6 hours of their injury. All did well without complications. In 15 children, including 5 in whom an intestinal perforation was not noted at initial work-up, there was an operative delay > 24 hrs (mean 36 hrs). Eleven of these had postoperative complications including wound infection (5), prolonged ileus (4), pancreatic pseudocyst (1), enterocutaneous fistula (1), and ARDS requiring ECMO (1). One child died due to his closed head injury. The accurate and rapid diagnosis of hollow visceral injury is difficult. A high index of suspicion including serial examination, additional radiologic work-up, or paracentesis is necessary to reduce the morbidity associated with a delayed diagnosis and treatment.

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A REVIEW OF CT SCAN IN THE DIAGNOSIS OF INTESTINAL AND MESENTERIC INJURY IN PEDIATRIC BLUNT ABDOMINAL TRAUMA

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Objectives: To determine the sensitivity, specificity, positive and negative predictive values of CT scan in the diagnosis of clinically significant intestinal and mesenteric injury in pediatric blunt abdominal trauma.

Patients: One hundred and forty five children who presented to a tertiary care pediatric hospital between 1987 and 1994 were retrospectively reviewed. All had experienced single or multiple injuries and underwent CT scan as part of the trauma assessment.

Methods: Patients were divided into two cohorts based on the results of the initial CT scan; either positive (n=20) or negative (n=125) for evidence of intestinal or mesenteric injury. The two cohorts were similar with reference to age, trauma score and timing of CT scan. The outcome of either operative (n=23) or conservative management (n=122) was compared with the initial CT scan results. Note: some of the laparotomies were for solid organ injury.

Results: The sensitivity of CT scan to diagnose clinically significant intestinal and mesenteric injury is 0.93. The specificity, positive and negative predictive values are 0.95, 0.65 and 0.99 respectively.

Conclusion: CT scan is an excellent test to screen for clinically significant intestinal and mesenteric injury in pediatric blunt abdominal trauma. Because of a lower positive value, other clinical and diagnostic imaging information should also be used to improve diagnostic accuracy.

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TRAUMATIC GASTRIC TRANSECTION COMPLICATED BY
TRAUMATIC VAGOTOMY - A CASE REPORT

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We report the first known pediatric survivor of seatbelt-related gastric transection followed by the effects of associated traumatic vagotomy.

An 11-year old boy presented after a motor vehicle accident with mid-abdominal wall ecchymoses, peritoneal irritation, and hematemesis. Computed tomography revealed intraperitoneal blood and free air. At laparotomy a near complete transection of the gastric antrum was found and repaired by primary anastomosis. After an initial unremarkable recovery the patient developed symptoms of gastric outlet obstruction including repeated vomiting and severe gastric distention. Contrast studies and endoscopy showed a patent anastomosis but complete pylorospasm, suggestive of traumatic vagotomy. Conservative management with prokinetics led to a gradual resolution of the problem over 2 months.

This case report documents an exceptionally rare seatbelt-related injury, and its unusual complication. Neither gastric transection nor traumatic vagotomy have previously been reported in the pediatric population. The case also serves to emphasize the significance of the "seatbelt sign" in assessment of motor vehicle related blunt abdominal trauma, and outlines potential problems associated with the wearing of adult-designed lap belts by pediatric passengers.

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THE SPLIT NOTOCORD SYNDROME
THERAPEUTIC OPTIONS

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The split notochord syndrome (SNS) is a very rare entity involving a dorsal enteric fistula, combined anterior and posterior vertebral clefts, myelomeningocele, anorectal malformations and other anomalies.

We recently managed two infants with SNS involving the dorsolumbar spine. The diagnosis in the first was made antenatally; delivery was a vaginal breech at term. In addition to the dorsal enteric anomaly, the baby had hydrocephalus, anorectal agenesis, club foot and paraparesis. The infant underwent staged surgical procedures and was generally well at 6 month follow-up.

The second baby was born prematurely by vaginal breech presentation; the dorsal enteric fistula was associated with ambiguous genitalia, umbilical hernia, paraparesis, cecal duplication and a short colon with colovesical fistula. Separation of gut from spine and bladder was technically possible, but the infant died from post-operative meningitis and septicemia. The extent of the G-I abnormalities in this baby is perhaps unique for this syndrome.

The SNS is invariably fatal without surgical intervention. Carefully planned surgical management may permit survival, but the risk of lethal sepsis is high.

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THE MANAGEMENT OF CHOLEDOCHOLITHIASIS IN THE
PEDIATRIC POPULATION
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New York Hospital, New York, NY

Objective: To determine the most appropriate management of
infants presenting with choledocholithiasis.

Design: A retrospective review of our own experience of
choledocholithiasis in infancy as well as a review of the current
literature.

Patients: Three infant with choledocholithiasis confirmed by
ultrasound are discussed. One was an 18-month old female who
developed jaundice, slay-colored stools, and a rash following an
MMR vaccine. A sonogram verified the presence of common duct
stones, and the patient underwent a laparoscopic cholecystectomy
followed by an open common bile duct exploration. The second
patient was a 10-week old full-term male who underwent an open
cholecystectomy and choledochoduodenostomy for an impacted
gallstone in the distal common bile duct. The third was a 2-month
old female with abdominal pain and sonographic evidence of
choledocholithiasis. Laparoscopic cholecystectomy was performed
at the age of 6 months. The common duct stones passed
spontaneously.

Results: All three patients had an uncomplicated hospital
course and have remained asymptomatic. The management of our
cases parallels the range of options available for adult patients with
the exception that ERCP and laparoscopic exploration of the CBD are
not generally available, even in major pediatric surgery centers.
Our experience is borne out by the current literature which
emphasizes the use of many treatment options for these patients.
ERCP with or without sphincterotomy and laparoscopic exploration
of the CBD have been reported in recent studies but the indications
for these forms of treatment are not yet clear.

Conclusion: An increasing incidence of choledocholithiasis
diagnosed by ultrasound in the pediatric population makes this an
important differential diagnosis in the child with obstructive
jaundice. The changes that have occurred in both diagnostic and
therapeutic modalities over the past decade have altered our
approach to this entity. Clinical research combing the experience of
many centers should be undertaken to help define the indication for
these new modalities. CAPS could help by coordinating this
research.

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HIRSCHSPRUNG'S DISEASE, IMPERFORATE ANUS AND DOWN'S SYNDROME

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Patients with Trisomy 21 have a high incidence of several gastrointestinal anomalies. However, the coexistence of imperforate anus and Hirschsprung's disease has been reported only twice. The aim of this report is to describe a female infant born with imperforate anus who presented with bowel obstruction 3 months after anoplasty. The obstruction was due to Hirschsprung's disease.

A female infant was born with imperforate anus without fistula and Trisomy 21. The anorectal malformation was of the high type so a proximal sigmoid colostomy was done. The stoma always functioned well. After 2 months, the anus was reconstructed using an anterior sagittal perineal approach without laparotomy. Recovery was uneventful and her colostomy was closed. Her stoolsing pattern was normal despite a pathology report from the colostomy site indicating the absence of ganglion cells. At the age of 5 months, she presented with a large bowel obstruction. Examination revealed a patent anus that could easily admit a finger. A rectal suction biopsy was performed and again no ganglion cells were identified. A leveling colostomy in the descending colon was done, followed by a pullthrough after 4 weeks. The endorectal dissection was uneventful since this plane was not violated by the anoplasty. The perianal portion of the surgery was more difficult due to inability to evert the anal mucosa but nonetheless a coloanal anastomosis was done. The baby was discharged 4 days postoperatively. She has a normal stooling pattern 9 months since colostomy closure. Hirschsprung's disease should be suspected in infants with Trisomy 21 who develop constipation after repair of imperforate anus. We feel that the endorectal pullthrough is the safest technique to approach Hirschsprung's disease after a former anoplasty.

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9. **Session One**, Saturday, 09:40-09:50; C, R

**EXTENDED HIRSCHSPRUNG'S DISEASE: A REPORT OF 3 CASES**

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Over a 15 year period (1/1980-1/1995) 69 infants were treated for Hirschsprung's disease (HD). 48 (70%) were seen in the newborn period. 3/69 (4.3%) had very extended HD. No other anomalies were found in those 3 patients.

**Patient 1:** Admitted on second day of life; T-tube ileostomy, for irrigation of meconium ileus was performed. Biopsy showed total colonic HD extending to 3.5 inches from the ileo-cecal valve. Tube ileostomy was converted to formal ileostomy. Duhamel operation was done at 12 months. Follow-up: Readmitted for dehydration by gastroenteritis at 15 months of age. He is now 12 years old, having 2-3 BM/day, and is now completely continent.

**Patient 2:** Admitted on the first day of life for perforation of hollow viscus. Laparotomy revealed perforation of the transverse colon and obstruction of the small bowel by thick meconium. Serial biopsies showed that the perforation was caused by HD extending to 35 cm from the duodeno-jejunal (DJ) junction. Jejunostomy was done. Further treatment was refused. The patient expired.

**Patient 3:** Admitted on second day of life for bowel obstruction. Gastrografin enema was complicated by perforation of the ascending colon and made laparotomy mandatory. Serial biopsies showed HD extending to 65 cm from the DJ junction. Jejunostomy was constructed. An isolated loop of 30 cm of ileum was created, on which extensive myectomy and myotomy was done. Post-op, multiple episodes of sepsis required excision of the ileal loop. The patient developed serious liver failure and portal hypertension, and died of massive stomal bleeding at 8 months of age. Extended HD still carries a high mortality. A few successful cases have been reported, but no standard treatment is yet available.

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HYDROPS FETALIS AND PULMONARY SEQUESTRATION

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The development of fetal ascites in conjunction with intrathoracic pathology has been well described, but has rarely been reported in association with pulmonary sequestrations. The current report presents three cases of non-immune hydrops fetalis seen in association with pulmonary sequestrations. Fetal hydrops was identified in all three cases antenatally and in one example it was severe enough that the recommendation of termination of pregnancy was considered. In one case a left sided chest mass was also identified antenatally. One infant was born by urgent cesarean section for fetal distress at 34 weeks gestation while the other two infants were delivered vaginally at 30 and 36 weeks. Two of the newborns were severely hydropic requiring aggressive cardiorespiratory resuscitation including bilateral chest tubes for massive pleural effusions. The third infant was stable at birth, but thereafter it rapidly developed respiratory distress and subsequently required intubation and ventilation. Two of the infants had a left sided chest mass and the other a right chest mass all identified by chest x-ray. Subsequent ultrasonography identified a chest mass and an identifiable systemic feeding artery in two of the infants. In the third case a specific diagnosis was not made prior to surgical intervention. After a resolution of the hydrops all these infants subsequently had successful removal of their intrathoracic pulmonary sequestration. Two of these were found to be extralobar and the third was an intralobar sequestration of the left lower lobe. The association of fetal hydrops and pulmonary sequestration has previously been reported to be a highly lethal combination. In summary, the current study reports a successful outcome in three cases of newborns born with non-immune hydrops fetalis in association with pulmonary sequestration following neonatal resuscitation and subsequent surgical excision.

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10:00-10:30 coffee break follows this paper
Open surgical ligation has proven to be a safe and effective method to bring about closure of the patent ductus arteriosus (PDA). Recent reports have suggested that percutaneous transcatheter (PTC) and video assisted thorascopic closure (VATC) may be better and more cost effective techniques for PDA closure. We have therefore reviewed our experience with the use of open thoracotomy for the elective ligation of PDA in the paediatric patient. This retrospective study evaluated the results of surgical ligation of PDA by a single paediatric surgeon in 42 children over a three year period. The ratio of female to male was 1.6:1 and the age of these patients was 2.8 ± 2.3 (mean ± standard deviation) and the weight was 14 ± 7 kg. The diagnosis was confirmed preoperatively in all cases by echocardiography. The patients underwent open ligation of PDA through a limited left lateral thoracotomy with exposure by an extrapleural approach. Closure was by two silk ligatures or silk ligature and clip in all cases and no drainage of the extrapleural space was performed. Operative time was 85 ± 12 minutes. Total hospital stay for the entire series was 3.1 ± 0.8 days, however, following the institution of a same day admission policy total length of stay was reduced to 2.4 ± 0.5 days with 10 of the last 16 consecutive patients having a total hospital stay of 48 hours. There was no mortality. Successful closure was confirmed by auscultatory findings in 41 of the children and by subsequent echocardiography in 1 patient. No operative complications occurred and no transfusions were required. Minor respiratory symptoms occurred in 2 patients postoperatively, transient systemic hypertension was seen in 2 patients and 1 wound infection occurred. Proponents of PTC and VATC cite the reduced morbidity seen when compared with open closure of PDA, but failure rates are significant. In the current series open PDA closure was 100% successful, is a safe procedure and can be performed with minimal morbidity. Length of operative time and a short hospitalization period compare favourably with that of PTC and VATC reported in the literature. Open surgical closure remains the standard by which all other techniques for PDA closure must be judged.

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Challenging the Embryogenesis of Cloacal Exstrophy

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Cloacal exstrophy is a complex clinical syndrome involving both the gastrointestinal and genitourinary tracts. As presently understood, cloacal exstrophy results from a migration failure of the lateral mesodermal folds of the infraumbilical anterior abdominal wall, and rupture of the resulting enlarged, persistent cloacal membrane before the eighth week of gestation. Classically the infant presents with an omphalocele, exstrophy of two hemibladders that flank a strip of intestinal mucosa corresponding to the cecum, imperforate anus, splayed pubic bones, and ambiguous genital remnants inferior to the exstrophied hemibladders. We present ultrasonographic evidence that disputes this embryologic theory.

A routine ultrasound exam at 18 weeks gestation demonstrated dichorionic diamniotic twins. Twin A had a moderate-sized omphalocele. Twin B had a dilated cloacal abnormality, bilateral hydronephrosis, and oligohydramnios. Repeat ultrasound at 24 weeks demonstrated rupture of the cloacal anomaly with resolution of both the hydronephrosis and oligohydramnios, as demonstrated in the figure below. This twin was later born with classic cloacal exstrophy.

The ultrasonographic evidence of an intact cloacal membrane at 18 weeks makes the prevailing theory of the embryology of cloacal exstrophy suspect since this tenet postulates rupture of the cloacal membrane before the end of the eighth week when the urorectal septum divides the rectum from the anterior structures that form the external genitalia, bladder, and urethra. This striking ultrasound evidence of an intact cloacal membrane at 18 weeks which ruptured prior to 24 weeks relieving the urinary tract outlet obstruction forces us to rethink how this surgically correctable anomaly develops.

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MANAGEMENT OF THE GASTROINTESTINAL TRACT AND NUTRITION IN PATIENTS WITH CLOACAL EXSTROPHY

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Cloacal exstrophy is a rare condition in which there is a complex set of congenital anomalies affecting multiple organ systems. Gastrointestinal features commonly include omphalocele; exstrophy of an everted cecal plate; a short, blind-ending distal colon; imperforate anus and, occasionally, a shortened small bowel. We have reviewed our experience managing these patients with particular regard to these anomalies of the gastrointestinal tract.

Twenty-six patients with cloacal exstrophy have been treated at our institution during the last 20 years with a long-term survival of 88% (23/26). Additional gastrointestinal anomalies included 4 cases of colonic duplication, one duodenal web and one malrotation. At the initial surgery, 3 patients were given an end ileostomy, while the others had tubularization of the cecal plate with preservation of the distal bowel and formation of an end colostomy. The average time to the initiation of enteral feeding was 15.6 days and to discontinuation of parenteral nutrition support was 36 days. One patient with short bowel syndrome died from TPN-associated liver failure. Six other patients exhibited short bowel physiology but each was ultimately weaned from supplemental intravenous hyperalimentation. Only 4 patients have had bowel continence successfully restored, 3 by posterior sagittal anorectoplasty and 1 by abdominoperineal pullthrough.

Excellent long term survival is now seen for patients with cloacal exstrophy. Many patients will initially exhibit short bowel physiology, but most adapt. Preservation of the distal colon for the gastrointestinal tract is important as an ileostomy may be difficult to manage. Finally, although urinary continence may frequently be established, bowel continence rarely is achieved.

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IS EARLY RESPONSE TO PORTOENTEROSTOMY PREDICTIVE OF LONG-TERM OUTCOME?

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Purpose: Therapy for biliary atresia (BA) typically involves portoenterostomy (PE); with the development of liver transplantation (LT) as an option for therapy in infancy. We reviewed our experience to determine the factors which might predict the requirement for LT.

Methods: Patients diagnosed with BA from September 1980 to 1994 were reviewed. Responses to PE were rated as poor (PR; death or OLT by 3 years), temporary (TR; OLT > 3 years) or good (GR; anicteric).

Results: Twenty-nine patients, were identified, 24% native. Twenty-three had PE, 11 responded. Seven (32%) became anicteric and continue to do well. Four (18%) required OLT after age 3 (TR). Twelve patients had PR; 3 underwent OLT (average age 1.3 years), 4 are listed for LT and 5 died by age 2.8 years. (Six patients underwent no PE; 2 died in infancy and 4 had LT.) All transplant recipients are well. Factors associated with PR were: older age at surgery 67±7 days vs. 51±4 days in the GR, nadir of AST, 273±84 U/L vs. 70±26 U/L in GR, and number of post-PE complications: 3.6 vs. 1 per patient in GR. The TR group was differentiated from the GR by bilirubin nadir, 46±10 µmol/L versus 14±3 µmol/L in GR, and rate of bilirubin decline 2.6±1.5 µmol/L/d vs. 10.8±3.0 µmol/L/d in the GR group (p < 0.05 for all comparisons).

Conclusions: Outcomes are comparable to North American series, but the incidence is higher, especially in natives. Factors correlating with outcomes include age at surgery, post-PE complications, postoperative drop and rate of drop of bilirubin and AST. The latter have not previously been reported and may prove useful in planning therapy for partial responders following PE.

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11:30-12:30

FRED MACLEOD LECTURE

Dr. J.A. Tovar

"Fetal Rat Models of Surgical Disease"

Dr. Tovar's biography appears on page xiv

LUNCH 12:30-13:45

Session 3 begins at 13:45
IDENTIFICATION OF RISK FACTORS CHARACTERISTIC AND
PREDICTIVE OF COLONIC NECROTISING ENTEROCOLITIS (NEC)

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A retrospective study was done to identify risk factors for
colic NEC. Thirty-four variables were initially identified by
literature review and integrated into a standardized template for
data collection. 176 cases were studied. 104 met the inclusion
criteria of pathological documentation of area of bowel involvement
after operation or post-mortem, or pneumatosis intestinalis on
radiograph. Data was entered into an SPSSde program and
transformed to BMDP for analysis. Each of the thirty-four
variables was examined for a simple association with colonic NEC
or small intestinal and ascending colonic disease by means of the
crude odds ratio and its 95% confidence limits and p-values by chi-
square with Yates correction. Significant factors on univariate
analysis: birthweight (p=0.0002), gestational age (p=0.0008),
ear early neonatal life stressors (p=0.0078), time from feed to NEC
(p=0.0351), clinical presentation by abdominal distention, bloody
diarrhea and feeding intolerance (p=0.0044), negative blood
cultures (p=0.0050), platelet count > 88,000/1 (p=0.0175), and
perforation (p=0.0092). These significant factors, including
clinically relevant interactions, were examined by step-wise
logistic regression. The final logistic regression model included
three significant risk factors: birthweight (adjusted odds ratio,
5.55; 95% confidence interval, 2.13-14.5), perforation, (adjusted
odds ratio, 0.235; 95% confidence interval, -0.859-0.64), and
blood cultures, (adjusted odds ratio, 0.376; 95% confidence
interval, 0.149-0.951). Birthweight above sample median, lack of
perforation and negative blood cultures are characteristic and
predictive of a subset of NEC limited to the colon.

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DIAGNOSTIC LAPAROSCOPY IN CHILDHOOD CROHN'S DISEASE

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Purpose: 25-40% of patients with Crohn's disease will have had the onset of their symptoms as children or adolescents. The symptoms may be subtle, or the investigations inconclusive, often resulting in a delay in diagnosis. Could laparoscopy help to facilitate a diagnosis in these equivocal cases?

Methods: A case series of seven children seen at British Columbia's Children's Hospital, who underwent diagnostic laparoscopy for suspected or known Crohn's disease, between 1993 and 1995, was studied. Clinical data was recorded for each case. The radiologic studies, endoscopic findings, and histology were reviewed. The indications for, and findings at, laparoscopy were evaluated in terms of the effect on diagnosis, therapy, and outcome.

Results: Six patients were suspected to have Crohn's disease, but contrast radiology, endoscopy, and histology findings were inconclusive. In three patients, laparoscopy demonstrated evidence of Crohn's disease with inflammation and thickening of the intestinal wall and creeping mesenteric fat. Two had no abnormal laparoscopic findings and another had inflammation at the terminal ileum, but no creeping fat. The seventh patient with known Crohn's disease had combined laparoscopy/colonoscopy to evaluate the extent of disease and guide further therapy. Treatment was affected by the findings at laparoscopy in all seven patients. Six of the procedures were done as outpatients and there were no procedure-related complications.

Conclusion: For children with suspected Crohn's disease, but with equivocal radiologic and endoscopic findings, laparoscopy may be a useful adjuvant investigation, particularly if creeping mesenteric fat is visualized.

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17. Session Three, Saturday, 14:15-14:30; O, R

NOSOCOMIAL INFECTIONS IN THE GENERAL SURGICAL NEONATE

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This epidemiologic review was undertaken to determine the rate of postoperative infections in neonates admitted to the Intensive Care Unit at a major urban centre. Three hundred and twelve neonates undergoing 347 operative procedures were evaluated in a 35 month period. Data collected and analyzed included the clinical diagnosis, the type of infection, the offending organism, and the classification of operative wounds. The length, priority and type of procedure was also evaluated.

The overall wound infection rate was 1.8%. By wound classification, there were 0 of 120 (0%) infections in clean cases; 4 out of 135 (2.9%) in clean contaminated cases; 1 out of 60 (1.6%) in contaminated cases and 1 of 17 (5.8%) in dirty cases. There were 4 (1.2%) lower respiratory tract infections of which 3 were caused by Pseudomonas aeruginosa. Four patients developed urinary tract infections and 13 (4.1%) patients were treated for gastroenteritis caused by torovirus (8), adenovirus (3), rotavirus (1), and clostridium difficile (1). Eight of the 13 patients with gastroenteritis had undergone bowel procedures.

Forty of the 312 patients (12.8%) developed peripheral intravenous line infections. 82.5% of these were caused by Staphylococcus epidermidis. Furthermore, 40 central venous lines in 98 patients (40%) were infected, of which 80% again were caused by Staphylococcus epidermidis.

In conclusion, the chance of a surgical neonate developing a nosocomial infection is 24.6% of which the majority by far are either central line and/or peripheral I/V infections.

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GERMLINE MUTATIONS OF THE RET PROTO-ONCOGENE IN PEDIGREE WITH MEN TYPE 2A: DNA ANALYSIS AND ITS IMPLICATIONS FOR PEDIATRIC SURGERY

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A) The objective: To assess the feasibility of screening for multiple endocrine neoplasia type 2A (MEN 2A), a dominantly inherited cancer syndrome characterized by medullary thyroid carcinoma, adrenal pheochromocytoma and parathyroid hyperplasia, and caused by mutations in the RET proto-oncogene.

B) The method used: We used DNA sequence techniques to evaluate the RET proto-oncogene in a family with MEN 2A, consisting of 95 members (3 to 64 years of age) and their spouses spanning five generations. Provocative calcitonin testing also was performed to assess its reliability for detecting the associated neoplasms. (1) Genomic DNAs were extracted from lymphoblastoid cell lines established from the family members and the RET gene was PCR amplified using RET-specific primers (10q11.2) and sequenced. (2) Periodic endocrine screening was performed by measuring the plasma calcitonin level after provocation with pentagastrin (0.5μg/kg IV).

C) The results obtained: Twenty patients with MEN 2A were confirmed by medical records or the screening program. The DNA sequence of the PCR products from clinically established MEN 2A patients revealed a mutation at codon 634 (TGC-CGC) that resulted in an amino acid change from cysteine to arginine. Endocrine screening tests revealed five additional affected family members who had positive DNA findings.

D) The conclusions: DNA sequencing can detect children at high risk at a preclinical stage of the disease. The combined screening program of DNA analysis and endocrine testing can identify patients who need to be followed carefully for cancer and the non-gene carriers who do not require further endocrine evaluation.

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SURGICAL SEQUELAE OF CONGENITAL PANCREATICO-BILIARY ANOMALIES

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Congenital pancreatico-biliary (PB) anomalies are extremely rare. We report seven patients (ages newborn - 31 years) who presented between 1982-1994 with surgical sequelae of congenital PB anomalies. Five patients had anomalous PB unions with high entry of the pancreatic duct (PD) into the common bile duct (CBD).

Three of these five patients had Type I fusiform choledochal cysts, one patient had an anomalous PB junction with both ducts entering a cystic stricture in the head of the pancreas and one presented with a spontaneous biliary perforation and concomitant biliary stricture. Two patients without anomalous PB junctions included one who presented with spontaneous perforation of the intrapancreatic CBD without jaundice and one who presented with jaundice and pancreatitis secondary to a distal CBD stricture. The anatomy was delineated in all cases by PTC, ERCP or intra-operative cholangio-pancreatography (IOPC). Surgical procedures included resection of the extra-hepatic biliary tree with Roux-en-Y hepatico-jejunostomy or external drainage in the cases of spontaneous biliary perforation.

Delineation of the exact anatomy of the biliary tree is essential to plan the operative treatment in the case of spontaneous biliary perforation. Transection of the distal CBD remnant should be as low as possible above the entry of the PD. ERCP is a useful adjunct after PB separation and is recommended to delineate PD abnormalities as well as detect stone formation in the residual CBD remnant.

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REPAIR OF CONGENITAL BRONCHOBILEARY FISTULA: DIAGNOSTIC AND SURGICAL TECHNIQUE

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Congenital bronchoiliary fistula (CBBF) is an extremely rare anomaly with a myriad of presentations which often include common bile duct abnormalities. Traditionally, bronchoscopy and bronchography have been used to make the diagnosis. Such invasive studies present a real risk in these infants with the chemical aspiration pneumonia that always accompanies this condition.

A full term neonate with pneumonia and bilious secretions was diagnosed with CBBF by means of a HIDA scan. Successful repair consisted of a right thoracotomy, high pleural approach, drainage into the ligation of the fistula via an extra-pleural cholecystography to confirm biliary drainage into the duodenum.

HIDA scan is a safe and efficient means of diagnosis of CBBF. When used in combination with operative contrast studies it provides clear delineation of all variations of this abnormality, enabling one stage total correction.

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COMPLICATIONS OF SURGICAL JEJUNOSTOMY TUBES IN CHILDREN

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A review of 64 surgical jejunostomies in 57 patients was carried out. Data were collected regarding complications and performance of the catheters. Patient diagnoses were grouped into cystic fibrosis (25), neurologic impairment (14) and miscellaneous others (25). Indications were grouped into malnutrition (43), inability to feed (17) and gastroesophageal reflux disease (4). Complications within these groups were compared. The ages ranged from 7 days to 23 years. Tubes were changed 251 times over 142 years of cumulative site patency for an average of 1.8 tube changes per year and an average life of 2.2 years per site. The longest site lasted 11.7 years. Four tube changes resulted in intraperitoneal insertion (1.6% of changes). The overall complication rate was 37.5%. The major and minor complication rates were 21.9% each. Stratification of complications by diagnosis revealed the highest incidence was in neurologically impaired children (64%), followed by cystic fibrosis (32%) and others (28%). 64% of major and 54% of minor complications occurred within the first six months. The mortality rate was 4.7%. Infections requiring intravenous antibiotics occurred in 9.4% of the sites at an average site age of 8.7 months. Tube dislodgment occurred in 30% of the patients. Our mortality and complication rates compare favourably to published series. Surgical jejunostomy is a reliable long term solution to feeding problems but carries a significant risk for complications, especially in neurologically impaired children. The risk is greatest in the first six months after insertion then significantly decreases as the site "matures".

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ROUX-EN-Y JEJUNOSTOMY IN PEDIATRIC PATIENTS

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Nutritional management employing gastrostomy and jejunostomy tubes is an important adjunct in the management of a number of conditions in pediatric medicine and surgery. For a number of reasons jejunostomy is the preferred route of access to the G.I. tract. Mechanical difficulties with simple loop jejunostomies have led to the development of Roux-en-Y feeding jejunostomies for a number of patients. There are 2 methods by which the cutaneous aspect of the jejunostomy is fashioned, either an intubatable Brook type stoma with removal of the tube between times of use or a permanent catheterized one with the jejunum remaining at the under surface of the abdominal wall (a modified Maydl jejunostomy). Both types of jejunostomy have been employed at the IWK Hospital for Children.

We reviewed our experience of 22 patients over a 27 month period having the Roux-en-Y feeding jejunostomy. Nine had the Brook type stoma and 13 had the modified Maydl stoma. Significant problems, of leakage, prolapse and perforation occurred in 3 patients (33%) with Brook style stomas. Each of these children required revision and 2 of the patients had multiple hospitalizations related to the problematic stoma. None of the patients with the modified Maydl stoma had any significant complications related to the stoma.

We conclude that Roux-en-Y feeding jejunostomy with indwelling catheter is associated with less morbidity than the intubatable Brook stoma.

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15:30-16:00 coffee break follows this paper
ABNORMAL INTERNAL ANAL SPHINCTER INNERVATION IN PATIENTS WITH HIRSCHSPRUNG’S DISEASE AND ALLIED DISORDERS

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The morphology of the intrinsic innervation of internal anal sphincter (IAS) in Hirschsprung’s disease (HD), and allied disorders is not clearly defined. The purpose of this study was to investigate innervation abnormalities in IAS of patients with HD and allied disorders.

Specimens of IAS were taken from 4 patients with HD, 5 patients with intestinal neuronal dysplasia (IND), 5 patients with IAS achalasia and 2 patients with hypoganglionosis at the time of internal sphincter myectomy and from five normal controls. Specimens were examined using neural cell adhesion molecule (NCAM) immunohistochemistry and NADPH-diaphorase and acetylcholinesterase (AChE) histochemistry.

The table shows the frequency of NCAM, NADPH-diaphorase and AChE positive fibers in IAS in controls and in patients with HD, IND, IAS achalasia and hypoganglionosis.

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<th>NCAM</th>
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<td>Hypoganglionosis</td>
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(−) = absent nerve fibers, (+) = occasional nerve fibers, (+) = moderate number of fibers, (+++) = large number of fibers

Our findings of increase AChE-positive nerves and the absence or marked reduction of NCAM and NADPH-diaphorase activity indicate that complex neural abnormalities occur IAS in patients with HD and allied disorders. The primary event remains obscure, but it is possible that a single defect, such as nitergic nerve depletion may lead to compensatory changes in other nerve fibers.

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NITRIC OXIDE SYNTHESIS INHIBITOR ACTION ON THE RABBIT PYLORIC MUSCLE

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Purpose: The relaxation mechanism of the pyloric smooth muscle is largely dependent on a non-adrenergic, non-cholinergic (NANC) inhibitory innervation mediated in part by nitric oxide (NO). We investigated the effect of NO antagonists on pyloric smooth muscle contractility, and the potential implication of decreased NO biosynthesis in the pathophysiology of neonatal hypertrophic pyloric stenosis (HPS).

Methods: Twenty anesthetized New Zealand white rabbits were used. Ten subjects were intraarterially infused with NO synthesis inhibitor N-Nitro-L-Arginine (L-NNA) (concentration $10^{-4}$ mol/L), while ten controls received normal saline intraarterially. Pyloric contractility was assessed by balloon manometry. Data analysis by separate and pooled variance t test, the Mann Whitney U test and Fisher Exact test. Means ± standard deviations were reported for all interval data. Statistical significance assumed by a p value < 0.05 (two tailed).

Results: L-NNA infusion in the experimental rabbits produced a dose-dependent increase in frequency of pyloric contractions. Maximal increase in frequency occurred during slow L-NNA infusion rate of 148 ng/min. (experiment vs. control; 1.267 ± 0.389 vs. 0.632 ± 0.375, p=0.001). The increased frequency level was sustained during a fast infusion rate, 292 ng/min. (experiment vs. control; 1.362 ± 0.604 vs. 0.704 ± 0.579, p=0.022). The duration and amplitude of the pyloric contractions were not affected by L-NNA infusion.

Conclusion: The inhibition of NO biosynthesis from L-Arginine may have resulted in a blockage of NANC-induced pyloric sphincter relaxation in the rabbit. We speculate that decreased NO production may be responsible for the sustained contraction of the pyloric smooth muscle with secondary hypertrophy in HPS.

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CONGENITAL CYSTIC ADENOMATOID MALFORMATION (CCAM) IN THE FETUS: NATURAL HISTORY AND PREDICTORS OF OUTCOME

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CCAM is a rare lesion which is often diagnosed prenatally. Outcome varies from hydrops and fetal death to resolution before birth. Previous studies have included selected fetuses from multiple institutions. We reviewed a 5-year experience with 17 consecutive fetuses in a single centre, to determine the natural history of the lesion and to identify factors which may be predictive of outcome.

One fetus was lost to follow-up, leaving 16 for evaluation. Four died during fetal life (3 terminations and 1 fetal death); 3 of these had hydrops. Of the 12 that were delivered, 1 had a thoracoamniotic shunt at 24 weeks. All 12 infants survived and underwent resection. Only 4 required neonatal support (1 ECMO, 2 ventilator, 1 oxygen).

Initial CCAM/chest ratio, degree of mediastinal shift at diagnosis, location of the CCAM, and age at diagnosis did not correlate with outcome. Predicted pathologic type did not correlate either with outcome or with pathologic diagnosis after surgery. The only accurate predictors of outcome were presence of hydrops (all died), and decrease in size of the CCAM over gestation (all survived).

Outcome associated with fetal CCAM may be better than previously recognized. Many will decrease in size despite significant mediastinal shift and lung compression at diagnosis. Fetal intervention or pregnancy termination should only be considered for fetuses with hydrops. Others should be followed with serial sonograms and counselling should reflect the Positive outcome seen in most cases.

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POSTPNEUMONECTOMY SYNDROME IN CHILDHOOD: USE OF INTRATHORACIC TISSUE EXPANDER

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Postpneumonectomy syndrome occurring after right pneumonectomy in infancy is associated with progressive respiratory symptoms. The shift and rotation of the mediastinum to the right result in compression of the trachea and/or left bronchus by the great vessels. A variety of methods have been described which prevent or treat this complication.

We recently evaluated and treated two children (ages 4 and 9 years) who had undergone right pneumonectomy in infancy for cystic adenomatoid malformation and presented with progressive respiratory symptoms. Both children had intrathoracic placement of 480 cc crescent shaped tissue expanders with subcutaneous ports. Approximately 200 cc of saline was instilled initially, followed by additional postoperative additions. The 4 year old boy has had return of his trachea to normal and a marked increase in exercise tolerance and decrease in wheezing. The 9 year old had two sequential tissue expanders placed and has had marked improvement in his tracheal compression, but only modest clinical improvement due to his underlying reactive airway disease.

Intrathoracic tissue expander placement is an effective method of treating postpneumonectomy syndrome in children. This technique permits volume adjustments postoperatively as the child grows. Delayed treatment is associated with less satisfactory results but the optimum time for placement remains to be determined.

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MULTIPLE ENTERO-ENTERO FISTULAE: AN UNUSUAL COMPLICATION OF HENOCH-SCHÖNLIN PURPURA

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Henoch-Schönlein purpura (HSP) is an immunologically mediated systemic vasculitis of small blood vessels that frequently involves the gastrointestinal tract. Pediatric surgeons are often asked to assess patients with HSP for abdominal pain. Common complications that require surgical intervention include intestinal intussusception, perforation, necrosis, and massive gastrointestinal bleeding. However, the development of multiple entero-entero fistulae has not been previously described. We describe a case of a ten-year old girl with HSP who presented with a typical rash, seizures secondary to CNS vasculitis, and gastrointestinal involvement. The abdominal pain persisted for several days until she developed marked fever and hypotension necessitating surgical intervention. At laparotomy, multiple entero-entero fistulae of the ileum were found requiring resection and primary anastomosis. Histologic examination of the ileum was consistent with HSP vasculitis. The patient made an unremarkable recovery and has had no recurrence of symptoms.

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Splanchnic artery pseudo-aneurysms are extremely rare in the pediatric age group. Recommendations for management of these lesions have not been clearly defined. We describe our experience with four patients who developed splanchnic artery false aneurysms following blunt abdominal trauma. Hepatic artery lesions were found in a seven year-old boy and a ten year-old girl after major liver lacerations. The boy had successful angiographic embolization of his lesion while the girl required direct ligation of her pseudo-aneurysm after nearly exsanguinating from massive hemorrhage. Splenic artery pseudo-aneurysms were found in a six year-old boy and an eight year-old girl after blunt splenic injuries. In both cases, spontaneous thrombosis of the pseudoaneurysms occurred after a period of observation. All four children have recovered completely with no long term sequelae. Splanchnic artery pseudo-aneurysms are a potentially life-threatening complication following blunt abdominal trauma. The investigation and management of these lesions must be individualized according to the clinical scenario.

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ANTICOAGULATION WITHOUT CATHETER REMOVAL IN CHILDREN
WITH CATHETER RELATED CENTRAL VEIN THROMBOSIS

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Catheter related central venous thromboses are more frequent among children than adults, with rates exceeding 30% in some series. The traditional management has been anticoagulation with early catheter removal. Unfortunately many patients require catheter replacement in another site with associated morbidity including possible further thrombosis. Although others have utilized thrombolytic agents (streptokinase, urokinase, tissue plasminogen activator) in attempts to avoid catheter removal, we consider the associated complications both too frequent and too serious. Instead, we have had success with standard anticoagulation (heparin followed by coumadin) in a limited number of patients. Between 3/1991 and 4/1994, 17 patients (ages 6 weeks to 19 years) were seen with catheter related deep venous thrombosis. Eight patients underwent early catheter removal (within 1 week of diagnosis) accompanied by anticoagulation; two of these patients had intrinsic catheter problems which necessitated removal (infected or blocked catheter), and one patient had hemophilia. Nine other patients received anticoagulation without catheter removal. Of these, one patient required catheter removal after ten days of heparin treatment failed to diminish the extent of thrombosis. Another patient responded well to anticoagulation but required catheter removal after several weeks for catheter infection. The other seven patients responded well to anticoagulation (resolution of symptoms, clot size diminution and development of collateral flow) and retained their catheters. Although anticoagulation may engender complications, particularly bleeding, none were experienced in this small group of patients. For those patients with a functional catheter that is essential to their care, anticoagulation may prevent catheter removal.

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THE ABDOMINAL EVALUATION FOLLOWING ACUTE CARDIORESPIRATORY COLLAPSE IN INFANTS: THE ROLE OF BEDSIDE ULTRASOUND

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Abdominal distention and metabolic acidosis are common findings in patients who are receiving (or recently have undergone) cardiopulmonary resuscitation (CPR). In patients with no antecedent history, the abdominal distention and metabolic acidosis usually raises the question of an intra-abdominal catastrophe. This series demonstrates how ultrasound can be of value as part of this evaluation.

Six infants had acute cardiorespiratory collapse. None had antecedent histories of bilious vomiting, abdominal distention, or pain prior to CPR. All had distended abdomens and severe metabolic acidosis. Plain x-ray findings were of no value (the readings were nonspecific except in one where free air was present - and this child proved not to have a perforation). Three of six patients survived. Of the deaths: two had malrotation with volvulus and one had no acute intra-abdominal pathology. Of the survivors: one had segmental ileal necrosis, one had a closed loop obstruction, one had primary peritonitis with viable bowel. After reviewing all laboratory and radiologic data the only distinguishing variable in the evaluation of these children was the abdominal ultrasound. A characteristic pattern of thickened bowel wall, dilated lumen, and lack of peristalsis was present in those children with abdominal pathology.

We conclude that bedside ultrasound in the ICU can be extremely valuable as an adjunct in assessing the abdomen of critically ill infants.

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THAL FUNDOPICATION IN NEUROLOGICALLY HANDICAPPED CHILDREN

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Neurologically impaired (NI) children frequently require feeding gastrostomy and this often aggravates or produces gastroesophageal reflux (GER). Patients with NI/GER undergoing Nissen fundoplication reportedly have recurrence rates up to 25%.

**Aim**: Clinical review of results after Thal fundoplication(fundo) in children with NI.

**Methods**: All children with NI who underwent fundo and Stamm gastrostomy (GT) over 18 years (n=141) were reviewed. Pyloroplasty was undertaken later as a second operation for delayed gastric emptying.

**Results**: Patients ranged from newborns to 18 years (50% were infants). The commonest etiology for NI was perinatal asphyxia. There was clinical or objective evidence of GER in 113 (80%) children. 26 children (20%) had no symptoms of GER but had a fundo as an adjunct to a feeding GT. GT/Fundo was the primary procedure in 129 children. Ten had only GT but needed fundo later (average 4 months). Only 9 patients (6%) required pyloroplasty (5-52 months later.) Recurrent GER was seen in 14 patients (10%): 8 were redone as Thals and 6 were converted to Nissen. Bowel obstruction ensued in 4 patients (3 %). 36 patients (25%) had died. Clinical follow up (mean 54 months) revealed that 96% were improved. Of the patients with an intact Thal 67% could burp or vomit, 33% could not.

**Conclusion**: Thal fundoplication is effective with a recurrence rate of only 10%. Pyloroplasty, needed in 6%, can be done later. The ability to vomit may protect the Thal fundoplication and avoid disruption but may allow enough vomiting to warrant, later, Nissen operation.

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NEUROLOGICALLY IMPAIRED CHILDREN WHO REQUIRE A GASTROSTOMY: PROPHYLACTIC ANTI-REFLUX PROCEDURE OR NOT?

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The approach to neurologically impaired (NI) children in need of nutritional support is controversial. Some advocate a prophylactic anti-reflux procedure (ARP) at the time of gastrostomy (G), while others favor the more conservative approach of performing an ARP only in the presence of clinical gastroesophageal reflux disease (GERD). The purpose of this study is to examine the outcome of the two approaches. There were 56 NI patients at our institution who underwent a G with or without an ARP, between 1980 and 1993. Their charts were reviewed. Patients with predisposing conditions to GERD (such as congenital diaphragmatic hernia or tracheo-esophageal fistula) were excluded. Of the 20 patients who underwent placement of a G (18/20 percutaneous) without an ARP, 11 showed improvement in their symptoms, 4 worsened, and 3 remained the same. The outcome is unknown for the remaining 2. Eight of these patients died, 3 of unrelated causes, 3 of sudden death, 1 of aspiration, and 1 of pneumonia. Of the 9 patients with follow-up (average 3.4 years), none of them have required an ARP to date. Of the 34 patients who underwent G and ARP, 2 were lost to follow-up, 9 were improved, 4 had less symptoms but recurrent pneumonias, 5 remained the same, and 13 died (9 of related causes, 2 of unrelated causes, and 2 of unknown causes). Five of these patients had small bowel obstruction which required reoperation, 3 had wrap failure which required surgery, and 3 had an asymptomatic wrap failure. This review is consistent with the argument that a more invasive procedure performed prophylactically in a NI child presents higher complication rates, without necessarily improving the outcome.

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CAN CARDIAC WEIGHT PREDICT LUNG WEIGHT IN CDH?
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Background: Antenatal assessment of fetal lung volume (or mass) is technically difficult and its predictive value as a marker of
disease severity in congenital diaphragmatic hernia (CDH) remains
unknown. To date, no fetal sonographic parameters except cardiac
left ventricular disproportion have been correlated with fetal or
neonatal survival in CDH.

Aim: The purpose of this study was to determine whether
fetal cardiac weight correlates with lung weight in both CDH and
control lambs at term.

Methods: Twenty CDH lambs were created surgically at 80
days gestation and sacrificed at term for measurement of lung and
heart weights. Nine control lambs served as controls. Analysis of
the relationship of heart weight to lung weight was made for both
groups, and regression curves were generated. Mean ± 2 SD curves
are shown for each group of lambs.

Conclusion: Our preliminary results suggest that cardiac
weight can be used to predict lung weight in both CDH and control
lambs at term. We speculate that similar data generated from
sonographic parameters of cardiac volume and cardiac mass earlier
in gestation, such as during the pseudoglandular stage of lung
development, can be helpful in identifying fetuses with CDH that
have lethal pulmonary hypoplasia and may benefit from in-utero
correction of the diaphragmatic defect. Although the significance
of the heart in the natural history of CDH remains unknown, its role as
a prognosticator of fetal and neonatal outcome must be investigated.

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THE BIANCHI PROCEDURE IN A PATIENT WITH JEJUNAL ATRESIA

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While bowel transplantation remains an option for short bowel syndrome (SBS), every effort must be made to optimize the function of the native bowel. This report describes how a patient with SBS improved after a Bianchi procedure. Patient M.E. was born in August 92 and at 12 hours of age had surgery for bowel obstruction where a type IIIb jejunal atresia, complicated by volvulus of the terminal ileum was found. He was left with 40 cm of small bowel and the I-C valve. He was discharged 31 days later. 11 days later, he was readmitted with FTT and jejunal dilatation. Over the next 10 months, his course could be summarized by minimal weight gain and multiple episodes of central line sepsis due to enteral organisms. During that period he underwent tapering of his jejunal loop, resection of anatomic jejunal loop and of the terminal ileum. These procedures resulted in no significant weight gain. Between Oct. and Dec. 93 he was home but was again admitted after a viral illness which precipitated massive weight loss. After resuscitation, his oral intake was worsening. In March 94 we decided to proceed with a Bianchi. At surgery, 30 cm of bowel were sufficiently dilated to divide longitudinally. A GIA-75 was fired 4 times, followed by anastomosis of the ends. Over the next months, there was a steady increase in enteral tolerance which allowed decrease of the TPN. There was also a drop in the number of central line infections. One year post Bianchi, the patient only receives TPN 3 nights/week. We conclude that in this patient with SBS, the Bianchi procedure led to increased absorptive surface, decreased bacterial overgrowth which translated for him into being able to stay at home and much fewer line sepsis episodes. Pediatric surgeons should not hesitate to use this procedure in the management of SBS.

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BALLOON OCCLUSION OF THE TRACHEA IN FETAL LAMBS: EFFECT OF ONE WEEK OBSTRUCTION ON LUNG GROWTH

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It has been shown that fetal tracheal obstruction (TO) induces lung growth, and attempts to apply this concept for human fetuses with diaphragmatic hernia have begun. There is little knowledge, however, as to the duration of TO necessary to obtain significant lung growth. We studied the effect of TO for 1 week in near-term fetal sheep.

TO was performed with a Swan-Ganz catheter at 126 days of gestation (N=5). Unoperated twins served as controls (C). All fetuses were delivered by C-section at 133 days (Term=140-145), sacrificed before air breathing and weighed. Tracheal fluid was drained passively and measured. Lungs were weighed and analyzed by routine histology and morphometry after standard fixation.

Tracheal fluid was increased in experimental animals (150.8ml ± 75.8 vs. 12.2ml ± 4.5). Lung weight over body weight (BW) ratio was significantly increased in TO vs. C (4.79% ± 0.92 vs. 2.57% ± 0.17, p=.00007), as was lung volume over BW (0.081cc/g ± 0.017 vs. 0.044cc/g ± 0.004, p=0.0059). Heart, liver and kidney weights remained similar to controls when corrected for BW. Airspace fraction and alveolar number per lung volume were preserved but alveolar number and alveolar surface area per gram of body were increased.

This study shows that a single week of tracheal obstruction near term significantly increases lung growth. This observation can now be applied to a fetal diaphragmatic hernia model, before eventual application to humans.

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THE OOPS PROCEDURE (OPERATION ON PLACENTAL SUPPORT): IN
UTERO AIRWAY MANAGEMENT OF THE FETUS WITH PRENATALLY
DIAGNOSED TRACHEAL OBSTRUCTION

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Tracheal obstruction of the newborn caused by cervical
masses such as teratomas and cystic hygromas can result in a
profound hypoxic insult or even death, due to an inability to
establish an adequate airway after birth. Prenatal sonographic
diagnosis of these congenital anomalies permits anticipation of an
airway problem at delivery, and formulation of a multidisciplinary
algorithm for airway management while oxygen delivery to the
baby is maintained through the placental circulation. We report the
case of a fetus in whom a large anterior cervical cystic hygroma
was detected by ultrasound at 26 weeks gestation. Cesarean
delivery was undertaken at 36 weeks under general anesthesia
supplemented with intravenous nitroglycerine to maintain a relaxed
uterus and prevent placental separation. Following hysterotomy,
the baby's head and thorax were delivered and a pulse oximeter
was placed for fetal monitoring. After several attempts,
endotracheal intubation was achieved and fiberoptic bronchoscopy
confirmed a patent distal airway. The baby was then delivered
completely and the umbilical cord divided 9 minutes after initial
delivery of the head. Although not required, a sterile tracheostomy
set-up was available for use if attempts at endotracheal intubation
proved unsuccessful. The baby remained intubated, and then 2 days
later underwent subtotal excision of a cervical cystic hygroma that
infiltrated the floor of the mouth bilaterally, as well as the left
parotid gland. Pharmacologic maintenance of the feto-placental
circulation following hysterotomy is an invaluable adjunct to
airway management of the neonate with prenatally diagnosed
tracheal obstruction.

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HARLEQUIN EXTERNAL GENITALIA AND IT'S MANAGEMENT

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Harlequin external genitalia signifies the presence of both female and male external genitalia. The genitalia are not ambiguous and the gonads are not hermaphrodite. The case of a term infant with negative prenatal history is presented. The following anomalies were encountered: tethered cord which was released; an imperforate anus which was corrected by posterior sagittal anorectoplasty, a solitary pelvic kidney and presence of both male and female external genitalia. The infant had a clitoris, urethra, and a vaginal opening. In the left labia, there is a penis with a urethra leading to a bladder diverticulum. There were scrotal folds but no gonads within. The uterus is absent, both ovaries were biopsied and normal. Chromosomal study revealed 46XX pattern. Excision of the bladder diverticulum with the male urethra, labioplasty and vaginoplasty are planned.

To our knowledge, this entity has not been documented previously. Several theories of the embryogenesis of this entity are discussed.

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10:00-10:30 break follows this paper
UNDER WATER - ND:YAG LASER - COAGULATION OF BLOOD VESSELS IN THE RAT MODEL

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Endoscopic coagulation of placental and umbilical cord vessels has been suggested as treatment of twin-twin transfusion syndrome and in case of acardiac twin gestation to separate the two circulations.

In a surgical trial, the feasibility, safety and hemostatic effect of ND:YAG laser, used in an underwater environment, was studied in ten male Wistar rats (300-340g), under general anesthesia. This model imitates the counter current cooling system of umbilical vessels in an amniotic fluid environment. The animals were placed under water at 37°C using a custom made device allowing spontaneous respiration. The femoral vessels, carotid artery, abdominal aorta and vena cava were exposed using a dissection microscope. The vessels were classified into three groups depending on their diameter, group I: 0.6 to 1.0 mm, group II: 1.1 to 1.5 mm and group III: 1.6 to 2.2 mm. Coagulation of these vessels was done using non-touch technique, with a 600 µm fiber, introduced through the working channel of a 3.2 mm cystoscope and connected to a 100 W ND:YAG-laser (Dornier Medilas 4100), in continuous mode. For each treated vessel the energy (Joules), coagulation and obliteration-effect evaluated by 1) visual result through the video-endoscope and 2) transection and flushing of the vessel on the living animal was noted. Results of the study are listed in table 1.

<table>
<thead>
<tr>
<th>Group</th>
<th>size</th>
<th>number of vessels (art/vein)</th>
<th>energy (J)/vessel</th>
<th>closed</th>
<th>patent</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>0.6-1.0</td>
<td>19 (11/8)</td>
<td>699</td>
<td>17 (89.4%)</td>
<td>2 (10.6%)</td>
</tr>
<tr>
<td>II</td>
<td>1.1-1.5</td>
<td>18 (16/2)</td>
<td>1322</td>
<td>12 (66.2%)</td>
<td>5 (27.8%)</td>
</tr>
<tr>
<td>III</td>
<td>1.6-2.2</td>
<td>15 (7/8)</td>
<td>1633</td>
<td>6 (40.0%)</td>
<td>6 (40.0%)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>0.6-2.2</td>
<td>52 (34/16)</td>
<td>1184</td>
<td>35 (67.3%)</td>
<td>13 (25%)</td>
</tr>
</tbody>
</table>

Conclusions: Using an in vivo rat model, under water ND:YAG-coagulation is feasible, but the failure rate and, what is more important, the complication rate rise to unacceptably high levels beyond a vessel diameter of 1 mm.

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011-32-16-33.78.38 FAX NUMBER: 011-32-16-33.78.21
PYLORIC STENOSIS IN THE AGE OF ULTRASONOGRAPHY: FADING SKILLS, BETTER PATIENTS?

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Hypertrophic pyloric stenosis can be accurately diagnosed by physical examination alone. Ultrasonographic confirmation will nevertheless be obtained in the vast majority of cases, often before clinical evaluation by the surgeon. The present study examines whether this easy access to ultrasonography by the primary care physician has affected the care for infants with pyloric stenosis. Over an 18-month period, 86 infants were treated for pyloric stenosis at this institution. There were 55 boys and 31 girls, ranging in age from 14 to 62 days (mean ± SD, 24.8 ± 8.8). Only 12/86 children were older than 4 weeks. Children were referred for surgical evaluation, but abdominal ultrasonography was ordered concomitantly (or within 1 hour of surgical consultation) in all cases. Age at onset of the first symptoms was 20.6 ± 2.8 days. Delay between onset and hospital admission was < 4 days in 55 patients (64 %), and > 1 week in 6 (7 %). Metabolic alkalosis (HCO3- > 25 mEq/L), hypokalemia (K < 3.5 mEq/L), hypochloremia (Cl < 96 mEq/L) and dehydration (urine specific gravity >1.020) were seen in only 5, 5, 7 and 7 %, respectively. Six infants had prolonged pre- and postoperative courses, because of prematurity (4) or associated conditions (2). In the remaining 80 patients, total hospitalization and postoperative stay were 3.6 ± 0.8 days and 3.4 ± 0.6 days, respectively.

While the diminished importance of clinical skills in the diagnosis of pyloric stenosis may be regrettable, the availability to the primary care physician of an easy, safe, inexpensive and reliable imaging modality may have contributed to prompter treatment. Patients were hospitalized with a correct diagnosis within days of first symptoms and, not having had enough time to develop water or electrolyte imbalance, could be operated within hours of admission. The "classic" presentation of pyloric stenosis was seen in fewer than 10%.

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BALLOON PYLOROPLASTY IN CHILDREN WITH DELAYED GASTRIC EMPTYING

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Delayed gastric emptying (DGE) is being increasingly identified in infants and children, especially in those with pathologic gastro-esophageal reflux. The precise etiology of this disorder remains to be elucidated although it may have a neurologic basis as many of the children affected are also globally neurologically impaired. Surgical pyloroplasty has proven to be an effective means to ameliorate the symptoms of DGE. In an attempt to avoid operation we undertook radiologically guided Gruntzig balloon dilatation of the pylorus (balloon pyloroplasty) in a small group of children. Seven children, ages 3 to 15 years, had scintiscan proven DGE and had failed to have their symptoms controlled with medical therapy. They had been referred for surgical pyloroplasty, yet six of the seven had associated medical and neurologic conditions placing them at a higher risk for operative complications. Gruntzig balloon pyloroplasty was undertaken on these children under fluoroscopic guidance, most on an outpatient basis. One patient also had the procedure endoscopically monitored as well. Only four of the original eight patients underwent post-dilatation scintigraphy. All four showed improvement, and two were rendered symptom-free. There were no complications. Our initial experience with radiologic-guided balloon pyloroplasty has convinced us that it is a safe and easily tolerated procedure. It should be studied further as it shows some promise as a therapeutic modality for children suffering from delayed gastric emptying.

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RECURRENT INTUSUSCEPTION: SAFE USE OF BARIUM ENEMAS REDUCTION

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Recurrent intussusception (RI) is thought to occur in 5-8% of patients. We reviewed our experience to better define the causes, timing and management of RI over a period of 15 years. There were 28 patients with 37 recurrent episodes in 258 patients. Single recurrences were noted in 22 patients, double recurrences in 4 patients, triple recurrence in 1 patient, and quadruple recurrence in 1 patient. Non RI and RI patients were compared as for symptoms. No differences were found in age, sex, presence of abdominal pain, lethargy or irritability. RI patients had an increased incidence of a palpable mass. Vomiting and bloody stools were found more often in non RI patients. Lead points were identified in 4 of 28 RI patients including: two Meckel's diverticulae and one each of Peutz-Jeghers polyp and lymphoma. Twenty-six of 37, episodes occurred within 6 months including 12 recurrences within 24 hours of previous reduction. Our standard management of uncomplicated intussusception has been hydrostatic barium enema reduction (BER). 140 of 210 non-RI patients underwent successful BER (67%). Of twenty-six patients requiring bowel resection for intussusception, there was but one RI episode (4%). Thirty-five episodes of RI were treated by BER with 19 successes (54%). After operative management, 4 of 10 RI episodes had successful BER inclusive of the one patient with bowel resection. BER in RI episodes resulted in no complications. BER is safe and has a good reduction rate in RI even with previous operative reduction or bowel resection.

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CHROMOSOMAL ANOMALIES AND SURVIVAL IN NEWBORNS WITH OMPhALOCELE

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With large omphalocele, the liver is a median organ and lies within the amniotic sac (extracorporeal liver: ECL). In small defects, only the bowel or stomach lies outside the abdominal cavity (intracorporeal liver: ICL). This study is a retrospective review of 83 cases of omphalocele treated during the past 10 years. In 50 cases, diagnosis was made with obstetrical ultrasonography. All underwent amniocentesis and fetal cardiac echography. 24 pregnancies were terminated due to associated anomalies. Of 59 live-births with omphalocele, 41 are still alive (69% survival). The incidence of cardiac, chromosomal and other anomalies was 19% (11), 10% (6) and 27% (16) respectively. Omphalocele with ICL had a better survival (82% vs. 48%) (p < 0.01), and a higher rate of chromosomal anomalies (16% vs. 0%) (p < 0.05) than those with an ECL. Although the incidence of cardiac defects was similar in both groups (16% vs. 24%), omphaloceles with ECL had more complex malformations. The presence of respiratory distress, cardiac, or chromosomal anomalies in a newborn with omphalocele are major determinants of survival as summarized in the following table:

<table>
<thead>
<tr>
<th>NON-SURVIVORS (%)</th>
<th>SURVIVORS (%)</th>
<th>p VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>18</td>
<td>41</td>
</tr>
<tr>
<td>Associated anomalies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>. cardiac</td>
<td>8 (44)</td>
<td>3 (7)</td>
</tr>
<tr>
<td>. chromosomal</td>
<td>5 (28)</td>
<td>7 (2)</td>
</tr>
<tr>
<td>. others</td>
<td>7 (39)</td>
<td>9 (22)</td>
</tr>
<tr>
<td>Prematurity (≤ 34 weeks)</td>
<td>8 (44)</td>
<td>1 (21)</td>
</tr>
<tr>
<td>Respiratory distress (Apgar ≤ 6)</td>
<td>16 (89)</td>
<td>7 (17)</td>
</tr>
<tr>
<td>ECL</td>
<td>11 (61)</td>
<td>10 (24)</td>
</tr>
<tr>
<td>ICL</td>
<td>7 (39)</td>
<td>31 (76)</td>
</tr>
<tr>
<td>Antenatal diagnosis</td>
<td>11 (61)</td>
<td>15 (36)</td>
</tr>
</tbody>
</table>

Chromosomal anomalies occurred mainly in omphaloceles with an intracorporeal liver and carried a poor prognosis while in omphalocele with ECL survival was affected mainly by the associated complex cardiac anomalies.

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RESULTS OF LIVER TRANSPLANTATION IN CHILDREN WITH UNRESECTABLE LIVER TUMOURS

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Liver cancer is an uncommon indication for liver transplantation in children. Between 1986 and 1995 5 children with hepatocellular cancer (HPCC) and 3 with hepatoblastoma (HPB) were referred to the transplant service with unresectable tumours. In children with HPCC, 4/5 had underlying predisposing conditions: 2 hepatitis B, 1 biliary atresia, 1 tyrosinemia. Pre op evaluation of all patients included careful radiological screening and pre transplant laparotomy for staging. Two patients with HPCC were excluded from further consideration because of intra abdominal spread. Three patients were transplanted (mean age 6.0±7.1 years), and all have survived from between 1 and 5 years with no evidence of recurrence. Three patients with HPB were assessed (mean age 2.0 ±1 years) :2 with stage 4 disease and 1 with stage 3. All 3 received pre op chemotherapy. Two with stage 4 disease had thoracotomies as part of their assessment. 2/3 patients had significant diminution in the size of the primary tumour during the waiting period. These 2 patients, including one with stage 4 disease have survived for longer than 2 years post transplant with no recurrence. The third patient had recurrence within 2 months of transplantation. In summary, the option of liver transplantation should be considered in all children with unresectable hepatic malignancies given the 83%1 year survival and no evidence of tumour recurrence. Stage 4 disease in HPB does not necessarily exclude patients from transplantation. Early referral is encouraged in order to minimize the spread of tumour outside the liver.

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ORTHOTOPIC LIVER TRANSPLANT FOR FIBROHISTIOCYTIC PSEUDOTUMOR OF THE LIVER HILUM

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Fibrohistiocytic pseudotumor is an extremely rare gastrointestinal neoplasm. We report the case of a 5-year old female who initially presented to another institution with partial gastric outlet obstruction due to an intrinsic mass along the lesser curvature of the stomach. She underwent subtotal gastrectomy, and the pathology revealed a fibrohistiocytic pseudotumor. She subsequently developed obstructive jaundice 1 month postoperatively, and CT scan, PTC with external decompression catheter placement, and selective celiac and mesenteric arteriography revealed high grade biliary obstruction, portal venous encasement, and extensive involvement of the left lobe of the liver by tumor. An attempt at left hepatic resection was aborted, and the patient was referred to us for further therapy. We performed total hepatectomy and temporary porto-caval shunt, and attempted a bench ex-vivo left trisegmentectomy with subsequent re-implantation of the posterior segment of the right lobe of the native liver. The biliary tree was unexpectedly found to be filled with purulent material. The reimplanted liver segment functioned poorly, and was removed 24 hours later because of a severe postoperative sepsis syndrome which resolved rapidly after completion hepatectomy. The native inferior vena cava was left in situ and a porto-caval shunt utilizing an internal jugular vein interposition graft was constructed for intestinal venous decompression. She was listed for urgent liver transplantation. The anhepatic state was managed with plasmapheresis every 12 hours. She was successfully transplanted 72 hours later, and was discharged from the hospital 3 weeks later without sequelae. She remains disease free at her 8-month follow-up visit. This represents the first case of liver transplantation for fibrohistiocytic pseudotumor involving the liver hilum, and supports the use of plasmapheresis for extended anhepatic periods as a bridge to liver transplantation.

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INFANTILE FIBROSARCOMA: A RARE TUMOR

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Infantile fibrosarcoma is a rare neonatal neoplasm, reports of which are sporadic and few, rendering inadequate the understanding of its clinical behavior and optimal management. Four cases presenting between 1980 and 1990 are reviewed. Age at presentation ranged from the first day of life to sixteen months. Site of origin varied greatly: one was an extremity lesion, one was pulmonary, one was axillary, and the other was initially noted on the back. All had initial histologic patterns typical for infantile fibrosarcoma, and thus no lesions were confused with their benign fibromatous counterparts. All initial resections were considered complete and had negative margins; no adjunctive therapy was used to complement the primary excisions. Three of the four cases recurred locally. These was no demonstrable correlation between histology and clinical behavior of the lesions after surgery. All cases diagnosed before the age of one year survived. One infant required four re-excisions before a cure was achieved. The mortality reviewed suffered first from a local recurrence recognized early, then from appearance in an adjacent organ, the lung, nine years later and finally succumbed to complications of his chemotherapy. This series confirms the finding of others that aggressive but non-mutilating initial excision is necessary but often insufficient to combat local recurrence for infantile fibrosarcoma. Additionally, this report lends weight to the presumption that when this disease is diagnosed later in life it carries a less favorable prognosis.

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LEFT VERTEBRAL ARTERY FLOW INVERSION AFTER COARCTATION REPAIR

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Use of left subclavian artery in repair of congenital coarctation of the aorta is a widely accepted technique. Studies demonstrated absence of significant long term impairment in arm function. The cerebral flow could be jeopardised by a subclavian steal, while the vascular supply to the arm seems protected. To confirm this reversed left vertebral blood flow a prospective single blinded study was carried out in our institution. All patients included in the study presented symptomatic neonatal coarctation associated with hypoplastic isthmus treated by aortoplasty with subclavian flap and suture ligation of ductus arteriosus. 15 patients were randomised in two groups; In group A(8), left subclavian artery was ligated proximally to vertebral artery, while in group B(7), a selective ligation of the left vertebral artery was added. Vertebral blood flow was assessed blindly with Duplex Sonography in the first post operative month. Our results confirmed a reversal of the ipsilateral (left) vertebral blood flow in all but one (7/8) patients without selective ligation of the vertebral artery (group A) and no inversion in vertebral blood flow was found in group B (7/7). Our data suggest that even if the clinical significance of this left subclavian steal is to be determined the potential hazard for brain circulation could be avoided by selective ligation of the ipsilateral vertebral artery.

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12:30-14:00: Lunch break and CAPS Business meeting follows this paper.
IS SINGLE STAGE ENDORECTAL PULLTHROUGH SAFE AND DESIRABLE?

J.T. Momoh, J. Ige
Jos University Teaching Hospital, Jos-Nigeria

In order to obviate the need for colostomy in our setting, and also to cut-down on the cost, and the attendant inherent risk associated with multiple surgical procedures, a single stage pullthrough option was offered to patients with Hirschsprung disease in the last 3 years, and the outcome compared to those who had three stage procedure.

Of the 30 children seen with Hirschsprung disease in the last 5 years, 13 had single stage procedure, 9 had multiple staged procedure while 8 had only sphincterectomy for short-segment disease. Boley's endorectal pullthrough was the technique used for all the 22 pullthroughs. For the stage pullthrough 3 patients had major complications of pneumonia, fecal peritonitis after closure of colostomy and major wound dehiscence; while the patients with fecal peritonitis, pelvic abscess and pneumonia, again the patient with peritonitis died of septic shock. For single staged procedure 3 patients had complication of fecal peritonitis, pelvic abscess and pneumonia, again the patient with peritonitis died of septic shock. The functional result after a follow-up period of up to 2-3 years is comparable and good in both groups.

Modification of technique in the single stage pullthrough that ensured comparable result include:
- on-table intra-operative colonic lavage with saline solution containing metronidazole to ensure clean colon.
- Sacrificing a longer segment (6-10cm above transition zone) of colon to ensure excision of dilated colonic segment with compromised tone.
- Meticulous colo-rectal anastomosis in view of the discrepancy between the dilated pullthrough colon and the anorectal stump.
- Routine use of soft rectal tube for the first 72 hours post pullthrough for decompression.

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INTERNAL SPHINCTEROTOMY IN
POST-PULLTHROUGH HIRSCHSPRUNG'S DISEASE

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Despite proper technique pullthrough operations for Hirschsprung's disease at times fail to deliver normal or effective bowel evacuation. Ten patients, herein described, had their pullthrough procedures performed by a number of different pediatric surgeons. Five had been diagnosed in the newborn period and had undergone colostomies. The remainder had been diagnosed somewhat late, ages two months through two years. They too had undergone initial colostomy and all patients had elective pullthrough procedures by a variety of techniques; two Soave procedures, seven Duhamel procedures, and one Kimura-Soave for the only case of total colonic Hirschsprung's disease in the group. All of these patients had manifest difficulty in passing stool following the pullthroughs, variously described as "severe constipation", "obstipation", or "faecal retention". Four patients had been treated for post-pullthrough Hirschsprung's enterocolitis. All the patients had been treated with many laxatives, suppositories, enema routines and diet regimes for years with no success. All had been radiographically examined to reveal various degrees of megarectum or megacolon. All had been re-biopsied to confirm ganglia in the pullthrough segments. Ranging in age from one and a half to 12 years old these patients underwent full posterior internal sphincterotomies. Nine of the ten had good to excellent outcomes with resolution of their megarectum/megacolon. Three of these still require small doses of senna compound which is being weaned. One patient with Down's syndrome and a Duhamel pullthrough has failed therapy and requires a stoma.

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THE EFFECT OF ELECTROMAGNETIC FIELDS STIMULATION ON LIVER REGENERATION INHIBITED WITH ACTINOMYCINE-D FOLLOWING 70% HEPATECTOMY IN RATS

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The study aimed to understand the effect of the electromagnetic fields (EMA) on the liver regeneration which inhibited with actinomycine-D (Act-D) following 70% hepatectomy. 50 albino Wistar rats had been divided to four groups. Every group had 10 rats. The first group had only 70% hepatectomy, second group had Act-D following 70% hepatectomy, and last group had EMA stimulation after 70% hepatectomy and Act-D administration. Wet liver weight measured in every group and liver specimens were evaluated with light and electron microscopy.

This study indicated that, while EMA stimulation has increased liver regeneration 1.3 fold, Act-D administration has decreased 2.5, and EMA stimulation has decreased the inhibitory effect of Act-D administration 2.2 fold. Light microscopy and electron microscopic study also has demonstrated similar results. As a conclusion study indicated that EMA stimulation has reversed the inhibitory effect of Act-D administration following 70% hepatectomy.

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0312 3192160/202
HEPATIC OVEREXPRESSION OF MHC CLASS II ANTIGENS AND MACROPHAGE ASSOCIATED ANTIGENS (CD68) IN PATIENTS WITH BILIARY ATRESIA WITH BAD PROGNOSIS

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Juntendo University School of Medicine, Tokyo 113, Japan.

The pathogenesis of biliary atresia (BA) is still unknown. Progression to cirrhosis despite restoration of bile flow by successful portoenterostomy suggests that it is a progressive disease of the liver and biliary tree. Whether immunological factors play any role in the development of this disease remains uncertain. Aberrant expression of major histocompatibility complex (MHC) Class II antigens on hepatocytes and biliary epithelium is regarded important in the progression of hepatocellular and biliary damage mediated by cytotoxic T-cells. This study was undertaken to evaluate expression of MHC Class II antigen and macrophage associated antigens (CD68) in liver of patients with biliary atresia in order to determine its role in progression of this disease.

Liver biopsies from infants with BA (n=15), neonatal hepatitis (n=3) and normal livers (n=6) were studied by an indirect immunoperoxidase staining using a panel of antibodies against MHC Class II antigen and macrophage associated antigens (CD68) as well as routine H&E and Masson's stain. In patients with biliary atresia, liver biopsy was obtained at the time of Kasai portoenterostomy.

Expression of class II antigens and CD68 antigens was either absent or minimal in normal liver biopsies. There were a few class II antigen and CD68 positive cells around bile ducts in all patients with neonatal hepatitis and in 5 of 7 biliary atresia patients with successful Kasai portoenterostomy. In contrast, there was strong expression of MHC class II antigen and CD68 antigens on obliterated and proliferating ductal epithelial cells within the portal tracts in all 8 patients with bad prognosis. All these eight patients were over 10 weeks of age at the time of Kasai operation and had either no or temporary postoperative bile flow.

Hepatic expression of MHC Class II antigen and CD68 antigens correlated well with the severity of clinical course in patients with biliary atresia, and may act as a prognostic factor in these patients.

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Dr. Prem Puri,
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353-1-4558111 FAX NUMBER: 53-1-4550201
51. Session Seven, Monday, 09:00-09:15; O

HOW DO WE (JPS) COMPARE?: THE PEER REVIEW PROCESS (PRP) IN
PEDIATRIC SURGERY (PS)
P.L. Glick, R.G. Azizkhan

Children's Hospital of Buffalo, Buffalo, NY

Introduction: The Journal of Pediatric Surgery (JPS) is the primary journal for community and academic PS. Legitimate concerns have been raised as to whether JPS can continue to meet the needs, i.e. timely/knowledgeable refereeing of submitted manuscripts, timely publication of accepted manuscripts, and rapid review/publication of "hot" information, of its heterogenous constituents. To access this, surveys of journal editors and PS Biology Club (PSBC) members were conducted.

Methods: Surveys were sent to the editors of 15 prestigious journals (response rate =66%) and members (N=96) of the PSBC (response rate = 56%).

Results:

<table>
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<th>Recruit to Accept (%)</th>
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Conclusions: PSBC members favored rapid peer review and publication time and strongly desired a rapid review and publication format. They submit manuscripts to over 45 different journals. Interestingly, the JPS compares favorably to other journals with regards the peer review and publication times. A rapid review/publication process and more emphasis to basic science are suggested.

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INITIAL EXPERIENCE WITH THE LATERAL APPROACH FOR LAPAROSCOPIC SPLENECTOMY IN THE PEDIATRIC AGE GROUP

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St. Louis Children's Hospital at Washington University Medical Center, St. Louis
Missouri and Geisinger Clinic, Danville, Pennsylvania

Laparoscopic splenectomy in children has been shown to be safe, reduce postoperative pain, hospital stay and time to full activities. We describe our experience with a 4 port "lateral" approach in 12 patients.

Patients were placed in the lateral decubitus position and the table flexed to separate the left subcostal margin and iliac crest. The camera port was inserted at the umbilicus and additional ports were placed in the epigastrium and left lower quadrant. After mobilization of the splenic vessels were controlled with an endo-GIA and/or clips. The spleens were placed in a bag, morcellated, and extracted through a port site.

Seven females and 5 males with a median age of 13 yrs. (6-17 yrs.) and weight of 59.5 Kg (33-124 Kg) underwent splenectomy for ITP (8). Spherocytosis (3) and Hodgkin's Disease (1). The median operating time was 180 minutes (135 - 300 minutes) and blood loss was 100 ml (10-350 ml). Accessory spleens were removed in 3 cases. One patient required a 9 cm left lower quadrant incision to remove a large spleen. The sole complication which was a transient pancreatitis and associated pleural effusion. The median postoperative hospital stay was 2 days (1-11 days) and time to full activities was 8.5 days (3-25 days).

The "lateral" approach affords excellent visualization of the splenic vessels, pancreas and accessory spleens. This approach is safe, reliable and is our preferred approach for laparoscopic splenectomy.

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USE OF DOPPLER SONOGRAPHY IN THE EVALUATION OF LIVER BLOOD FLOW DURING SILO REDUCTION OF A GIANT OMPHALOCELE

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Division of Pediatric Surgery, Department of Surgery, and Department of Radiology*, Stanford University School of Medicine, Stanford, CA

Repair of a giant omphalocele containing a centrally extruded liver requires initial visceral reduction by a prosthetic silo prior to abdominal wall closure. The unique anatomic relationship of the extraabdominal liver to the inferior vena cava predisposes to the development of venous occlusion as the liver is gradually yet forcibly reduced into the abdominal cavity. We report a case of a baby born with a giant omphalocele in whom compromised hepatic vascular outflow was suspected during the course of silo reduction, on the basis of clinical changes and a sudden increase in the serum transaminases (aspartate amino transferase and alanine amino transferase) and serum bilirubin. Doppler sonography performed through the prosthetic silo demonstrated triphasic (arterial, portal and hepatic venous) vascular flow in the extraabdominal liver as well as normal intraabdominal hepatic venous and vena caval flow. Documentation of normal hepatic vascular flow permitted a continued expeditious visceral reduction by the prosthetic silo, and delayed primary abdominal wall closure on the seventh day of life. Doppler sonography performed through the silo may be an important diagnostic adjunct during the visceral reduction phase of staged abdominal wall closure in infants with giant omphalocoeles containing liver.

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THE NITROFEN-RAT MODEL: IS THE LUNG THE PRIMARY TARGET?

D. Kluth, R. Hoffmann, B. Tander, W. Lambrecht
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Introduction: Nitrofen is an embryotoxic substance that can cause congenital diaphragmatic hernia (CDH) and pulmonary hypoplasia (PH) in offspring of rats and mice. We used this model to test "clinically" the hypothesis whether nitrofen induces lung hypoplasia directly by interfering primarily with lung development or indirectly by the presence CDH.

Methods: Five litters of Sprague-Dawley rats (88 newborns) were exposed to nitrofen on day eleven of pregnancy. Three litters (51 newborn rats) served as controls. After spontaneous delivery, the newborns (n=139) were monitored for 24 hours using a "clinical" based scoring system and percutaneous sO2 measurements. In all animals the presence and size of CDH was estimated by microdissection and the survival time was recorded.

Results: In the nitrogen group, 71 out of 88 newborns showed CDH (80.7%). The majority of these animals (85%) died within the first hour of life. Seventeen animals of the nitrofen group had no hernia (18%). In this group 10 animals survived for more than 24 hours (56%). Compared to controls, animals born with CDH and PH had significant lower survival rate, worse clinical condition, and lower sO2 scores. The same was true when nitrofen animals without a hernia were compared to those with hernias.

Conclusions: From these results we conclude that CDH is the major cause of pulmonary insufficiency and death in this model, rather than the result of embryotoxic action of nitrofen on the lungs. Morphometric studies are under way for further quantification of these findings.

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09:50-10:30 coffee break follows this paper
PHOSPHOLIPASE A2 SECRETION DURING INTESTINAL GRAFT ISCHEMIA

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Purpose: We have previously found high secretory phospholipase A2 (sPLA2) activity in tissue and luminal effluent of rat jejunal grafts with significant reperfusion injury. In an attempt to identify any secretory activity occurring during the ischemic period (i.e. before reperfusion), we evaluated the biochemical changes in the perfusate of intestinal grafts during the period of cold ischemia, and the effects of a PLA2 inhibitor on enzyme secretion. The preservation solution was studied over of LDH (as a marker of cell death) and sPLA2 secretion (as a possible primer for tissue disruption after reperfusion). Methods: 35 cm jejunal grafts, harvested from Lewis rats (200 g) on a pedicle of SMA and SMV, were flushed and preserved for 48 hours in either University of Wisconsin (UW) solution alone (Group 1) or UW + PX-13 (a PLA2 inhibitor, 10 μM, Group 2) (n=5/group). Aliquots of solution (1ml) were collected at 0,1,3,6,12,24 and 48 hrs of ischemia, snap frozen and processed for PLA2 and LDH by standard biochemical methods. Graft samples were fixed for light and electron microscopy (LM/TEM). Results: sPLA2 activity in UW was optimal at physiologic pH (7-7.5), was Ca dependent and acid stable, identifying it to be the cytotoxic 14KD sPLA2. sPLA2 activity rose rapidly in the perfusate of untreated grafts and tapered off after 6 hours of ischemia, indicating maximal enzyme secretion immediately after harvesting. Addition of a PLA2 inhibitor resulted significantly lower sPLA2 activity as compared to untreated grafts (28 ± 3.5 vs. 176 ± 25.5, p<0.05). LDH activity increased later than sPLA2. There was no statistical difference between groups. LM/TEM showed only minimal epithelial separation in all cases.

Conclusions: Prompt recovery of sPLA2 in the UW used for graft preservation indicates active secretion during ischemia, particularly in the early stages. Since graft structure is preserved during this period, we postulate that the enzyme functions as a primer for injury during reperfusion. Enzyme secretion blocked by PX-13, suggesting that this compound may be useful for graft protection. Gross cell death (LDH) does not appear to play a significant role during intestinal graft ischemia.

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IS INTERVAL APPENDECTOMY AFTER APPENDEICEAL ABSCESSESS NECESSARY?

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Since 1980, the authors have not routinely removed an appendix on an interval basis following treatment for an appendiceal abscess. In this group of 10 patients, there were eight boys and two girls, two to 15 years of age. All presented with typical signs and symptoms of a ruptured appendix with an abscess that was suspected by history and examination, and proven by radiologic means (usually ultrasonography). They were all treated for at least one week with intravenous triple antibiotics. Two required drainage of their abscess (two radiological and one operative). The followup has been both clinical and ultrasonographic; the inflammation always disappears within one month. One child (two years old) returned in two months with signs and symptoms of a ruptured appendix and appendectomy was done. The other nine have remained well from six months to 13 years. From this experience and reviewing the literature, aside from the fact that close to half of the interval appendectomies show some residual inflammation, only a relatively small number of patients with an appendiceal abscess properly treated will return with a flareup or recurrence of their appendicitis (requiring appendectomy) usually within a few months; the rest live a normal life with their asymptomatic appendix intact.

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CHEST WALL AND SPINAL DEFORMITIES IN ADULT PATIENTS WITH CONGENITAL DIAPHRAGMATIC DEFECTS

K. Vanamo, J. Peltonen, R. Rintala, H. Lindahl, I. Louhimo,
Children's Hospital, University of Helsinki, Finland

The development of the lung, diaphragm and thoracic cage are closely interrelated. Despite this, the incidence of rib cage and thoracic spine deformities in patients with congenital diaphragmatic defects remains unknown. The aim of the study was to evaluate the incidence and presentation of chest wall and spinal deformities in adult patients with repaired congenital diaphragmatic defects.

Between 1948-1980, 107 out of 184 patients survived after repair of congenital diaphragmatic defects. Sixty survivors (mean age 29.6 ± 9.0 years) underwent clinical examination, chest and spinal radiography, and spirometry and diffusing capacity measurement. In 27 of this group, plethysmography, Xenon-133 radiospirometry and tests for bronchial hyperreactivity were conducted.

Subjective physical performance was below average in 8 patients (13%), 7 (12%) had asthma and 4 (7%) reported increased susceptibility to respiratory infections. Twenty-three patients (38%) experienced recurrent back pain. Seven patients (12%) reported occasional pain in the region of their incision on lifting, bending and similar activities. Anterior chest asymmetry was present in 29 patients (48%). Eleven patients (18%) had pectus excavatum and one pectus carinatum deformity. Anterior asymmetry, pectus deformities and flat chest were more common in patients who had initially a large diaphragmatic defect. Sixteen patients (27%) had a significant scoliosis (Cobb angle equal or more than 10°). In patients who had significant ventilatory impairment in spirometric and diffusion capacity measurements, scoliosis was more common than in patients with normal findings in these examinations. One patient required spinal stabilization, another with a severe kyphoscoliosis remained under observation and a further patient with moderate scoliosis was treated with a spinal brace.

The results of this study indicate that chest wall deformities and scoliosis are common in adult patients with repaired congenital diaphragmatic defects. In most patients the deformity may be mild but some will require operative treatment. These results suggest that surveillance until adulthood is appropriate.

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44-51-252 5250  *FAX. NUMBER: 44-51-228 2024
NEC OR MICROCOLON OF PREMATURITY OR MECONIUM PLUG?  
A DILEMMA IN THE TINY PREMATURE INFANT

L. Krasna, D. Rosenfeld, P. Salerno
UMDNJ-Robert Wood Johnson Medical School, New Brunswick, NJ

Failure of a small premature newborn to adequately evacuate meconium for days or weeks has been attributed to "probable" necrotizing enterocolitis (NEC) or "microcolon of prematurity". We wish to present an unusual type of "meconium plug syndrome" with the same clinical picture, seen in tiny premature babies (500-1500 gms), which required a Gastrografin enema or UGI to evacuate the plug.

We present 19 babies (480 - 1500 gms) seen at our mature nursery, who presented with the same clinical picture without any x-ray suggestion of NEC who had Barium Enemas performed, because of our suspicion of "meconium plug syndrome". All 19 babies demonstrated extensive meconium plugs, that were evacuated by the enema or by a Gastrografin upper GI series. Most of them improved after the plugs were passed. These meconium plugs were different than the usual case in a number of features: 1. Many of the mothers were on magnesium sulfate, or had eclampsia, 2. The plugs were diagnosed late (12-30 days) rather than shortly after birth, and 3. These were extensive, extending to the right colon.

We suggest that when a tiny premature baby has findings consistent with "meconium plug syndrome", the baby be transported to radiology, for a Gastrografin enema, in spite of the difficulties involved. Delay postpones the start of feedings, and increases the number of radiographic studies.

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ANTEGRADE ENEMA THERAPY FOR CHILDREN WITH FAECAL INCONTINENCE - EARLY LESSONS LEARNED

G.K. Blair, J.J. Murphy, J. Penner
British Columbia's Children's Hospital, Vancouver B.C.

Objective: To review retrospectively our experience with antegrade enema therapy in children suffering from neuromuscular faecal incontinence.

Methodology: The hospital and clinic records of children who had undergone either appendicostomy or caecostomy for the purpose of allowing antegrade enema therapy were reviewed. All these patients are still actively followed by our surgical service.

Results: Ten patients have undergone this treatment; 8 females, 2 males. The mean age at operation was 9.5 years. Four children had imperforate anus as the primary diagnosis, 5 suffered from meningomyelocele, and one had a failed Hirschsprung's pullthrough. There were 5 caecostomies and 5 appendicostomies. One caecostomy patient had a significant post-operative wound infection. One patient no longer required antegrade enemas and the caecostomy has been closed. The remaining patients are at various stages of follow-up. The antegrade enemas are proving to be more effective than their previously prescribed medical and enema therapy. Stomal intubation was an early problem. The patients are now managed with specially sized skin-level gastrostomy tubes in place for administration of the enema solution. We are utilizing lower volumes of enema solutions on average of 3 times weekly.

Conclusion: Antegrade enema therapy via caecostomy or appendicostomy can be effective but the surgical approach and subsequent enema prescription must be carefully individualized.

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PARAUMBILICAL INTESTINAL REMNANT, CLOSED ABDOMINAL WALL AND MIDGUT LOSS IN A NEONATE

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Rainbow Babies and Childrens Hospital, Cleveland, Ohio

The embryology of normal abdominal wall closure as well as the sequence of events leading to umbilical and paraumbilical defects, remain controversial. The combination of midgut loss with high jejunal atresia, the presence of a mummified right paraumbilical intestinal remnant and an intact abdominal wall in a neonate may add to our understanding of two clinical entities: gastrochisis and "congenital" short gut syndrome.

The patient is a girl born at 35 weeks weighing 2220g. An obstetric ultrasound performed at 26 weeks revealed loops of dilated bowel. A small avascular hyperechoic mass outside the fetus and to the right of the umbilical cord was seen. At birth, this glove-like tissue remnant measured 4x1 cm. It was connected by a 2mm wide avascular stalk to the right side of the insertion of the umbilical cord. The abdominal wall was without defect. The specimen had a lumen and microscopy revealed "remotely ischemic bowel". At laparotomy, a markedly dilated proximal jejunum was connected by a fibrous band to a small left transverse colon. This band united both intestinal loops to the umbilicus. The total duodeno jejunal length was 25 cm. An end jejunostomy was placed. At 34 days of age, she was discharged to home supported primarily by parenteral nutrition. Although the child did well initially, she eventually died of liver failure at age 1 year.

From the intrauterine and neonatal findings, we can postulate that in the early embryonic stage the midgut failed to return to the celomic cavity and suffered a vascular insult, such as torsion. Without the presence of viable intestine, the abdominal wall closed. The remnant, rather than sloughing or being absorbed, mummified. This case explains one of the mechanisms of segmental intestinal atresia. It also supports the theory that in gastrochisis the presence of viable bowel prevents the physiologic tendency for spontaneous closure of the abdominal wall.

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ESOPHAGEAL ATRESIA AND TRACHEOESOPHAGEAL FISTULA
ASSOCIATED WITH BRONCHOPULMONARY
FOREGUT MALFORMATIONS

N. Wiseman
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Two patients presenting with the primary diagnosis of Esophageal atresia and distal tracheoesophageal fistula underwent primary neonatal repair. Case #1 had an unremarkable neonatal course and returned at age 8 years with a striking multicystic lesion in the region of the superior segment of the right upper lobe. In retrospect this lesion was present on x-rays taken during the neonatal period. He came to have resection of a pulmonary sequestration which had become secondarily infected. Case #2 underwent primary repair with difficult mobilization of the distal esophagus resulting in moderate anastomotic tension. An early postoperative esophagram demonstrated a communicating bronchopulmonary foregut malformation with a bronchus arising from the esophagus. This lesion was resected at a second thoracotomy. Review of the initial neonatal chest x-ray revealed evidence of the malformation which had been initially interpreted as aspiration pneumonia. Both patients are well at follow-up. These cases demonstrate the rare association of bronchopulmonary foregut malformation with esophageal atresia. The missed initial diagnosis in both instances underlines the need to look for this association at the time of initial radiographic investigation. Very few similar cases has been reported in the past.

The association has been reported and classified by Srikanth and occurs with an overall increase in morbidity and mortality.

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12:00: Closing Remarks, Meeting Adjourns and Lunch
14:15 Bus returns to the Montreal Airports
27 ième

Réunion Annuelle

le Chéribourg
Septembre 2-4, 1995

l'Association Canadienne de Chirurgie Pédiatrique
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Vingt-Septième Congrès Annuel

L'ASSOCIATION CANADIENNE de CHIRURGIE PÉDIATRIQUE

Samedi-Lundi
les 2-4septembre 1995
le Chéribourg
Salon Memphrémagog
Magog, Quebec
J1X 3WP
tel. 819 843-3308
fax 819 843-2639
sans frais 800 567-6132
CANADA

Prière d'apporter ce programme au congrès.

iii
PROGRAMME SCIENTIFIQUE ET SOCIAL

Vendredi, le 1er Septembre, 1995

09:00-17:00 Réunion du Conseil de l'ACCP, salle Grande Coulée
16:00 L'autobus quitte l'hôpital Sainte-Justine pour Chéribourg
17:00 Inscription

Programme Social
19:00-22:00 Soirée d'accueil, Centre d'Art d'Orford
Samedi, le 2 Septembre, 1995

07:00-17:00 Inscription
07:00-08:00 Petit déjeûner
07:45-08:00 Bienvenue et cé ré monie d'ouvert Salon Memphrémagog
08:00-10:00 Première session scientifique
10:00-10:30 Pause
10:30-11:25 Deuxième session scientifique
11:30-12:30 Conférence Fred MacLeod
12:30-13:45 Déjeûner
13:45-15:30 Troisième session scientifique
15:30-16:00 Pause
16:00-17:15 Quatrième session scientifique

Dimanche, le 3 Septembre, 1995

07:00-12:30 Inscription
07:00-08:00 Petit déjeûner
08:00-10:00 Cinquième session scientifique
10:00-10:30 Pause
10:30-12:30 Sixième session scientifique
12:30-14:30 Déjeûner d'affaires des membres
L'après-midi est libre

Programme Social
19:00 Réception du Président
19:30 Banquet du Président
Habit de soirée facultatif
Lundi, le 4 Septembre, 1995

07:00-12:15 Inscription
07:00-08:00 Petit déjeûner
08:00-09:50 Septième session scientifique
10:00-10:30 Pause
10:30-12:00 Huitième session scientifique
12:00 Ajournement et Déjeûner
14:15 L'autobus retourne aux aéroports de Montréal
Votre enveloppe doit partir après 17:00 si vous
prenez l'autobus via le formulaire d'inscription
19:25 Départ de Mirabel pour réunion conjointe
ACCP/SFCP à Paris. L'agence de voyages
Éminence, Montréal (tel. 514 344-9100; fax 514
344-6035), est chargé des arrangements.
MOT DE BIENVENUE DU PRÉSIDENT

Welcome! Bienvenue! Notre congrès Annuel nous fournit à nouveau l'occasion de se revoir, d'accueillir de nouveaux membres et invités, participer ensemble aux rencontres sociales que nous avons organisées et surtout, de partager nos nouvelles découvertes scientifiques et cliniques,

Nous sommes assurés d'un séjour des plus agréables, en bonne compagnie, grâce à Salam et Diane Yazbeck, organisateurs locaux de congrès. Nous pouvons nous attendre à un excellent programme scientifique, préparé par Geoff Blair et son comité du programme.

En tant que chirurgien pédiatrique desservant une population plutôt restreinte, c'est toujours avec grand intérêt que j'anticipe chacune de nos réunions annuelles, depuis déjà 27 ans.

Profitez-en et participez !
Amusez-vous et partagez votre savoir !

A.W. Juckes, M.D.
Président
l'Association Canadienne de Chirurgie Pédiatrique
L'ASSOCIATION CANADIENNE DE CHIRURGIE PÉDIATRIQUE

L'association Canadienne de chirurgie PÉDIATRIQUE fut fondée en 1967. Son principal but est d'améliorer la qualité des soins chirurgicaux offerts aux enfants au Canada.

Il existe trois secteurs d'intérêt principaux pour les membres. Ce sont les méthodes diagnostiques, les traitements ainsi que la recherche.

Les Nouveaux Nés Porteurs de Malformations Congénitales

Bien que la majorité des nouveaux nés porteurs de malformations congénitales graves puissent être opérés avec succès, il arrive sou-vent que la malformation ne soit pas reconnue ou, si elle est diagnostiquée, que le médecin de première ligne ne soit pas au courant des possibilités chirurgicales. Dans ces conditions, la plupart de ces enfants meurent ou, s'ils survivent, la qualité de leur vie est fortement diminuée par leur malformation.

Les Néoplasies de L'enfant

Le cancer constitue la deuxième cause de mortalité chez les enfants. Actuellement, l'exérèse chirurgicale des tumeurs associée à la chimiothérapie et la radiothérapie permet de guérir la majorité de ces enfants.

Les Traumatismes

Les traumatismes représentent la première cause de mortalité infantile en Amérique du nord. Grâce aux méthodes modernes de premiers soins, de transport, de réanimation et de soins intensifs, ainsi qu'à la disponibilité des équipes chirurgicales spécialisées, il est devenu possible de sauver un grand nombre de ces enfants.

Programme d'éducation Médicale Continue

Afin de réussir à améliorer la qualité des soins chirurgicaux pédiatriques, l'Association Canadienne de Chirurgie PÉDIATRIQUE a lancé un programme d'éducation médicale continue pour les médecins, le personnel infirmier ainsi que pour les autres travailleurs du domaine de la santé de l'enfant. Un fond d'éducation fut créé afin de pouvoir soutenir ce programme.
Le fond d'éducation couvre, tous les ans, les frais de visites de chirurgiens pédiatiques reconnus venant donner des conférences et enseigner dans différents centres médicaux canadiens. Il fournit un chirurgien pédiatique conferencier à la réunion annuelle de la société canadienne de pédiatrie. Le fond d'éducation permet aussi à l'association de commanditer tous les ans une session scientifique au congrès du Collège Royal des Médecins et Chirurgiens du Canada. Il soutient enfin le congrès annuel de notre association. Le financement du fond d'éducation provient d'individus et de groupes aussi bien médicaux que non médicaux intéressés à la chirurgie de l'enfant. Il provient également de certaines fondations charitables. Il est de l'intention de l'association d'augmenter le capital jusqu'à un niveau suffisant pour que les intérêts puissent soutenir le programme d'éducation médicale continue. Le fond d'éducation de l'Association Canadienne de Chirurgie Pédiatrique est inscrit auprès du gouvernement fédéral et tous les dons qu'il reçoit sont entièrement déductibles d'impôt. Une vérification comptable est faite tous les ans.

Les dons peuvent être adressés à :
Ray Postuma, M.D.
Secrétaire-Trésorier de l'ACCP
AE 201-840 Sherbrook St.
Winnipeg, MB, R3A 1S1
Canada
Tel. 1-204-787-4203
Fax: 1-204-787-4837
E-mail: capsule@caps.ca
CONSEIL DE L'ACCP, 1994 - 1995
CONSEIL EXÉCUTIF

Président: A. Juckes Directeur (3e année): A. Bensoussan
Président sortant: S. Ein Directeur (2e année): J-M Laberge
Secrétaire-Trésor: R. Postuma Directeur (1e année): J.C. Donald

COMITÉS (en date du 95.16.16)

1 Archiviste: B. Shandling
S. Ein
2 Bilinguism P. Soucy
R. Cloutier R. Eccles S. Mercier S. Yazbeck
3 Malformations: M. Di Lorenzo D. Price P. Soucy
congénitales:
4 Constitution a D. Girvan G. Fraser P. Soucy
Règlements:
5 Éducation: J-M. Laberge M. Evans H. Lau A. Winthrop P. Wolfson A. Wong
6 Problèmes éthiques, J. Desjardins H. Blanchard L.A. Scott N. Wiseman
moraux et légaux: J. Desjardins J. Bass S. Chou M. Giacomantonio
B. Shandling
T.J. Baest R. Postuma
J. Desjardins J-M. Laberge R. Pearl
R. Sonnino
7 Finances: D. Girvan G. Blair
A. Bensoussan G. Blair
S. Ein G. Blair
A. Juckes G. Blair
Trésorier: G. Blair
R. Postuma
8 Prochains Congrès: S. Ein
Président: I. Kransna P. Soucy
A. Juckes
Secrétaire: R. Postuma
Accueil:
S. Yazbeck 1995 M. Giacomantonio 1996
A. Wong 1997
Autres membres: G. Blair*: U.B.C.
R. Kennedy M. Giacomantonio*

Le nom du président de comité est souligné

Veuillez contacter le secrétaire trésorier si vous êtes disponibles pour servir dans l'un des comités ou des groupes d'intérêt ci-dessus ou si vous désirez apporter des corrections à la liste ci-dessus. (Secrétaire trésorier:
Tel 204 - 787 4203 ; Fax 204 - 787 4618 or E-mail: capsule@caps.ca)
L'ASSOCIATION CANADIENNE DE CHIRURGIE PÉDIATRIQUE

PRÉSIDENTS

1967-1973 Harvey Beardmore Montreal
1973-1975 Colin Ferguson* Winnipeg
1975-1977 Jim Simpson* Toronto
1977-1979 Sam Kling Edmonton
1979-1981 Pierre Paul Collin Montreal
1981-1983 Barry Shandling Toronto
1983-1985 Gordon Cameron Hamilton
1985-1987 Stanley Mercer Ottawa
1987-1989 Alex Gillis Halifax
1991-1993 Sigmund Ein Toronto
1993-1995 Angus Juckes Regina
1995- Jean Desjardins Montreal

* décédés

SECRÉTAIRES - TRÉSORIERS

1967-1974 Barry Shandling Toronto
1974-1978 Gordon Cameron Hamilton
1978-1983 Frank Guttman Montreal
1989-1995 Ray Postuma Winnipeg
1995- Salam Yazbeck Montreal

ix
MEMBRES FONDATEURS

L'ASSOCIATION CANADIENNE DE CHIRURGIE PÉDIATRIQUE

Michael ALLEN
Phillip ASHMORE
Harvey BEARDMORE
Gordon CAMERON
Pierre-Paul COLLIN
Jean DESJARDINS
Jacques DUCHARME
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Samuel KLING
Donald MARSHALL
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David MURPHY
Herbert OWEN*
Barry SHANDLING
Israel SHRAGOVITCH*
James SIMPSON*
Clinton STEPHENS*
Jacques TURCOT*

*DÉCÉDÉS

Premier congrès annuel : 22 Janvier 1969 - VANCOUVER
LES PROCHAINS CONGRÈS DE L'ACCP:

28e Congrès Annuel
Dimanche 18-20 Août, 1996
le Sheriton, Halifax

29e Congrès Annuel
Vendredi Octobre 3-7 1997
le Hotel Rimrock, BANFF

30e Congrès Annuel
Toronto*

31e Congrès Annuel
Vendredi, 24-26 Septembre, 1999
Montréal*

32e Congrès Annuel
Vendredi, 22-24 Septembre, 2000
Ottawa*

*la date et le lieu sont ceux des congrès du Collège Royal
AVIS IMPORTANT DU COMITE DE PUBLICATIONS

RE : PRESENTATIONS 1996
28 ème congrès annuel
Halifax
Dimanche 18-20 Août, 1996

Les communications scientifiques qui seront présentées au congrès de l'ACCP en 1996 pourraient être sélectionnées pour publication dans le Journal of Pediatric Surgery. Le comité de publication exige que six (6) copies du manuscrit soient soumises QUATRE SEMAINES avant la présentation à l'adresse suivante :

Président, Comité des Publication
Association Canadienne de Chirurgie Péditrique
c/o Dr. SALAM YAZBECK
Hôpital Ste. Justine
3175 Cote Ste. Catherine
Montreal, PQ, H3T 1C5

Tous les manuscrits doivent respecter se conformer strictement aux directives aux auteurs qui apparaissent dans le Journal of Pediatric Surgery. Si tel n'est pas le cas, le communication ne pourra pas être considérée pour publication.
Il nous fait grand plaisir d'accueillir M. le docteur Juan Tovar comme conférencier invité de l'ACCP.

Le Docteur Tovar est bien connu dans le monde de la chirurgie pédiatrique, surtout en Europe et en Amérique du Sud.

Il est un gradué "cum laude" de la Faculté de Médecine de l'Université de Salamanca, sa ville natale. Son travail de Ph.D. à l'université de Valladolid, sur l'ostéoporose de l'enfant, lui valut également la mention "cum laude".

Sa formation en pédiatrie et en chirurgie pédiatrique se fit d'abord dans sa ville natale, puis à Paris sous les professeurs Fèvre et Pellerin, à l'hôpital pour enfants "La Paz" de Madrid et enfin au Children's Hospital of Los Angeles.

Il fut chef de chirurgie pédiatrique à San Sebastian de 1977 à 1991 et devint chef de chirurgie pédiatrique à l'hôpital "La Paz" de
Il enseigne à l'Université de Valladolid, l'Université du Pays Basque et l'Université Autonome de Madrid, où il détient le poste de Professeur de Pédiatrie et de Chirurgie.

Son C.V. comprend 71 publications internationales et 146 publications nationales, 25 chapitres de livre et 26 projets de recherche. Il a publié sur l'appendicite le prolapsus rectal, les tératomes, le reflux gastro-oesophagien et la pH métrie, la sténose du pylore, la fistule trachéo-œsophagienne, le maladie de Hirschsprung, les hernies, la hernie diaphragmatique, les malformations ano-rectales, la neurofibromatose, la cryptorchidie l'omphalocèle, l'adénome du pancréas, le neuroblastome, la transplantation hépatique et l'atresie des voies biliaires.

 Ses recherches se sont portées sur l'ostéoporose, l'alimentation parentérale, l'embryon de poulet comme modèle de spina bifida, l'atresie des l'intestin, le gastroschisis, 1a nutrition, l'alphafétotéprotéine, le rat comme modèle de la hernie diaphragmatique et son effet sur le développement du poumon et la malrotation de l'intestin, les malformations du rachis, le syndrome de l'intestin court et l'oesophagite. Il s'est aussi intéressé au diagnostic par ordinateur de l'abdomen aigu, la pH métrie dans le RGO et la motilité gastro-intestinale.

Le Docteur Tovar est membre de plusieurs sociétés nationales et internationales et de l'équipe éditoriale de plusieurs publications en pédiatrie et en chirurgie pédiatrique.

Le Docteur Tovar visitera Toronto, Ottawa, Québec et Montréal avant le Congrès et sera accompagné de son épouse Annick. Ils ont deux enfants, Daniel et Clara. C'est un honneur pour nous d'accueillir le Dr. Tovar comme conférencier invité de l'ACCP en 1995, et nous lui souhaitons la plus cordiale bienvenue dans le "giron" de l'ACCP.

Nous nous faisons aussi un plaisir de vous aviser que

le Docteur Tovar
sera conférencier invité
du Collège Royal des Médecins et
Chirurgiens du Canada.
COMMUNICATIONS DES RESIDENTS

Les présentations faites par les residents en chirurgie sont jugées par un panel constitué de membres du comité des Publications et/ou du comité du Programme. Il y a deux catégories de prix : celui du meilleur travail clinique et celui du meilleur travail expérimental. Chaque prix est de $250.00. Le comité du Programme essaie normalement de placer ces communications durant les deux premiers jours du programme afin que la remise des prix puisse avoir lieu au cours du banquet du Président. Puisque cette année certaines des communications devront être présentées le dernier jour, les prix seront attribués après le congrès annuel et annoncés dans le prochain numéro de CAPSULE.

PRIX POUR LES MEILLEURES COMMUNICATIONS DES RÉSIDENTS EN 1994:

Meilleur travail clinique: Dr. J. F. Bealer
Pour sa présentation intitulée:

"THE INCIDENCE AND SPECTRUM OF NEUROLOGIC INJURY FOLLOWING OPEN FETAL SURGERY FOR CONGENITAL ANOMALIES"

John F Bealer, Erik D Skarsgard, Walter E Finkbeiner, N Scott Adzick, Michael R Harrison, The Fetal Treatment Center, USCF, San Francisco, USA

Meilleur travail expérimental: Dr. D. Major
Pour sa présentation intitulée:

"COMBINED VENTILATION AND PERFLUOROCHEMICAL (PFC) TRACHEAL INSTILLATION AS AN ALTERNATIVE TREATMENT FOR NEAR-DEATH CONGENITAL DIAPHRAGMATIC HERNIA"

D Major, M Cadenas, R Cloutier, L Fournier, TH Shaffer, MR Wolfson
Unité de recherche en pédiatrie,
Centre Hospitalier de l'Université Laval, Saint-Foy, Québec.
Temple University School of Medicine, Philadelphia, USA

Félicitations Dr. Bealer et Dr. Major !!!
LES ARMOIRIES DE
L'ASSOCIATION CANADIENNE DE CHIRURGIE PEDIATRIQUE
CANADIAN ASSOCIATION OF PEDIATRIC SURGEONS

Le Blason

Sur fond violet pale, se trouve à droite un bistouri droit
entouré d'un serpent alors qu'à gauche se tient un enfant, tout argent
Couronne: Au sommet se trouvent trois feuilles d'érable ainsi que la
date 1967.
Devis: " Je le pensay , Dieu le guarit ."
Signification

Le rouge et le violet des armes sont les couleurs du Collège
Royal des Medecins et Chirurgiens du Canada et représentent le
sang artériel et veineux vu au cours de la chirurgie. L'association du
bistouri avec le serpent guérisseur d'Esclape ainsi qu'avec l'image
d'un enfant en bonne santé symbolise la pratique de la chirurgie
pédiatrique .

La couronne du blason est la feuille d'érable du Canada et la
date de fondation de notre association

La devise est une citation D'Ambroise Paré, père de la
chirurgie moderne.

Avis Concernant le Programme scientifique
Abbréviations utilisées dans les pages que suivent:
O - Original, présentation de 10 minutes, suivie d'une
discussion de 5 minutes.
R - Communication d'un résident, éligible au concours pour le
meilleur travail clinique ou expérimental d'un résident.
C - Rapport de cas, techniques spéciales ou méthodes.
Présentation de 5 minutes suivie d'une discussion de 5
minutes.

Le nom de celui/celle qui présentera est souligné.

On rappelle aux auteurs qu'ils doivent faire parvenir six (6)
copies de leur manuscrit, quatre (4) semaines avant le
congrès, au Président du Comité des Publication:

Président, Comité des Publications de L'ACCP
c/o Dr. Salam Yazbeck
Hôpital Ste. Justine
3175 Cote Ste. Catherine
Montréal, Q C
H3T 1C5
programme détaillé

Samedi-Lundi, Septembre 2-4, 1995
le Chéribourg
Salon Memphrémagog

xix
Programme Scientifique  
Samedi, Septembre 2, 1995  
le Chéribourg  

07:00-08:00  Petit déjeuner  

07:45  Bienvenue et Cérémonie d'ouverture  
Le président, Dr Angus W. Juckes  
Salon Memphrémagog  

08:00-10:00  Session Scientifique 1  
Les Co-Présidents:  
Dr. G. Blair and Dr. M. Di Lorenzo  

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</table>
| 1 | O   | 0900-0815  | NONSPECIFIC ABDOMINAL COMPLAINTS IN THE PEDIATRIC POPULATION: THE QUEST FOR HELICOBACTER PYLORI  
N.R. Yoshida, E. Webber, M. Giacomantonio  
Izaak Walton Killam Children's Hospital, Halifax, NS |
| 2 | O   | 0815-0830  | CHANGING PATTERNS OF PAEDIATRIC PEPTIC ULCER DISEASE  
K. Azarow, P. Kim, B. Shandling, S. Ein  
The Hospital for Sick Children, University of Toronto, Toronto, ON |
| 3 | O   | 0830-0845  | GASTROINTESTINAL INJURY IN CHILDREN FOLLOWING BLUNT ABDOMINAL TRAUMA  
R.S. Roussou, M.C. Strolov, K.F. Heiss, R.R. Rickets  
Egleston Children's Hospital at Emory University, Atlanta, GA |
| 4 | O   | 0845-0900  | A REVIEW OF CT SCAN IN THE DIAGNOSIS OF INTESTINAL AND MESENTERIC INJURY IN PEDIATRIC BLUNT ABDOMINAL TRAUMA  
J. Graham, A. Wong  
Alberta Children's Hospital, University of Calgary, Calgary, AB |
| 5 | C   | 0900-0910  | TRAUMATIC GASTRIC TRANSECTION COMPPLICATED BY TRAUMATIC VAGOTOMY - A CASE REPORT  
M.H. Kimmins, D. Poenaru, I. Kamal  
Kingston General Hospital, Kingston, ON |
| 6 | C   | 0910-0920  | THE SPLIT NOTOCHORD SYNDROME  
THERAPEUTIC OPTIONS  
S. Al Shannafy, A. Al-Rabeeah, A. Al-Bassam, D.A. Gillis, M. Hassonah  
King Faisal Specialist Hospital and Research Center, Riyadh, Saudi Arabia |
| 7 | C   | 0920-0930  | THE MANAGEMENT OF CHOLEDOCHOLITHIASIS IN THE PEDIATRIC POPULATION  
E. Hwang, D. Wesson  
Department of Surgery, Cornell University Medical College and the New York Hospital, New York, NY |
| 8 | C   | 0930-0940  | HIRSCHSPRUNG'S DISEASE, IMPERFORATE ANUS AND DOWN'S SYNDROME  
H. Flaggola, A. Fecteleau, J.M Laberge, F.M. Gutman  
Montreal Children's Hospital, Montreal, QC |
| 9 | C   | 0940-0950  | EXTENDED HIRSCHSPRUNG'S DISEASE: A REPORT OF 3 CASES  
The Montreal Children's Hospital, Montreal, QC |
| 10|     | 0950-1000  | HYDROPS FETALIS AND PULMONARY SEQUESTRATION  
M. G. Evans  
Hospital of Western Ontario, University of Western Ontario, London, ON |

10:00-10:30  PAUSE  
O = Original, 10 minutes; R = Travail d'un résident; C = Présentation de 5 minutes
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| 11 | O | 10:30-10:45 Sam. Sep 2 | OPTIMAL SURGICAL MANAGEMENT OF PATENT DUCTUS ARTERIOSUS  
T.L. Fortes, M.G. Evans  
Children's Hospital of Western Ontario, University of Western Ontario, London, ON |
| 12 | C | 10:45-10:55 Sam. Sep 2 | CHALLENGING THE EMBRYOGENESIS OF CLOACAL EXSTROPHY  
S.W. Bruch, N.S. Adzick, R.B. Goldstein*, M.R. Harrison  
The Fetal Treatment Center, *Dept. of Radiology, UCSF, San Francisco, CA |
| 13 | O | 10:55-11:10 Sam. Sep 2 | MANAGEMENT OF THE GASTROINTESTINAL TRACT AND NUTRITION IN PATIENTS WITH CLOACAL EXSTROPHY  
A. Davidoff, A. Hebra, D. Balmer, J. Templeton, L. Schnauer  
Departments of Surgery and Nutrition Services, Children's Hospital of Philadelphia, PA |
| 14 | O | 11:10-11:25 Sam. Sep 2 | IS EARLY RESPONSE TO PORTOENTEROSTOMY PREDICTIVE OF LONG-TERM OUTCOME  
N.L. Yanchar, A.M.J. Shapiro, D.L. Sigalet  
University of Alberta, Edmonton, AB |

Fred MacLeod Lecture  
Dr. J.A. Tovar  
"Fetal Rat Models of Surgical Disease"

Déjeuner

O = Original, 10 minutes; R = Travail d'un résident; C = Présentation de 5 minutes
Programme Scientifique  
Samedi, Septembre 2, 1995  
le Chéribourg  
13:45-15:30  **Session Scientifique 3**  
Salon Memphrémagog  
Les Co-Présidents:  
Dr. S. Ein and Dr. J. Desjardins

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| 15 | O   | 1345-1400 Sam. Sep 2 | IDENTIFICATION OF RISK FACTORS CHARACTERISTIC AND PREDICTIVE OF COLORECTAL NECROTIZING ENTEROCOLITIS (NEC)  
J. Baerg, M. Giacomantonio, P. Fahwa, L. Tan, R. Keith  
University of Saskatchewan, Saskatoon, SK and Dalhousie University, Halifax, NS |
| 16 | O   | 1400-1415 Sam. Sep 2 | DIAGNOSTIC LAPAROSCOPY IN CHILDHOOD CROHN'S DISEASE  
G.G. Miller, G.K. Blair, J.J. Murphy  
Department of Surgery, University of British Columbia's Children Hospital, Vancouver, BC |
| 17 | O   | 1415-1430 Sam. Sep 2 | NOSOCOMIAL INFECTIONS IN THE GENERAL SURGICAL NEONATE  
A. Sandler, S. Ode Damiuk, R. Gold, R. Filler, R. Pearl  
The Hospital for Sick Children, University of Toronto, Toronto, ON |
| 18 | O   | 1430-1445 Sam. Sep 2 | GERMLINE MUTATIONS OF THE RET Proto-Oncogene in Pedigree with Men Type 2A: DNA ANALYSIS AND ITS IMPLICATIONS FOR PEDIATRIC SURGERY  
T. Shimotaka, N. Iwai, J. Yanagihara, K. Inoue,  
*J. Inazawa, **I. Nishio  
Division of Surgery, Children's Research Hospital, *Dept. of Hygiene,  
Kyoto Prefectural University of Medicine,  
Kyoto, Japan  
**Dept. of Medical Genetics, Biomedical Research Center, Osaka University Medical School, Osaka, Japan |
| 19 | O   | 1445-1500 Sam. Sep 2 | SURGICAL SEQUELAE OF CONGENITAL PANCREATOIC-BILIARY ANOMALIES  
N. Spigland, R. Greco  
UMDNJ-Robert Wood Johnson Medical School, New Brunswick, NJ |
| 20 | C   | 1500-1510 Sam. Sep 2 | REPAIR OF CONGENITAL BRONCHOBILIARY FISTULA: DIAGNOSTIC AND SURGICAL TECHNIQUE  
S. Efrati, M. Krishnamoorthy, C. Yee, H. Applebaum  
Departments of Surgery and Nuclear Medicine, Kaiser Permanente Medical Center, Los Angeles, CA |
| 21 | C   | 1510-1520 Sam. Sep 2 | COMPLICATIONS OF SURGICAL JEJUNOSTOMY TUBES IN CHILDREN  
P. Soury, D. Smith  
Children's Hospital of Eastern Ontario, Ottawa, ON |
| 22 | C   | 1520-1530 Sam. Sep 2 | ROUX-EN-Y JEJUNOSTOMY IN PEDIATRIC PATIENTS  
N.R. Yoshida, E. Webber, D.A. Gillis, M. Giacomantonio  
Izaak Walton Killam Children's Hospital, Halifax, NS |

15:30-16:00  **PAUSE**

O = Original, 10 minutes; R = Travail d'un résident; C = Présentation de 5 minutes
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<th>CL</th>
<th>TIME</th>
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</table>
| 23 | O  | 1600-1615 Sam. Sep 2 | ABNORMAL INTERNAL ANAL SPHINCTER INNERVATION IN PATIENTS WITH HIRSCHSPRUNG'S DISEASE AND ALLIED DISORDERS  
H. Kobayashi, H. Hirakawa, P. Puri  
Children's Research Centre, Our Lady’s Hospital for Sick Children, Crumlin, Ireland |
| 24 | O  | 1615-1630 Sam. Sep 2 | NITRIC OXIDE SYNTHESIS INHIBITOR ACTION ON THE RABBIT PYLORIC MUSCLE  
E. Gisponi, D. Dustag, D. Super  
Case Western Reserve, University School of Medicine, Cleveland, Ohio |
| 25 | R  | 1630-1645 Sam. Sep 2 | CONGENITAL CYSTIC ADENOMATOIDS MALFORMATION (CCAM) IN THE FETUS: NATURAL HISTORY AND PREDICTORS OF OUTCOME  
J.A. Miller, J.E. Corteville, J.C. Langer  
Depts. of Surgery and Obstetrics/Gynecology, Washington University, St. Louis, MO |
| 26 | C  | 1645-1655 Sam. Sep 2 | POSTPNEUMONECTOMY SYNDROME IN CHILDREN: USE OF INTRATHORACIC TISSUE EXPANDER  
J.B. Pfleisch, P.W. Campbell  
Vanderbilt University, Nashville, TN |
| 27 | R  | 1655-1705 Sam. Sep 2 | MULTIPLE ENTERO-ENTERO FISTULAE: AN UNUSUAL COMPLICATION OF HENOCH-SCHÖNLEIN PURPURA  
K.W. Gow, J.J. Murphy, G.K. Blair  
British Columbia's Children's Hospital, University of British Columbia, Vancouver, BC |
| 28 | R  | 1705-1715 Sam. Sep 2 | SPANCHNIC ARTERY PSEUDO-ANEURYSMS SECONDARY TO BLUNT ABDOMINAL TRAUMA IN CHILDREN  
K.W. Gow, J.J. Murphy, G.K. Blair  
British Columbia's Children's Hospital, University of British Columbia, Vancouver, BC |

O = Original, 10 minutes; R = Travail d'un résident; C = Présentation de 5 minutes
Programme Scientifique  
Dimanche, Septembre 3, 1995  
le Chéribourg  

07:00-08:00  Petit déjeuner  
08:00-10:00  Session Scientifique 5  
Salon Memphrémagog  
Les Co-Présidents:  
Dr. D. Girvan and Dr. A. Bensoussan  

<table>
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| 29 | O   | 0800-0815    | ANTICOAGULATION WITHOUT CATHETER REMOVAL IN CHILDREN WITH CATHETER RELATED CENTRAL VEIN THROMBOSIS  
R.D. Kenney, M. David, A.L. Bensoussan  
Hôpital Sainte-Justine, Montreal, QC                                                                                                                            |
| 30 | O   | 0815-0930    | THE ABDOMINAL EVALUATION FOLLOWING ACUTE CARDIORESPIRATORY COLLAPSE IN INFANTS: THE ROLE OF BEDSIDE ULTRASOUND  
K. Azarow, P. Babyn, B. Connelly, S. Shemla, S. Ein, R. Pearl  
The Hospital for Sick Children, University of Toronto, Toronto, ON                                                                                          |
| 31 | O   | 0930-1045    | THAL FUNDOPICATION IN NEUROLOGICALLY HANDICAPPED CHILDREN  
V. Ramachandran, K.W. Ashcraft, R.J. Sharp, J.P. Murphy, C.L. Snyder, G.K. Gittes, S.W. Blickler  
The Children's Mercy Hospital, Kansas City, MO                                                                                                               |
| 32 | O   | 1045-1100    | NEUROLOGICALLY IMPAIRED CHILDREN WHO REQUIRE A GASTROSTOMY: PROPHYLACTIC ANTI-REFLUX PROCEDURE OR NOT?  
Montreal Children's Hospital, Montreal, QC                                                                                                                   |
| 33 | O   | 1100-1215    | CAN CARDIAC WEIGHT PREDICT LUNG WEIGHT IN CDH?  
Buffalo Institute of Fetal Therapy (BIFT), Deps. of Surgery, Pediatrics, and Physiology, School of Medicine and Biomedical Sciences, SUNY-AB, Buffalo, NY |
| 34 | C   | 1215-1330    | THE BIANCHI PROCEDURE IN A PATIENT WITH JEJUNAL ATRESIA  
H. Flageole, V.R. Adolph, D. Sigeta, A. Fecteau, J-M Laberge  
Montreal Children's Hospital, Montreal, QC                                                                                                                   |
| 35 | O   | 1330-1445    | BALLOON OCCLUSION OF THE TRACHEA IN FETAL LAMBS: EFFECT OF ONE WEEK OBSTRUCTION ON LUNG GROWTH  
G. Chitulescu, J-M Laberge, M.F. Chen, A. Manika, E. Hashim  
Montreal Children's Hospital, Montreal, QC                                                                                                                  |
| 36 | O   | 1445-1500    | THE OOPS PROCEDURE (OPÉRATION SUR PLANCENTAL SUPPORT): IN UTERO AIRWAY MANAGEMENT OF THE FetUS WITH PRENATALLY DIAGNOSED TRACHEAL OBSTRUCTION  
E.D. Skarogard, U. Chikina, E. Krane, E.T. Fife  
Division of Pediatric Surgery, Dept. of Surgery, Dept. of Obstetrics and Gynecology, and Dept. of Anesthesiology, Stanford University School of Medicine, Stanford, CA |
| 37 | C   | 1500-1600    | HARLEQUIN ENTERNAL GENITALIA AND ITS MANAGEMENT  
S. Al Jadaan, S. Chou  
Children's Hospital of Eastern Ontario, Ottawa, ON                                                                                                           |

10:15-10:45 PAUSE

O = Original, 10 minutes; R = Travail d'un résident; C = Présentation de 5 minutes
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<td>38</td>
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<td>1030-1045&lt;br&gt;Dim. Sep 3</td>
<td>UNDER WATER - ND: YAG LASER - COAGULATION OF BLOOD VESSELS IN THE RAT MODEL&lt;br&gt;V. Evrand, P. Van Baalser, J. Deprest, T. Lené, K. Vandenberghe, I. Brosens&lt;br&gt;Center for Surgical Technologies, Faculty of Medicine, Katholieke Universiteit Leuven, Belgium</td>
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<td>39</td>
<td>O</td>
<td>1045-1100&lt;br&gt;Dim. Sep 3</td>
<td>PYLORIC STENOSIS IN THE AGE OF ULTRASONOGRAPHY: FADING SKILLS, BETTER PATIENTS?&lt;br&gt;A. Chen, F. I. Luks, B.F. Gilchrist, C.W. Wesselhoeft, F.G. DeLuca&lt;br&gt;Division of Pediatric Surgery, Hasbro Children's Hospital, Brown University School of Medicine, Providence, RI</td>
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<td>40</td>
<td>C</td>
<td>1100-1110&lt;br&gt;Dim. Sep 3</td>
<td>BALLOON PYLOROPLASTY IN CHILDREN WITH DELAYED GASTRIC EMPTYING&lt;br&gt;P.L. Skarsgard, G.K. Blair, G.Culham&lt;br&gt;Department of Surgery &amp; Radiology, British Columbia's Children's Hospital, Vancouver, BC</td>
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<td>41</td>
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<td>1110-1125&lt;br&gt;Dim. Sep 3</td>
<td>RECURRENT INTUSSUSCEPTION: SAFE USE OF BARIUM ENEMA REDUCTION&lt;br&gt;A. Festou, H. Flagelo, J-M Laberge, K.S. Shaw, F.M. Guttman, L.T. Nguyen&lt;br&gt;Montreal Children's Hospital, Montreal, QC</td>
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<td>1125-1140&lt;br&gt;Dim. Sep 3</td>
<td>CHROMOSOMAL ANOMALIES AND SURVIVAL IN NEWBORNS WITH OMPhALOCELE&lt;br&gt;D. Shvili, K.S. Shaw, M. Lallier, S. Yazbeck, M. Di Lorenzo, A. Gignyon, H. Blanchard&lt;br&gt;Hôpital Sainte-Justine, Montreal, QC</td>
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<td>43</td>
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<td>1140-1155&lt;br&gt;Dim. Sep 3</td>
<td>RESULTS OF LIVER TRANSPLANTATION IN CHILDREN WITH UNRESECTABLE LIVER TUMOURS&lt;br&gt;R. Superti, R. Bilik&lt;br&gt;Department of Surgery, Hospital for Sick Children, Toronto, ON</td>
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<td>44</td>
<td>C</td>
<td>1155-1205&lt;br&gt;Dim. Sep 3</td>
<td>ORTHOTOPIC LIVER TRANSPLANT FOR FIBROHISTIOCYTIC PSEUDOTUMOR OF THE LIVER HILUM&lt;br&gt;H.B. Kim, A. Habra, A. Davidoff, M. Buzby, E. Maller, M.A. Hoffman&lt;br&gt;Department of Surgery, The Children's Hospital of Philadelphia and the University of Pennsylvania School of Medicine, Philadelphia, PA</td>
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<td>45</td>
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<td>1205-1215&lt;br&gt;Dim. Sep 3</td>
<td>INFANTILE FIBROSARCOMA: A RARE TUMOR&lt;br&gt;M. Smith, S.K. Mayer, A. Ouimet&lt;br&gt;Hôpital Sainte-Justine, Montreal, QC</td>
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<td>1215-1230&lt;br&gt;Dim. Sep 3</td>
<td>LEFT VERTEBRAL ARTERY FLOW INVERSION AFTER COARCTATION REPAIR&lt;br&gt;S. Vobachy, J. Dubois, D. Johnson, A. Fourtner, C. Chartrand&lt;br&gt;Cardiac Surgery and Radiology Dept., Ste-Justine Hôpital, University of Montreal, Montreal, QC</td>
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O = Original, 10 minutes; R = Travail d'un résident; C = Présentation de 5 minutes
# Programme Scientifique  
**Lundi, Septembre 4, 1995**  
*le Chérubourg*  

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<th>Time</th>
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<th>Centre</th>
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<tr>
<td><strong>8:00 - 8:15</strong></td>
<td>IS SINGLE STAGE ENDORECTAL PULLTHROUGH SAFE AND DESIRABLE??</td>
<td>J.T. Momoh, J. Ige</td>
<td>Jos University Teaching Hospital, Jos, Nigeria</td>
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<td><strong>8:15 - 8:30</strong></td>
<td>INTERNAL SPHINCTEROTOMY IN POST-PULLTHROUGH HIRSCHSPRUNG'S DISEASE</td>
<td>G.K. Blair, J.J. Murphy, G.C. Fraser</td>
<td>Division of Pediatric General Surgery, British Columbia's Children's Hospital, Vancouver, BC</td>
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<td><strong>8:30 - 8:45</strong></td>
<td>THE EFFECT OF ELECTROMAGNETIC FIELDS STIMULATION ON LIVER REGENERATION INHIBITED WITH ACTINOMYCINE-D FOLLOWING 70% HEPATECTOMY IN RATS</td>
<td>S. Yücesan, M.Y. Mecdet, F. Özgüner, A. Nayci, M. Çakmak, H. Dindar, M. Bartas, H. Gökçöra, M. Kaya, E. Yazgan, U. Mele</td>
<td>Department of Pediatric Surgery, Ankara University School of Medicine, Dikimevi, 06100 Ankara / Turkey</td>
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<td><strong>8:45 - 9:00</strong></td>
<td>HEPATIC OVEREXPRESSION OF MCH CLASS II ANTIGENS AND MACROPHAGE ASSOCIATED ANTIGENS (CD68) IN PATIENTS WITH BILIARY ATRESIA WITH BAD PROGNOSIS</td>
<td>H. Kobayashi, R. Surana, T. Miyano, P. Puri</td>
<td>Children's Research Centre, Our Lady's Hospital for Sick Children, Crumlin, Ireland and Jutendo University School of Medicine, Tokyo,</td>
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<tr>
<td><strong>9:00 - 9:15</strong></td>
<td>HOW DO WE (JPS) COMPARE? THE PEER REVIEW PROCESS (PRP) IN PEDIATRIC SURGERY (PS)</td>
<td>P.L. Glick, R.G. Azizkhan</td>
<td>Children's Hospital of Buffalo, Buffalo, NY</td>
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<td><strong>9:15 - 9:30</strong></td>
<td>INITIAL EXPERIENCE WITH THE LATERAL APPROACH FOR LAPAROSCOPIC SPLENECTOMY IN THE PEDIATRIC AGE GROUP</td>
<td>P. Fitzgerald, J. Langer, B. Cameron, A. Park, M. Marcuccio, M. Walton, M. Skinner</td>
<td>Children's Hospital at Chedoke-McMaster, Hamilton, ON St. Louis Children's Hospital at Washington University Medical Center, St. Louis Missouri and Geisinger Clinic, Danville, PA</td>
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<tr>
<td><strong>9:30 - 9:45</strong></td>
<td>USE OF DOPPLER SONOGRAPHY IN THE EVALUATION OF LIVER BLOOD FLOW DURING SILO REDUCTION OF A GIANT OMPHALOCELE</td>
<td>E.D. Skarregard, R.A. Barth*</td>
<td>Division of Pediatric Surgery, Dept. of Surgery, Dept. of Radiology*, Stanford University School of Medicine, Stanford, CA</td>
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<tr>
<td><strong>9:45 - 10:00</strong></td>
<td>THE NITROGEN-RAT MODEL: IS THE LUNG THE PRIMARY TARGET?</td>
<td>D. Küth, R. Hoffman, B. Tander, W. Lambracht</td>
<td>Dept. of Pediatric Surgery, University Hospital, Hamburg, Germany</td>
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09:50 - 10:30 PAUSE

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### Programme Scientifique
Lundi, Septembre 4, 1995
le Chéribourg
Salon Memphrémagog

**10:30-12:00 Session Scientifique 8**
Les Co-Présidents:
Dr. J. Donald et Dr. S. Yazbeck

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<td>55</td>
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<td>1030-1045</td>
<td>PHOSPHOLIPASE A₂ SECRETION DURING INTESTINAL GRAFT ISCHEMIA</td>
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<td>Lun. Sep 4</td>
<td>R.E. Sonnino, R. Franson, A. Schrama, L. Pigott, S. Buchelt</td>
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<td>Medical College, of Virginia, Richmond, VA</td>
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<td>56</td>
<td>O</td>
<td>1045-1100</td>
<td>IS INTERVAL APPENDECTOMY AFTER APPENDICEAL ABSCESSENECESSARY?</td>
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<td>Lun. Sep 4</td>
<td>S.H. Elia, B. Shandling</td>
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<td>Hospital for Sick Children, Toronto, ON</td>
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<td>57</td>
<td>O</td>
<td>1100-1115</td>
<td>CHEST WALL AND SPINAL DEFORMITIES IN ADULT PATIENTS WITH CONGENITAL DIAPHRAGMATIC DEFECTS</td>
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<td>Children's Hospital, University of Helsinki, Finland</td>
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<td>58</td>
<td>O</td>
<td>1115-1130</td>
<td>NEC OR MICROCOLON OF PREMATURITY OR MECONIUM PLUG? A DILEMMA IN THE TINY PREMATURE INFANT</td>
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<td>Lun. Sep 4</td>
<td>I. Krasna, D. Rosenfeld, P. Salerno</td>
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<td>UMDNJ-Robert Wood Johnson Medical School, New Brunswick, NJ</td>
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<td>C</td>
<td>1130-1140</td>
<td>ANTEGRADE ENEMA THERAPY FOR CHILDREN WITH FECAL INCONTINENCE - EARLY LESSONS LEARNED</td>
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<td>Lun. Sep 4</td>
<td>G.K. Blair, J.J. Murphy, J. Penner</td>
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<td>British Columbia's Children's Hospital, Vancouver, BC</td>
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<td>60</td>
<td>C</td>
<td>1140-1150</td>
<td>PARAUMBILICAL INTESTINAL REMNANT, CLOSED ABDOMINAL WALL AND MIDGUT LOSS IN A NEONATE</td>
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<td>Rainbow Babies and Children's Hospital, Cleveland, OH</td>
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<td>61</td>
<td>C</td>
<td>1150-1200</td>
<td>ESOPHAGEAL ATRESIA AND TRACHEOESOPHAGEAL FISTULA ASSOCIATED WITH BRONCHOPULMONARY FOREGUT</td>
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<td>Lun. Sep 4</td>
<td>N. Wiseman</td>
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<td>Pediatric Surgery, Children's Hospital, Winnipeg, MB</td>
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12:00
AJOURNEMENT; Déjeuner

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Please note; the following papers were withdrawn on August 8, 1995 by the Authors from the program circulated in July 1995
(* indicates paper number in the original program of July 1995)

16*. **Session Three**, Saturday, 14:00-14:15; O, R
REGIONAL BLOOD FLOW RESPONSE TO EPINEPHRINE INFUSION IN NORMOVOLEMIC AND HYPOVOLEMIC PIGLETS
D.L. Bigam, DW Jirsch, KJ Barrington, PY Cheung
Surgical Medical Research Institute, University of Alberta

54*. **Session Seven**, Monday, 09:35-09:45; C
SIRENOMELIA: UROLOGIC MANIFESTATIONS OF A SURVIVING MERMAID
British Columbia's Children Hospital
University of British Columbia, Vancouver

The resulting program changes affect the following papers in the final program as published herein: #16, #41, #51, #54, #59-#61
Authors of these papers are asked to note the change in their presentation time.

We regret the inconvenience caused by last minute withdrawal of papers.
RESUMÉS

ABBRÉVIATIONS:

O = Original, présentation de 10 minutes et discussion de 5 minutes
R = Communication d'un résident, mêmes limites de temps
C = Rapport de cas, techniques ou méthode: présentation de 5 minutes et discussion de 5 minutes