CANADIAN ASSOCIATION of
PAEDIATRIC SURGEONS

30th

Annual Meeting

TORONTO

September 25-28, 1998
Thirtieth Annual Meeting

CANADIAN ASSOCIATION of
PAEDIATRIC SURGEONS

September 25-28, 1998

Toronto Marriott Eaton Center
525 Bay Street
Toronto (Ontario) CANADA
M7Y 2W1

(416) 597-9200
SCIENTIFIC AND SOCIAL PROGRAM

Friday, September 25, 1998

09:00 - 17:00  Meeting of CAPS Council (Executive)
17:00          Registration
19:00 - 22:00  Welcoming Reception – Toronto Marriott Eaton Center

Saturday, September 26, 1998

07:00 - 13:00  Registration
07:00 - 07:55  Continental Breakfast
07:30 - 13:00  Exhibits
07:55 - 08:00  Welcome and Opening Ceremony
08:00 - 10:00  Scientific Session ONE
10:00 - 10:30  Refreshment Break
10:30 - 11:30  Scientific Session TWO
11:30 - 12:30  Fred MacLeod Lecture
12:30          Lunch
14:00 - 15:00  Scientific Session THREE
15:00 - 16:00  Surgeons on the "Firing Line"

Sunday, September 27, 1998

07:00 - 12:30  Registration
07:00 - 08:00  Continental Breakfast
07:30 - 13:00  Exhibits
08:00 - 10:00  Scientific Session FOUR
10:00 - 10:30  Refreshment Break
10:30 - 11:30  Scientific Session FIVE
11:30 - 12:30  "2 minutes / 2 slides"
12:30          CAPS Members Business Meeting
19:00          Presidential Reception
19:30          Presidential Banquet – Toronto Marriott Eaton Center

Monday, September 28, 1998

07:00 - 12:00  Registration
07:00 - 08:00  Continental Breakfast
07:00 - 13:00  Exhibits
08:00 - 10:00  Scientific Session SIX
10:00 - 10:30  Refreshment Break
10:30 - 12:30  Scientific Session SEVEN
12:30          Annual Meeting Adjoins
PRESIDENT'S WELCOME

Dear CAPS members and Guests:

This year marks a special occasion in the history of CAPS. It is our 30th anniversary and we are looking forward to a very special meeting in Toronto from Friday, September 25th through to Monday, September 28th. The Canadian Association of Paediatric Surgeons began in January of 1969 with a meeting in Vancouver where 27 pediatric surgeons from across Canada came together because of their common interest in the well-being and care of surgical problems in children. We have subsequently grown to an organization that now has members around the world and an annual meeting that is known for its superb clinical and scientific program and wide-ranging discussions from all members in attendance. This year will continue this fine tradition.

Arlene and Siggie Ein will be our local hosts and they always ensure that we have a most enjoyable occasion. I know that Arlene is working on some special features for this 30th anniversary meeting. Geoff Blair and his Program Committee will again provide us with an excellent scientific program which has always been the hallmark of our meetings and it is bound to stimulate many interesting comments from all of our member and guests who attend.

Toronto is one of our most exciting and diversified cities with many opportunities for sight-seeing and entertainment. September in Ontario is a great time to visit and there are other activities close to Toronto which can be enjoyed by our members and guests if they want to make a bit of an extended holiday out of this meeting.

We look forward to having you join us and make this anniversary meeting a very special occasion.

Kind personal regards and see you in September.

Yours sincerely,

David P. Girvan, M.D.
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-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.
EDUCATION FUND

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:

Salam Yazbeck, M.D.
CAPS Secretary-Treasurer
Hôpital Sainte-Justine
3175 Côte Ste.Catherine
Montreal (Quebec) CANADA
H3T 1C5

Telephone (514) 345-4688
Fax (514) 345-4964
E-mail Secretary@caps.ca
PRESIDENTS

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 H. Ein  Toronto
1993-1995  Angus Juckes  Regina
1995-1997  Jean G. Desjardins  Montreal
1997-1999  David P. Girvan  London

* indicates deceased

SECRETARY-TREASURERS

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

ALLEN            Michael
ASHMORE          Phillip
BEARDMORE        Harvey
CAMERON          Gordon
COLLIN           Pierre-Paul
DESIARDINS       Jean G.
DUCHARME         Jacques C.
DUVAL            Frederick
FALLIS           James
FERGUSON*        Colin
GILLIS           Alex
GUTTMAN          Frank M.
JUCKES           Angus
KARN*            Gordon
KENNEDY          Richard
KLINMAN          Murray
KLING            Samuel
MARSHALL         Donald
MARSHALL         Russell
MERCER           Stanley
MURPHY           David
OWEN*            Herbert
SHANDLING        Barry
SHRAGOVITCH*     Israël
SIMPSON*         James
STEPHENS*        Clinton
TURCOT*          Jacques

* indicates deceased

1st ANNUAL MEETING was held January 22, 1969 in VANCOUVER
THE COATS OF ARMS
OF THE
CANADIAN ASSOCIATION OF PAEDIATRIC SURGEONS

Heraldic Blazon

Per pale gules and purpure, dexter a scalpel erect entwined by a serpent, sinister a child standing, all argent.

Crest: On the three maple leaves slipped gules and blacked 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 AEsculapius, 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".
FUTURE C.A.P.S. MEETINGS

31th Annual Meeting
September 24-26, 1999
MONTREAL

32nd Annual Meeting
September 22-24, 2000
OTTAWA
RESIDENTS' PAPERS

The papers presented by Surgical Residents are adjudicated by a panel of members from the Publication Committee. 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 $500. The Program Committee normally tries to schedule the Residents papers during the first two days of the meeting to enable the awarding of the Residents Prizes during the Presidential Dinner.

WINNERS OF THE 1997 RESIDENT BEST PAPER AWARDS

BEST CLINICAL RESEARCH PAPER

Dr. Miriam C. WHITE

"Sensitivity and cost effectiveness of radiology vs olive palpation
for the diagnosis of hypertrophic pyloric stenosis"
M.C. White, J.C. Langer, S. Don, M.R. Debaun
Washington University, Department of Surgery, Radiology and Pediatrics
St. Louis, MO USA

BEST BASIC SCIENCE RESEARCH PAPER

Dr. Michael S. IRISH

"Contractile properties of intralobar pulmonary arteries and veins
in congenital diaphragmatic hernia:
An initial look at the nitric oxide-cGMP pathway of vasodilation"
M.S. Irish, P. Kapur, D.A. Bambini, J. Russell, B.A. Holm, R.H. Steinhorn, P.L. Glick
The Buffalo Institute of Fetal Therapy of the Children's Hospital of Buffalo
The State University of New York at Buffalo School of Medicine and Biomedical Sciences
Buffalo, NY USA

CONGRATULATIONS DR. WHITE AND DR. IRISH!
# CAPS COUNCIL 1997-1998

## EXECUTIVE

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>D.P. Girvan</td>
</tr>
<tr>
<td>Past-President</td>
<td>J.G. Desjardins</td>
</tr>
<tr>
<td>Secretary-Treasurer</td>
<td>S. Yazbeck</td>
</tr>
<tr>
<td>Director (3rd year)</td>
<td>N.E. Wiseman</td>
</tr>
<tr>
<td>Director (2nd year)</td>
<td>N. Grace</td>
</tr>
<tr>
<td>Director (1st year)</td>
<td>P. Soucy</td>
</tr>
</tbody>
</table>

## COMMITTEES

### Archivist

- S. Ein

### Ethics, Moral and Legal Issues

- A.L. Bensoussan
- T.J. Baelst
- B. Dahman
- A. Grace

### Research

- M. Di Lorenzo
- R. Superina
- R. Cloutier
- J. Langer
- P. Kim
- G.K. Blair

### Archivist

- F. Gutman
- R. Cloutier
- R. Eccles
- A. Osieret

### Finance

- N. Wiseman
- N. Grace
- D. Girvan
- J.M. Laberge
- S. Yazbeck (Secr.-Treas.)

### Membership and Credentials

- R. Postuma
- S. Yazbeck
- I. Nelson
- L. A. Scott
- D. Price

### Specialty Committee in Pediatric General Surgery (of the Royal College)

- S. Ein
- A. Hayashi *(University of Manitoba)*
- D. Price ***(Dalhousie University)***
- J.M. Laberge ***(McGill University)***
- R. Filler ***(University of Toronto)***
- P. Soucy ***(University of Ottawa)***
- S. Yazbeck ***(University of Montreal)***
- P. Fitzgerald
- R. Keith ***(Chair, general surgery committee)***

### CAPS President

- CAPS President ***(Chair, general surgery committee)***

### APSA training directors chair

- Legend:
  - **Nucleus member**
  - **Ex-officio member**
  - **Corresponding member**

### Nominating

- J.G. Desjardins
- M. Walton
- L.T. Nguyen
- A. Wong

### Standards

- M. Evans
- N. Grace
- R. Filler
- J. Kamal
- A.L. Bensoussan
- A. Wong

### Constitution and Bylaws

- J. Bagg
- J. Donald
- A.W. Juckes
- P. Soucy

### Liaison with American College of M. Laberge

### Program

- G. Blair
- R. Postuma
- K. Hess
- D. St-Vil
- A. Winthrop
- K. Shaw

### Laparoscopy

- P. Fitzgerald
- A. Hayashi
- F.I. Luks
- R. Rubin
- A. Wong

### Education

- J.M. Laberge
- P. Fitzgerald
- P. Wolfson
- R. Sommio
- D. Pecoraro
- P. Soucy

### Publication

- P. Soucy
- R. Cloutier
- J. Langer
- M. Brandt
- G. Lees
- D. Siegel
- A. Hayashi
- M. Di Lorenzo

### Trauma

- A. Wong
- B.J. Hancock
- D. St-Vil
- M. Walton
- K. Shaw

---

Underlining 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.
PRINTING OF THE PROGRAM BOOKLET
AND PART OF THE SOCIAL PROGRAM
WERE MADE POSSIBLE WITH THE FINANCIAL SUPPORT
OF THE FOLLOWING SPONSORS

American Pseudo-Obstruction and Hirschsprung’s Disease Society, Inc. (APHS)
Baxter Corporation, Hyland/Immuno Division
Harcourt Brace & Company, Canada (W.B. Saunders/Mosby)
Organon Canada Ltd.
Pilling Weck Inc.
Sherwood-Davis & Geck
Sofamor Danek Canada Inc.
Theracur (Canada) Inc.
Zeneca Pharma
VISIT OUR WEB SITE

www.caps.ca
GUEST LECTURER

Doctor Richard K. REZNICK, M.D.

Doctor Richard K Reznick obtained his MD from McGill university in 1977 and started his surgical training at the University of Toronto. Dr Reznick was certified by the Royal College of Surgeons of Canada in 1982 and by the American Board of Surgery in 1983.

After having spent two years in clinical practice he embarked on two fellowships, one year in surgical education at the Southern Illinois University and one year in colorectal surgery at Texas University in Houston.

Doctor Reznick was certified by the American Board of Colon and Rectal Surgery in 1988 and he became a fellow of the American College of Surgeons in 1992.

After having started as a lecturer at the University of Toronto in 1987, Doctor Reznick became an assistant professor in 1989 and an associate professor in 1993. He is presently the director of the Faculty of Medicine Center for research in education. He is also an attending surgeon at the Toronto Hospital since 1991 and director of Telemedicine Canada since July 1997. Doctor Reznick is member of twelve scientific societies.
Our guest lecturer's bibliography is impressive, it includes over 56 published articles, 13 book chapters, 103 presentations and 67 invited lectures.

Doctor Reznick is actively involved in research to assess students and teachers. Funding for his projects has amounted to over $300,000 in the last nine years.

Since starting his residency in general surgery he received an impressive number of honours and awards for his contributions both as a surgeon and as an educator.

CAPS is pleased to invite

**DOCTOR RICHARD K. REZNICK**

to give the Fred MacLeod Annual Lecture.
His talk is entitled "SKILLS COMMENSURATE WITH LEVEL OF TRAINING".
PROGRAM SCHEDULE

PROGRAMME DÉTAILLÉ

ABBREVIATIONS

O     original 10 minute paper
R     resident paper
C     5 minute case/method paper

O,R   Adjudicated
C,R   Not adjudicated
FRIDAY, SEPTEMBER 25, 1998
TORONTO MARRIOTT EATON CENTRE

09:00 - 17:00  Meeting of CAPS Council (Executive)
               Dundas Room

17:00          Registration
               In front of escalator, lower level

19:00 - 22:00  Welcoming Reception
               Ballroom Salon A & B
SATURDAY, SEPTEMBER 26, 1998
TORONTO MARRIOTT EATON CENTRE

07:00 - 13:00  Registration
               In front of escalator

07:00 - 07:55  Continental Breakfast
               Foyer, lower level

07:30 - 13:00  Exhibits
               Foyer, lower level

07:55 - 08:00  Welcome and Opening Ceremony
               President, Dr. David P. Girvan

08:00 - 10:00  Scientific Session ONE
               Ballroom Salon A & B

10:00 - 10:30  Refreshment Break
               Foyer, lower level

10:30 - 11:30  Scientific Session TWO
               Ballroom Salon A & B

11:30 - 12:30  Fred MacLeod Lecture
               Doctor Richard Reznick, University of Toronto
               "Skills Commensurate with Level Training"

12:30          Lunch

14:00 - 15:00  Scientific Session THREE
               Ballroom Salon A & B

15:00 - 16:00  Surgeons on the "Firing Line"
SATURDAY, SEPTEMBER 26, 1998

SCIENTIFIC SESSION ONE
Toronto Marriott Eaton Centre
Ballroom Salon A & B Room

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>OR</td>
<td>08:00 - 08:10</td>
</tr>
</tbody>
</table>

**IS SINGLE DRUG THERAPY ADEQUATE FOR APPENDICITIS?**

C.M. Hollands, R. Pagliesi, C.A. Burnweit, K. McGee, M. Nahmad,
M. Weinberger, C.A. Lankau, Jr.
Miami Children's Hospital
Miami, FL USA

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>OR</td>
<td>08:15 - 08:25</td>
</tr>
</tbody>
</table>

**THE MORBIDITY AND MORTALITY OF PEDIATRIC SPLENECTOMY: DOES PROPHYLAXIS MAKE A DIFFERENCE?**

M. Jugenburg, S.H. Ein, M.H. Freedman, G. Haddock, L. Ford-Jones
The Hospital for Sick Children
Toronto (Ontario) Canada

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5 MINUTE DISCUSSION

CO-CHAIRMEN
Dr. G. K. Blair
Dr. J. Bass
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speakers/Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>FEMORAL HERNIA IN CHILDREN</td>
<td>S. Al-Shansafey, M. Giacomantonio</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IWK - Grace Health Centre</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Halifax (Nova Scotia) Canada</td>
</tr>
<tr>
<td>08:40</td>
<td>3 MINUTE DISCUSSION</td>
<td></td>
</tr>
<tr>
<td>08:45</td>
<td>NEUTROPENIC ENTEROPATHY: A TEN YEAR REVIEW</td>
<td>L. Barry, F. Magee, R. Anderson, G.K. Blair, J.J. Murphy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>British Columbia's Children's Hospital</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vancouver (British Columbia) Canada</td>
</tr>
<tr>
<td>08:55</td>
<td>3 MINUTE DISCUSSION</td>
<td></td>
</tr>
<tr>
<td>09:00</td>
<td>FALLS IN CHILDREN: ESTABLISHING PREVENTION MECHANISMS</td>
<td>M. Lallier, S. Bouchard, D. St-Vil, M. Tucci</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hôpital Sainte-Justine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Montreal (Quebec) Canada</td>
</tr>
<tr>
<td>09:10</td>
<td>3 MINUTE DISCUSSION</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Case Western Reserve University</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cleveland, OH USA</td>
</tr>
</tbody>
</table>
7 09:30 - 09:40  THE USE OF ANTENATAL STEROIDS TO COUNTERACT THE NEGATIVE EFFECTS OF TRACHEAL OCCLUSION IN THE FETAL LAMB MODEL
The Montreal Children's Hospital
Centre Hospitalier de l'Université Laval
Royal Victoria Hospital
Montreal (Quebec) Canada

09:40  5-MINUTE DISCUSSION

8 09:45 - 09:55  THE DETERMINANTS OF PROTEIN CATABOLISM IN NEONATES ON ECMO
S.B. Shew, T.H. Keshen, F. Jahoor, T. Jaksic
Baylor College of Medicine, ARS/USDA
Children's Nutrition Research Center
Houston, TX USA

09:55  5-MINUTE DISCUSSION

10:00  REFRESHMENT BREAK
**SATURDAY, SEPTEMBER 26, 1998**

**SCIENTIFIC SESSION TWO**
Toronto Marriott Eaton Centre
Ballroom Salon A & B

**CO-CHAIRMEN**
Dr. A. Winthrop  
Dr. R. Postuma

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 9:00 | HETEROPTIC HEPATOCYTE TRANSPLANTATION USING THREE DIMENSIONAL POLYMER MATRICES.  
      | EVALUATION OF DIFFERENT MODALITIES OF HEPATOTROPHIC STIMULATION          |
|       | P.M. Kaufmann, S. Uyama, D. Kloth, J.P. Vacanti  
      | University of Hamburg, Hamburg, GERMANY  
      | Children's Hospital and Harvard Medical School, Boston, MA USA  
      | University of Kyoto Medical School, JAPAN |
| 10:00 | 5 MINUTE DISCUSSION                                                     |
| 10:05 | THE "ENT" MANIFESTATIONS OF GASTROESOPHAGEAL REFLUX: WHEN IS A pH STUDY INDICATED |
|       | S. Bouchard, M. Laffter, S. Yaback, A.L. Bensousan  
      | Hôpital Sainte-Justine  
      | Montreal (Quebec) Canada |
| 10:55 | 5 MINUTE DISCUSSION                                                     |
| 11:00 | PRIMARY SWENSON PULLTHROUGH IN THE NEONATE COMPARED WITH MULTIPLE STAGE PULLTHROUGH |
|       | M.C. Santos, J.M. Giacomantonio, H.Y.C. Lau  
      | IWK - Grace Health Centre  
<pre><code>  | Halifax (Nova Scotia) CANADA |
</code></pre>
<p>| 11:05 | 5 MINUTE DISCUSSION                                                     |</p>
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
</table>
| 11:15 | Long Term Outcomes of Hirschsprung's Disease: The Patients' Perspectives  
N.L. Yanchar, P. Soucy  
The Children's Hospital of Eastern Ontario  
Ottawa (Ontario) CANADA  
11:25 5 Minute Discussion |
| 11:30 | Fred Macleod Lecture  
Doctor Richard Reznick  
University of Toronto  
'Skills Commensurate with Level Training' |
| 12:30 | Lunch |
# Scientific Session Three

**Saturday, September 26, 1998**

**Toronto Marriott Eaton Centre**
**Ballroom Salon A & B Room**

<table>
<thead>
<tr>
<th>CO-CHAIRMEN</th>
<th>Dr. P. Soucy</th>
<th>Dr. N. Wiseman</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th>OR</th>
<th>Title</th>
<th>Authors/Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:00</td>
<td></td>
<td><strong>Free Radical Formation in Infants:</strong></td>
<td><strong>The Effect of Critical Illness, TPN and Enteral Feeding</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>R. Basu, D.P.R. Muller, I. Merryweather, A. Pierro</strong></td>
<td><strong>Institute of Child Health and Great Ormond Street Hospital for Children</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>London, United Kingdom</strong></td>
<td></td>
</tr>
<tr>
<td>14:10</td>
<td></td>
<td><strong>5 MINUTE DISCUSSION</strong></td>
<td></td>
</tr>
<tr>
<td>14:00</td>
<td></td>
<td><strong>Pectus Deformities in Children:</strong></td>
<td><strong>A Nine-Year Experience</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>P. Mandhan, K.W. Ashcroft, R. Sharp, P. Murphy, C. Snyder</strong></td>
<td><strong>Children's Mercy Hospital</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Kansas City, MO USA</strong></td>
<td></td>
</tr>
<tr>
<td>14:25</td>
<td></td>
<td><strong>5 MINUTE DISCUSSION</strong></td>
<td></td>
</tr>
<tr>
<td>15:00</td>
<td></td>
<td><strong>25-Year Experience with Lymphangioma in Children</strong></td>
<td><strong>A. Alaghbani, L.T. Nguyen, J.M. Laberge</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>The Montreal Children's Hospital</strong></td>
<td><strong>Montreal (Quebec) Canada</strong></td>
</tr>
<tr>
<td>14:30</td>
<td></td>
<td><strong>5 MINUTE DISCUSSION</strong></td>
<td></td>
</tr>
<tr>
<td>15:00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Session</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>---------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14:45 - 14:55</td>
<td>Neonatal Oxidative Liver Metabolism in an Animal Model of Sepsis&lt;br&gt; C. Romeo, S. Eaton, P.A. Quant, L. Spitz, A. Pietro&lt;br&gt;Institute of Child Health and Great Ormond Street Hospital for Children&lt;br&gt;London, United Kingdom</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14:55</td>
<td>5-Minute Discussion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15:00</td>
<td>Surgeons on the &quot;Firing Line&quot;&lt;br&gt;Chair: Dr. A. Winthrop</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SUNDAY, SEPTEMBER 27, 1998
TORONTO MARRIOTT EATON CENTRE

07:00 - 12:30  Registration
              In front of escalator, lower level

07:00 - 08:00  Continental Breakfast
              Foyer, lower level

07:30 - 13:00  Exhibits
              Foyer, lower level

08:00 - 10:00  Scientific Session FOUR
              Ballroom Salon A & B

10:00 - 10:30  Refreshment Break
              Foyer, lower level

10:30 - 11:30  Scientific Session FIVE
              Ballroom Salon A & B

11:30 - 12:30  "2 minutes / 2 slides"
              Ballroom Salon A & B

12:30          CAPS Members Business Meeting
              King Room

19:00          Presidential Reception
              Trinity Ballroom I & II

19:30          Presidential Banquet
              Trinity Ballroom I & II
# Sunday, September 27, 1998

**Scientific Session Four**

Toronto Marriott Eaton Centre

Ballroom Salon A & B

**Co-Chairmen**

Dr. K. Heiss

Dr. D. St-Vil

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Presenters</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00</td>
<td><strong>Differential Energy Metabolism in Conjoined Twins</strong></td>
<td>M.R. Barris, A. Pierro, L. Spitz, E.M. Kiely</td>
<td>Institute of Child Health and Great Ormond Street Hospital for Children, London, United Kingdom</td>
</tr>
<tr>
<td>08:05</td>
<td><strong>Poor Outcomes of Gastrointestinal Perforations in Childhood Abdominal Non-Hodgkin’s Lymphangioma</strong></td>
<td>N.L. Yanchar, J. Bass</td>
<td>Children’s Hospital of Eastern Ontario, Ottawa (Ontario), Canada</td>
</tr>
<tr>
<td>08:15</td>
<td><strong>Perineal Hemangioma, Anorectal Malformation and Genital Anomaly: A New Association?</strong></td>
<td>S. Bouchard, S. Yazbeck, M. Lallier</td>
<td>Hopital Sainte-Justine, Montreal (Quebec), Canada</td>
</tr>
<tr>
<td>08:20</td>
<td><strong>Prenatal Percutaneous Needle Drainage of Cystic Sacrococcygeal Teratomas</strong></td>
<td>S. Kay, S. Khalife, J.M. Laberge, K.S. Shaw</td>
<td>The Montreal Children’s Hospital, Royal Victoria Hospital, Montreal (Quebec), Canada</td>
</tr>
<tr>
<td>Time</td>
<td>Room</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>08:30</td>
<td>OR</td>
<td>PYLORIC STENOSIS: A CLINICAL PATHWAY APPRAISAL OF COST EFFECTIVENESS OF CARE</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lucile Packard Children's Services, UCSF Stanford Healthcare</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Palo Alto, CA USA</td>
<td></td>
</tr>
<tr>
<td>08:40</td>
<td></td>
<td>5 MINUTE DISCUSSION</td>
<td></td>
</tr>
<tr>
<td>08:45</td>
<td>C</td>
<td>CAPS EXPERIENCE WITH E-ABSTRACTS</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R. Postuma</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Canadian Association of Paediatric Surgeons</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Winnipeg (Manitoba) Canada</td>
<td></td>
</tr>
<tr>
<td>08:50</td>
<td>C</td>
<td>VIDEO ASSISTED CURE OF A NEONATAL ESOPHAGEAL ATRESIA</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td></td>
<td>O. Reimberg, N. Lutz, M.A. Bernath</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Centre Hospitalier Universitaire Vaudois</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lausanne, Switzerland</td>
<td></td>
</tr>
<tr>
<td>08:55</td>
<td></td>
<td>5 MINUTE DISCUSSION</td>
<td></td>
</tr>
<tr>
<td>09:00</td>
<td>OR</td>
<td>REVISITING THE ROLE OF ROUTINE RETROPLEURAL DRAINAGE AFTER REPAIR OF ESOPHAGEAL ATRESIA WITH DISTAL TRACHEOSOPHAGEAL FISTULA</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S. Kay, K.S. Shaw</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The Montreal Children's Hospital</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Montreal (Quebec) Canada</td>
<td></td>
</tr>
<tr>
<td>09:10</td>
<td></td>
<td>5 MINUTE DISCUSSION</td>
<td></td>
</tr>
<tr>
<td>09:15</td>
<td>OR</td>
<td>MECKEL'S DIVERTICULA: A 15 YEAR CLINICOPATHOLOGIC REVIEW</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>K.W. Gow, I.F. Magee, H.R. Nadel, E.M. Webber</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>British Columbia's Children's Hospital</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The University of British Columbia</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vancouver (British Columbia) Canada</td>
<td></td>
</tr>
<tr>
<td>09:25</td>
<td></td>
<td>5 MINUTE DISCUSSION</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>OR</td>
<td>09:30 - 09:40</td>
<td></td>
</tr>
<tr>
<td>----</td>
<td>----</td>
<td>---------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>NECROTIZING ENTEROCOLITIS: EXTENT OF DISEASE AND OPERATIVE TREATMENT</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>L. Fasoli, R. Turi, L. Spitz, E. Kieley, D. Drake, A. Pierro</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Institute of Child Health and Great Ormond Street Hospital for Children</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>London, UNITED KINGDOM</td>
<td></td>
</tr>
</tbody>
</table>

| 09:40 | 5 MINUTE DISCUSSION |
|

<table>
<thead>
<tr>
<th>27</th>
<th>OR</th>
<th>09:45 - 09:55</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>DIAPHRAGMATIC PLICATION FOR EVENTRATION OF THE DIAPHRAGM IN CHILDREN</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D.M. Notrica, K.A. Macken, G. Teague, M.C. Stovroff</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Emory University School of Medicine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Atlanta, GA USA</td>
</tr>
</tbody>
</table>

| 09:55 | 5 MINUTE DISCUSSION |
|

<p>| 10:10 | REFRESHMENT BREAK |
|</p>
<table>
<thead>
<tr>
<th>Time</th>
<th>Room</th>
<th>Session Title</th>
<th>Authors</th>
<th>Institution</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:30-10:40</td>
<td>OR</td>
<td>&quot;POOP AND SCOOP&quot;: MUCOUS FISTULA REFEEDING IN NEONATES WITH SHORT BOWEL SYNDROME</td>
<td>K. Al-Harbi, V. Gardner, J.M. Walton, P.G. Fitzgerald</td>
<td>Children's Hospital at Hamilton Health Science Corporation</td>
<td>Canada</td>
</tr>
<tr>
<td>10:40</td>
<td></td>
<td>5 MINUTE DISCUSSION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:45-10:55</td>
<td>OR</td>
<td>MISSED DIAGNOSIS OF IMPERFORATE ANUS: A CLOSER LOOK AT THE PROBLEM</td>
<td>H.L. Nancy Kim, K.W. Gow, J.G. Penner, G.K. Blair, J.J. Murphy, E.M. Webber</td>
<td>British Columbia's Children's Hospital</td>
<td>Canada</td>
</tr>
<tr>
<td>10:55</td>
<td></td>
<td>5 MINUTE DISCUSSION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:00-11:10</td>
<td>OR</td>
<td>LONG TERM OUTCOME OF THYROID SURGERY IN CHILDREN: A 30 YEAR EXPERIENCE</td>
<td>M. Lallier, J.G. Desjardins, D. St-Vil, M. Giroux</td>
<td>Hôpital Sainte-Justine</td>
<td>Canada</td>
</tr>
<tr>
<td>11:10</td>
<td></td>
<td>5 MINUTE DISCUSSION</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
FIBROMATOSIS:
CLINICAL AND PATHOLOGIC FEATURES SUGGESTIVE OF RECURRENCE
J. Barga, J.J. Murphy, J.F. Magee
British Columbia's Children's Hospital
Vancouver (British Columbia) CANADA

11:25
3-MINUTE DISCUSSION

11:30 - 12:30
2 MINUTES 12 SLIDES
Chair: Dr. G.K. Blair

12:30
ANNUAL BUSINESS MEETING
LUNCHEON
MONDAY, SEPTEMBER 28, 1998
TORONTO MARRIOTT EATON CENTRE

07:00 - 12:00  Registration
              In front of escalator, lower level

07:00 - 08:00  Continental Breakfast
              Foyer, lower level

07:00 - 13:00  Exhibits
              Foyer, lower level

08:00 - 10:00  Scientific Session SIX
              Ballroom Salon A & B

10:00 - 10:30  Refreshment Break
              Foyer, lower level

10:30 - 12:30  Scientific Session SEVEN
              Ballroom Salon A & B

12:30  Annual Meeting Adjourns
**MONDAY, SEPTEMBER 28, 1998**

**SCIENTIFIC SESSION SIX**
Toronto Marriott Eaton Centre
Ballroom Salon A & B

**CO-CHAIRMEN**
Dr. M. Giacomantonio  
Dr. S. Yazbeck

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>
| **32** | C | 08:00 - 08:05 | **MESENTERIC FIBROMATOSIS: CASE REPORT AND REVIEW OF THE LITERATURE**  
S. Al-Jadaan, A. Al-Rabeeah  
King Fahad National Guard Hospital, Department of Surgery  
Riyadh, SAUDI ARABIA |
| **33** | C | 08:05 - 08:10 | **JUVENILE XANTHOGRANULOMA PRESENTING AS OBSTRUCTIVE JAUNDICE**  
P. Pradil, S. Cayer, M. Lomay, L. Pelletier, R. Cloutier, S. Leclerc  
Centre Hospitalier Universitaire Laval  
St-Foy (Quebec) Canada |
|   |   |   | **5 MINUTE DISCUSSION** |
| **34** | C | 08:15 - 08:20 | **DESMOID TUMOR OF THE POSTERIOR MEDIASTINUM PRODUCING AIRWAY OBSTRUCTION**  
Loma Linda University Children's Hospital  
Loma Linda, CA USA |
| **35** | C | 08:20 - 08:25 | **PLEUROPULMONARY BLASTOMA: A RARE PATHOLOGY WITH AN EVEN RARER PRESENTATION**  
M. Lepiere, S. Bouchard, M. Di Lorenzo, S. Yousef, H. Blanchard,  
J.G. Lapierre, D. Viscoff, M. Tucci  
Hôpital Sainte-Justine  
Montreal (Quebec) Canada |
|   |   |   | **5 MINUTE DISCUSSION** |
36  O  08:30 - 08:40  PEDIATRIC ACCIDENTAL DEATHS IN MANITOBA, CANADA (1984-1992)
N. Wiseman, A. Abdoh, D.A. Weizman
Winnipeg Children's Hospital, Department of Pediatric General Surgery
Winnipeg (Manitoba) Canada

08:40  5 MINUTE DISCUSSION

37  O  08:45 - 08:55  COST FACTORS IN CANADIAN PEDIATRIC TRAUMA
A. Dueck, D. Premary, D. Pichora
Queen's University
Kingston (Ontario) CANADA

08:55  5 MINUTE DISCUSSION

38  O  09:00 - 09:10  ANTENATAL DIAGNOSES OF CONJOINED TWINS
A.P. Dickson, S. Rimmer, A. Bianch, N.K. Alizai
St. Mary's Hospital, Department of Fetal Therapy
Manchester, ENGLAND

09:10  5 MINUTE DISCUSSION

39  O  09:15 - 09:25  THE ROLE OF PROPHYLACTIC CHOLECYSTECTOMY DURING SPLENECTOMY IN CHILDREN WITH HEREDITARY SPHEROCYTOSIS
A. Sandler, G. Winkel, K. Kimura, R. Soper
The University of Iowa Hospital and Clinics, Department of Surgery
Iowa City, IA USA
<table>
<thead>
<tr>
<th>Page</th>
<th>Time</th>
<th>Session Title</th>
<th>Authors/Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>09:30</td>
<td>GASTRO-OESOPHAGEAL REFLUX IN CHILDREN WITH CONGENITAL ABDOMINAL WALL DEFECTS</td>
<td>A. Koivusalo, R.J. Rintala, H. Lindahl</td>
</tr>
<tr>
<td></td>
<td>09:30-09:40</td>
<td>5-MINUTE DISCUSSION</td>
<td>The University of Iowa Hospital and Clinics, Department of Surgery Iowa City, IA USA</td>
</tr>
<tr>
<td>41</td>
<td>09:45</td>
<td>ABDOMINAL WOUND DEHISCENCE IN CHILDREN: A PROSPECTIVE ANALYSIS OF 445 PATIENTS</td>
<td>D.A. Smith, H.V. Ficor</td>
</tr>
<tr>
<td></td>
<td>09:45-09:55</td>
<td>5-MINUTE DISCUSSION</td>
<td>Southern Illinois University School of Medicine and St. John Medical Center, Springfield, IL University of Illinois College of Medicine at Peoria and St. Francis Medical Center, Peoria, IL USA</td>
</tr>
<tr>
<td></td>
<td>10:00</td>
<td>REFRESHMENT BREAK</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>42</strong></td>
<td>0</td>
<td>10:30 - 10:40</td>
<td>LONG TERM OUTCOME OF EARLY VASCULAR THROMBOSIS IN PEDIATRIC LIVER TRANSPLANTATION</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>43</strong></td>
<td>0</td>
<td>10:45 - 10:55</td>
<td>REPEAT PULLTHROUGH SURGERY FOR COMPLICATED HIRSCHSPRUNG'S DISEASE: INDICATIONS, TECHNIQUES, AND RESULTS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>44</strong></td>
<td>0</td>
<td>11:00 - 11:10</td>
<td>THE SWENSON PROCEDURE FOR HIRSCHSPRUNG'S DISEASE: COMPARISON OF LAPAROSCOPIC TO OPEN APPROACH</td>
</tr>
<tr>
<td>Session</td>
<td>Time</td>
<td>Title</td>
<td>Authors</td>
</tr>
<tr>
<td>---------</td>
<td>------</td>
<td>----------------------------------------------------------------------</td>
<td>----------------------------------------------</td>
</tr>
<tr>
<td>45</td>
<td>11:15-11:25</td>
<td>PEDIATRIC GENERAL SURGERY PRACTICE PATTERNS AND OUTCOMES</td>
<td>K. Clark, D. Poenaru, I. Kanud</td>
</tr>
<tr>
<td>46</td>
<td>11:30-11:40</td>
<td>DOES FORMAL RESEARCH DURING A GENERAL SURGERY RESIDENCY PREDICT INCREASED ACADEMIC PERFORMANCE?</td>
<td>J.G. Raffenburger, S.R. Luck</td>
</tr>
<tr>
<td>47</td>
<td>11:45-11:50</td>
<td>A CASE OF DELAYED SPLENIC RUPTURE</td>
<td>N. Caron, K.W. Gow, G.K. Blair, J.J. Murphy III</td>
</tr>
<tr>
<td>48</td>
<td>11:50-11:55</td>
<td>OBSERVATION OF SPLENIC TRAUMA: WHEN IS A LITTLE TOO MUCH</td>
<td>M. S. Irish, R. Brown, A.J. McCabe, P. L. Glick</td>
</tr>
<tr>
<td>Time</td>
<td>Session</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>---------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:00 - 12:05</td>
<td>AN UNUSUAL BILE DUCT INJURY IN A CHILD FOLLOWING BLUNT ABDOMINAL TRAUMA: S. Bin Yabh, A. Al-Rabeesh, A. Al-Sammarrai. King Fahad National Guard Hospital, Department of Surgery, Riyadh, Saudi Arabia.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:05 - 12:10</td>
<td>SEAT BELT TRANSECTION OF THE PARARENAL VENA CAVA IN A FIVE YEAR OLD CHILD: SURVIVAL WITH CAVAL LIGATION: R.S. Abram, J.M. DeCoi, M.W.L. Gauderer. The Children's Hospital of Greenville, Hospital System, Greenville, SC, USA.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:15 - 12:20</td>
<td>AN UNUSUAL PRESENTATION OF CONTINUOUS GASTRIC AND ESOPHAGEAL DUGULATION PASSING THROUGH A DUPLICATED DIAPHRAGMATIC HIATUS: D.M. Notica, M.A. Giller, D.E. Wesson. Baylor College of Medicine and Texas Children's Hospital, Houston, TX, USA.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12:10: 5 MINUTE DISCUSSION

12:25: 5 MINUTE DISCUSSION

12:50: ANNUAL MEETING ADJOURNED
ABSTRACTS

RÉSUMÉS

ABBREVIATIONS

O original 10 minute paper
R resident paper
C 5 minute case/technique report
O,R Adjudicated
C,R Not adjudicated
IS SINGLE DRUG THERAPY ADEQUATE FOR APPENDICITIS?

C.M. Hollands, R. Puglisi, C.A. Burnweit, K. McGee,
Miami Children's Hospital, Miami, FL USA

Background/Purpose: Antibiotic therapy for appendicitis traditionally involves multiple drug therapy, however, recent studies using Unasyn (ampicillin/sulbactam) alone have compared favorably. This study evaluated Unasyn as single drug therapy for all appendicitis.

Methods: Unasyn was given pre-operatively to patients undergoing appendectomy from October 1, 1996 to September 30, 1997. Intra-operative cultures guided post-operative antibiotic therapy for gangrenous and perforated (complicated) appendicitis. Comparison was made to a control group (January 1, 1994 to December 31, 1995) where simple appendicitis was treated with cefoxitin and complicated appendicitis with clindamycin and gentamicin.

Results: The experimental group contained 260 patients; 142 simple, 33 gangrenous, and 71 perforated. The control group contained 482 patients; 283 simple, 52 gangrenous, and 130 perforated. Age, length of stay, and infectious complications were compared. There was no difference between age and length of stay (p = .629, p = .924; t-test). An increased rate of infectious complications was seen in all patients receiving Unasyn (experimental vs control -- simple: 4.2% vs 2.8%, p = .01; gangrenous: 15% vs 9.6%, p = .01, and perforated: 30% vs 23%, p = .03; chi-square).

Conclusion: Complicated appendicitis probably requires multiple drug therapy, although, single drug therapy with Unasyn may be appropriate for simple appendicitis.

Sponsoring CAPS member: Dr. Kurt F. Heiss
Senior author:
Dr. Charles A. Lankau, Jr.
Miami Children's Hospital
3200 SW 60th Court, Suite 201
Miami, FL 33155
Phone: (305) 662-8320 Fax: (305) 665-2467
E-mail: doccmh@aol.com
THE MORBIDITY AND MORTALITY OF PEDIATRIC SPLENECTOMY: 
DOES PROPHYLAXIS MAKE A DIFFERENCE?

M. Jugenburg, S.H. Ein, M.H. Freedman, G. Haddock, L. Ford-Jones 
Divisions of General Surgery, Hematology, and Infectious Diseases 
The Hospital for Sick Children, Toronto (Ontario) CANADA

Background: To analyze the incidence of post-splenectomy sepsis morbidity and mortality after prophylaxis in comparison to our previous 13-year study (1958-1970 inclusive).

Methods: All patients who had splenectomy at The Hospital for Sick Children, Toronto between 1971 and 1995 inclusive (to give minimum of two years for follow-up) were reviewed for infection and mortality. Criteria for infection were hospitalization and an isolated serum organism.

Results: Of the 264 patients studied, 10 had a post-splenectomy infection (3.8%); nine occurred in patients splenectomized between the ages of 0-5 years. Infection took place within 2.13 years ± 3.25 (mean ± SD) after splenectomy for the vaccinated patients and 11 days ± 5 (mean ± SD) for the non-vaccinated children. A significant number of patients had admission due to an apparent respiratory infection, but no serum organisms were isolated. One died of overwhelming sepsis, but the responsible organism was not identified.

Conclusions: Although there has not been a decrease in the number of splenectomies performed per year, the incidence of infection and mortality has decreased by 47% and 88% respectively with prophylaxis.

Senior author: 
Dr. Sigmund H. Ein 
The Hospital for Sick Children  
555 University Avenue  
Toronto (Ontario) M5G 1X8 
Phone: (416) 813-7340  Fax: (416) 813-7477 
E-mail: sigmund.ein@mailhub.sickkids.on.ca
**FEMORAL HERNIA IN CHILDREN**

**S. Al-Shanafey, M. Giacomantonio**

IWK - Grace Health Centre, Halifax (Nova Scotia) CANADA

**Background:** Femoral herniae are uncommon in children, and easily misdiagnosed. To evaluate our own performance with femoral herniae in children, we reviewed our experience for the past two decades.

**Methods:** All patients with femoral hernia under 15 years of age (January 1977 to January 1998) were reviewed. Age, gender, presentation, operative findings and procedure, and previous repair were recorded.

**Results:** There were nine girls (53%) and eight boys (47%). Age range was 2-15 years; thirteen right side (77%), three left side (18%), and one bilateral (6%). All presented with a recurrent lump in the groin, one with incarceration. Duration of symptoms ranged from one day to three years (median 3 months). Six cases were diagnosed correctly preoperatively (35%); the others thought to be either an inguinal hernia or recurrent inguinal hernia.

**Conclusion:** Femoral hernia in childhood is a challenging clinical problem due to its rarity and similar clinical presentation as indirect inguinal hernia. The frequency with which an incidental indirect inguinal hernia sac or patent processus vaginalis can be found at surgery can perpetuate a misdiagnosis. The absence of an expected indirect inguinal hernia sac or an apparent recurrence of an indirect inguinal hernia should lead to consideration of a possible femoral hernia.

**Senior author:**
Dr. M. Giacomantonio
IWK - Grace Health Centre
5850 University Avenue
Halifax, (Nova Scotia) B3J 3G9
Phone: 902 428-8114 Fax: 902 428-3260
E-mail: salshana@is2.dal.ca
NEUTROPENIC ENTEROPATHY: A TEN YEAR REVIEW

J. Baerg, F. Magee, R. Anderson, G.K. Blair, J.J. Murphy
British Columbia's Children's Hospital, Vancouver (British Columbia) CANADA

Purpose: With the advent of aggressive chemotherapy, the incidence of neutropenic enteropathy is increasing. This study was performed to (1) determine patients affected, (2) assess efficacy of treatment (3) identify predisposing factors.

Methods: A 10 year (1988-1997) review identified 33 children who suffered 38 episodes of neutropenic enteropathy. Each presented with fever, abdominal pain, and chemotherapy-induced neutropenia. A pediatric surgeon confirmed the diagnosis. All were initially treated with fluid resuscitation, bowel rest, and broad-spectrum antibiotics.

Results: Neutropenic enteropathy occurred in 24 children with hematologic malignancies and 9 with solid tumors. Three leukemia patients developed this disease after bone-marrow transplantation. All five children who suffered a recurrence received chemotherapy for Burkitt's lymphoma. Overall survival was 94% (31/33). Four patients (12%) required laparotomy and right hemicolecctomy. All survived. The two mortalities were due to multi-system organ failure in children who were never surgical candidates. Cytosine arabinoside was administered in 16 (60%) with hematologic malignancies.

Conclusion: Excellent survival was attained in children with neutropenic enteropathy. Supportive care should be the primary treatment; reserve laparotomy for patients with bowel perforation. Although described in patients receiving chemotherapy for hematologic malignancies, this disease also occurs in solid tumor patients and after bone-marrow transplantation. Intensive chemotherapy predisposes to neutropenic enteropathy, especially if the regimen includes cytosine arabinoside.

Sponsoring CAPS member: Dr. G.K. Blair
Senior author:
Dr. J.J. Murphy
4480 Oak Street, Room A242
Vancouver (British Columbia)
Phone: (604) 875-2667 Fax: (604) 875-2721
E-mail: GBLAIR@wpog.childhosp.bc.ca

* Buckets often resume ~ 90% of neutropenia resolution

Perforation ⇒ Chemoresection + 2 stomas
FALLS IN CHILDREN: ESTABLISHING PREVENTION MECHANISMS

Hôpital Sainte-Justine, Montreal (Quebec) CANADA

Purpose: Trauma remains the first cause of death in children over 1 year. Although they do not carry a high risk of death, falls are a major cause of admissions to trauma units. To help develop prevention mechanisms, we reviewed all admissions after a fall at a single institution.

Methods: Retrospective chart review of all falls from 1994 to 1997. Included are falls from superimposed beds, or from a minimum of 10 feet.

Results: Out of 1410 patients admitted after a fall, 87 met the inclusion criteria. Mean age was 6.5 years with 72% males. Patients mainly fell from superimposed beds (28%), balconies (25%), windows (14%), trees (10%), and roofs (7%). Sixty-one percent of falls occurred during summer time. Major injuries included head trauma (45%), musculoskeletal (32%) and solid organ (10%). Mean length of stay (days) for intracranial injuries was 26, spine fracture 13, and musculoskeletal injuries 8. Surgery was required for 43% of intracranial trauma, 39% of musculoskeletal injuries, 60% of facial trauma and 50% of spine fractures. One patient died after falling from the 5th floor.

Conclusion: Prevention strategies should include 1) multidisciplinary approaches to ensure that windows, balconies and superimposed beds are childproof 2) campaigns to sensitize the public about the high rate and mechanisms of falls.

Senior author:
Dr. Dickens St-Vil
Hôpital Sainte-Justine
3175 Côte Ste-Catherine
Montreal (Quebec), H3T 1C5
Phone: (514) 345-4688 Fax: (514) 345-4964
E-mail: chirhsj@point-net.com
SELECTIVE MANAGEMENT OF PEDIATRIC PANCREATIC INJURIES

Divisions of Pediatric Surgery and Pediatric Radiology
Case Western Reserve University, Cleveland, Ohio USA

Background/Purpose: Our objective was to describe the incidence, management and outcome of children treated at our regional pediatric trauma center for traumatic pancreatitis.

Methods: Diagnostic approaches, injury grade (AAST Organ Injury Scaling), interventions, mortality and incidence of missed injuries were recorded on all pancreatic injuries admitted from 1990–1997.

Results: Twelve of 3,700 trauma admissions had traumatic pancreatitis (0.3%), mean age (+ SEM) 8.7 (± 1.23) years. Intraoperative diagnosis was made in three patients with penetrating injury. Diagnosis of blunt pancreatic trauma (BPT) in nine children using a combination of serial serum amylase and computed tomography (CT) was more sensitive (100%) than using initial CT alone (86%) or amylase alone (78%). Mean injury grade was 3.75 (± 0.25). Endoscopic retrograde cholangiopancreatography confirmed ductal injury in two children requiring surgical management. The remainder were managed with bowel rest, and observation. There were no missed injuries. Mortality was 66% among penetrating injuries and 0% for BPT.

Conclusions: A combination of radiological and laboratory findings may improve the diagnosis of BPT. With intact pancreatic ductal architecture, conservative treatment protocols may be solely employed.

Senior author:
Dr. Enrique Grisoni
11100 Euclid Ave, Suite 122
Cleveland, Ohio 44106
Phone: (216) 844-3015 Fax (216) 844-8687
E-mail: erg2@po.cwru.edu

[27% Handled]
[199% Child abuse]
[38% MUA]

[CT = imp? > Than amylase]
7. Session One  Saturday  09:30-09:40  OR

THE USE OF ANTENATAL STEROIDS TO COUNTERACT
THE NEGATIVE EFFECTS OF TRACHEAL OCCLUSION
IN THE FETAL LAMB MODEL

S. Kay, B. Piedbocuf, H. Flageole, M. Fong Chen, J.M. Laberge
The Montreal Children’s Hospital, Department of Surgery
Centre Hospitalier de L’Universite Laval, Department of Pediatrics
Royal Victoria Hospital, Department of Pathology
Montreal (Quebec) CANADA

Purpose: Tracheal occlusion in the lamb induces pulmonary hyperplasia but has
negative effects on Type II cells. This study examines whether antenatal steroids
reverse these adverse effects.

Methods: Eighteen fetuses were divided into 4 groups: 1-(TO): tracheal occlusion
at 117 days gestation; 2-(TO+st): tracheal occlusion at 117 days plus a maternal
intramuscular injection of 0.5 mg/kg betamethasone 24 hours before delivery; 3-
(control) and 4-(control+st): unoperated controls, littermates of TO and TO+st.
Fetuses were sacrificed at 137 days gestation. Outcome measurements were: lung-
to-body-weight ratio (LBWR), lung morphometry, and assessment of Type II
pneumocytes by in-situ hybridization to mRNA of SP-C produced by these cells.

Results: Eighteen lambs had lung samples analyzed for weight and morphometry.
In-situ hybridization was done for 8 lambs: 3 in TO and control; 2 in TO+st.
LBWR and alveolar development were significantly greater in the TO and TO+st
groups. Type II pneumocyte density was decreased by tracheal occlusion
(5.8±1.5/hpf vs. 89.5±5.0/hpf, p<0.05). Although steroids increased surfactant-
producing cell numbers (5.8±1.5/hpf vs 23.5±0.3/hpf, p<0.05), levels were still far
from controls. The amount of SP-C mRNA per cell was also positively influenced
by steroids (TO 16.4±1.1 vs TO+st 21.8±0.9, p<0.05).

Conclusions: A maternal injection of betamethasone before delivery does not alter
the positive effects of tracheal occlusion on lung growth, but does counteract the
negative effects on Type II pneumocytes.

Senior author:
Dr. J-M Laberge
The Montreal Children’s Hospital, Department of Surgery
2300 Tupper, Suite C-1134
Montreal, Quebec H3H 1P3
Phone: (514) 934-4497  Fax: (514) 934-4341
E-mail: jlabsur@mch.mcgill.ca
THE DETERMINANTS OF PROTEIN CATABOLISM 
IN NEONATES ON ECMO

S. Shew, T.H. Keshen, F. Jahoor, T. Jaksic
Baylor College of Medicine, ARS/USDA Children's Nutrition Research Center,
Houston, Texas USA

Background: Protein catabolism appears to be markedly elevated among neonates on ECMO. The aim of this study was to determine the effect of dietary caloric intake on protein catabolism in neonates on ECMO in order to help construct therapies that may promote anabolism.

Methods: Twelve TPN fed (88.1 ± 5.0 (S.E.) kcal/kg/d, range 60 - 113 kcal/kg/d; 2.3 ± 0.2 protein g/kg/d) neonates were studied on ECMO at day of life 7.2 ± 0.8 d. Protein kinetics were determined using infusions of 13C-bicarbonate and 13C-leucine.

Results: As expected, C-reactive protein levels were significantly elevated compared to normal controls (44.0 ± 7.6 mg/L vs. 1.9 ± 1.1 mg/L, P < 0.001). Negative protein balance (- 2.3 ± 0.6 g/kg/d, range 1 to -6.4 g/kg/d) highly correlated (r : -0.88, P < 0.001) with total protein turnover. Increased dietary caloric intake correlated with increased amino acid oxidation (r : 0.85, P <0.001), increased total protein turnover (r : 0.73, P < 0.01), continued negative protein balance (r : 0.72, P < 0.01), increased whole-body protein breakdown (r : 0.66, P < 0.05), and increased CO2 production rate (r : 0.73, P < 0.01).

Conclusions: A surplus of dietary caloric intake does not improve protein catabolism and merely increases CO2 production in these highly stressed neonates. Thus, judicious caloric supplementation is warranted.

Senior author:
Dr. Tom Jaksic
Clinical Care Center,
6621 Fannin MC 3-2325, suite 245
Houston, TX 77030-2399
Phone: (713) 770-3135 Fax: (713) 770-3141
E-mail: tjaksic@bcm.tmc.edu

Such a high catabolic state, that adding O2 or
HETEROTOPIC HEPATOCYTE TRANSPLANTATION USING THREE DIMENSIONAL POLYMER MATRICES. EVALUATION OF DIFFERENT MODALITIES OF HEPATOTROPHIC STIMULATION

P.M. Kaufmann, S. Uyama, D. Kluth, J.P. Vacanti
University of Hamburg, Medical School., GERMANY
Children's Hospital and Harvard Medical School, Boston, MA USA
University of Kyoto, Medical School, JAPAN

Background: Despite new techniques, liver donor scarcity remains a problem. Therefore liver cell transplantation could be an interesting alternative. Feasible hepatocyte transplant models should provide sufficient volume (at least 10% liver mass) and adequate stimulation of transplanted cells in heterotopic locations.

Methods: In Lewis rats, 10% of the liver mass (= 5x10^7 liver cells) was transplanted between the mesenteric leaves of the intestine using three dimensional porous polyvinyl-alcohol matrices as carriers. 70% partial hepaectomaty, portacaval shunt, cotransplantation of enterocytes, cotransplantation of islets of Langerhans and methylprednisolone injection were used for stimulation, some of these in combination. Specimens were harvested two weeks after transplantation and the hepatocyte area per histologic cross section was measured.

Results: 70% partial hepaectomaty, enterocyte cotransplantation and methylprednisolone injection resulted in hepatocyte areas similar to the control group (3,100 (±7,592) μm^2). Portacaval Shunt (96,866 (±55,039) μm^2) and islet cotransplantation (173,020 (±75,977) μm^2) caused a highly significant increase. PCS and IsCoTx in combination resulted in a further significant increase compared to the methods used individually (288 930 (±86 726) μm^2). Immune histochemistry stains for active DNA synthesis, insulin and glucagon showed appropriate positive results.

Conclusions: We conclude that hepatocytes can be successfully transplanted utilizing three dimensional polymers and hepatotrophic stimulation.

Sponsoring CAPS member: Dr. Salam Yazbeck
Senior author:
Dr. Dietrich Kluth
Department of Pediatric Surgery
University Hospital Hamburg
Martinistr. 52
D-20246 Hamburg, GERMANY
Phone: 49-40-4717-2497 Fax: +49-40-4717-6914
E-mail: kluth@uke.uni-hamburg.de
THE "ENT" MANIFESTATIONS OF GASTROESOPHAGEAL REFLUX: WHEN IS A pH STUDY INDICATED?

Hôpital Sainte-Justine, Montreal (Quebec) CANADA

**Purpose:** To evaluate the pertinence of pH studies for persistent “ENT” symptoms related to gastroesophageal reflux (GER).

**Methods:** Retrospective analysis of age, reason for referral, pH study, treatment and follow-up of patients with “ENT” symptoms suspected to have GER.

**Results:** Out of 3000 esophageal pH studies performed over 16 years, 105 children were referred by an otorhinolaryngologist to rule out GER. Mean age was 33 months with 65% males. Reasons for referral included (number and mean age): stridor (n=31:8 mo.), laryngomalacia (n=18:13 mo.), recurrent otitis (n=12:42 mo.), laryngitis (n=16:50 mo.), dysphonia (n=14:59 mo.), laryngeal papillomatosis (n=8:62 mo.), sinusitis (n=5:56 mo.), and dysphagia (n=1). Overall, 43% of studies were positive: stridor (58%), laryngomalacia (61%), laryngitis (56%) and sinusitis (40%). Patients with otitis, dysphonia and laryngeal papillomatosis had GER in 1%, 14%, and 25% respectively. Follow-up in the 3 larger groups of patients showed successful medical treatment for stridor (92%), laryngitis (75%) and laryngomalacia (43%). Five fundoplications were done: one neurologically impaired patient, and 4 non-responders.

**Conclusion:** We recommend that a pH study be done in children with stridor, laryngomalacia, laryngitis and sinusitis when faced with failure of the usual treatment. However, a pH study does not seem beneficial for recurrent otitis, dysphonia or laryngeal papillomatosis.

**Senior author:**
Dr. Arié L. Bensoussan
Hôpital Sainte-Justine
3175 Côte Ste-Catherine
Montréal (Québec)
H3T 1C5
Phone: (514) 345-4688   Fax: (514) 345-4964
E-mail: chirhsj@point-net.com
PRIMARY SWENSON PULLTHROUGH IN THE NEONATE COMPARED WITH MULTIPLE STAGE PULLTHROUGH

M.C. Santos, J.M. Giacomantonio, H.Y.C. Lau
IWK-Grace Health Centre, Halifax (Nova Scotia) CANADA

Background: In Hirschsprung Disease, the trend has been for earlier performance of definitive surgery. Primary Swenson pullthrough at diagnosis has become the preferred procedure.

Methods: Retrospective review of the patients treated for Hirschsprung Disease from January 1988 through March 1998 was performed. Forty-seven patients were treated by staged operation (41 Swenson, 4 Soave and 2 Duhamel) and 18 patients treated by primary Swenson pullthrough. Median values and ANOVA and chi-square were used for intergroup comparisons.

Results: The staged group (S) was similar to the primary group (P) for gestational age (40 vs 39 weeks), time to meconium passage (37.9 vs 35.5 hours) and age at diagnosis (median, S 27 vs P 3.5 days). As expected age (median M 268 vs P 5 days) and weight (mean M 9.4 vs P 3.7 kg, p<0.001) at time of Swenson were lower in primary group. Planned LOS was lower in the primary group (mean, M 40.8 vs P 20.3 days, p<0.05) as was total LOS (mean, M 49.1 vs P 22.4 days, p=0.023). Operative time was decreased in the primary group (mean, M 305.2 vs P 272.2 minutes, p=0.02). Complication were lower in the primary group (p=0.03), with no statistical differences in mortality or enterocolitis rates. Complications included ostomy prolapse, trapped stool, anastomotic leak, perineal infection, enterocolitis, internal sphincter dysfunction, small bowel obstruction, permanent ostomy, and incisional hernia.

Conclusion: At our institution there were no increases in total complications or enterocolitis with primary Swenson pullthrough. LOS and operative time was decreased in primary Swenson. At this time primary pullthrough remains a viable option for the treatment of Hirschsprung's disease.

Senior Author:
Dr. J.M. Giacomantonio
5850 University Avenue
IWK-Grace Health Centre
Halifax, NS B3J 3G9
Phone: (902) 428-8114  Fax: (902)428-3260
E-mail: santos_mc@email.msn.com
LONG TERM OUTCOMES OF HIRSCHSPRUNG'S DISEASE: THE PATIENTS' PERSPECTIVE

N.L. Yanchar, P. Soucy
The Children's Hospital of Eastern Ontario, Ottawa (Ontario) CANADA

**Background:** The results of Hirschsprung's disease (HD) may not be uniformly successful, and the parents' and child's interpretation of the outcome may be different from those reported in the literature.

**Methods:** Treatments and outcomes of 107 children diagnosed with HD, over a 22 1/2 year period, were reviewed retrospectively and by follow-up questionnaire. Follow-ups were divided into short-term (<5 years, Group A) and long-term (>5 years, Group B). Degrees of constipation and incontinence were determined using a standard scoring system.

**Results:** Demographics were similar to those found in other studies, with a 2.7:1 male:female ratio, 13% incidence of positive family history and 8.5% incidence each of associated trisomy 21 and cardiac malformations. The median age of presentation was 9 days (range 1 day to 9.4 years) and 41% presented within the first 72 hours of life. Aganglionosis involved the rectosigmoid region in 75%, long colon in 16%, and total colon in 7%. Treatments included a Soave procedure in 57, Duhamel in 32, Swenson in 9, and sphincterotomy/myectomy in 2. There were 176 recorded complications of which 39 were related to the original enterostomy. Postoperative enterocolitis and bowel obstructions occurred in 13 patients each. Follow-up Groups A and B included 45 and 49 patients, respectively; of the latter group, the median follow-up was 10 years (range 5 to 22.3 years). Fifty-seven of these 94 patients (20 in Group A, 37 in Group B) had a completed follow-up questionnaire. Degrees of constipation and incontinence did not change significantly within the longer follow-up group, although there were trends to improvement (none or mild constipation: Group A - 85%, Group B - 86%, excellent or good continence: Group A - 45%, Group B - 57%). The patient's social life was significantly affected in Group B (49% vs. 25% in Group A, p = 0.04), but there were more negative effects on the family's lifestyle in Group A (30% vs. 19% in Group B, p = 0.14). Despite only 56% of patients interpreted as having "normal" stool habits, the majority of parents (88%) were moderately or very satisfied with their child's outcome. This changed little with longer follow-up.

**Conclusions:** The outcomes for HD are not always as good as we surgeons may perceive; long term follow-up is important. With time, most children adapt to residual functional problems, but the effects on their social lives may be significant. Despite high complication rates, mediocre outcomes of continence, and relative infrequency of "normal" stool habits, most parents are satisfied with their child's outcome and adapt to their functional abnormalities along with them.

Senior author:
Dr. Pierre Soucy
CHEO
401 Smyth Road, Ottawa (Ontario) K1H 8L1
Phone: (613) 737-2799 Fax: (613) 738-4840
E-mail: pepin@cheo.on.ca
FREE RADICAL FORMATION IN INFANTS:  
THE EFFECT OF CRITICAL ILLNESS, TPN AND ENTERAL FEEDING

R. Basu, D.P.R. Muller, I. Merryweather, A. Pierro  
Institute of Child Health and Great Ormond Street Hospital for Children  
London, UNITED KINGDOM

Background: An increase in free radical activity has been detected in patients in intensive care unit (ICU) and receiving total parenteral nutrition.  
Purpose: To investigate: 1) the relative contribution of critical illness and parenteral nutrition (PN) on free radical activity; 2) the effect of minimal enteral feeding during PN on free radical production.  
Methods: We studied 8 control infants (before minor surgery), 25 stable patients (ward) and 27 critically ill infants (ICU). Of the infants on PN, 21 received total PN and 9 PN and minimal enteral feeding. Plasma malondialdehyde (MDA), an index of free radical activity, was measured colorimetrically. IL6 and TNF were measured in 30 infants. Critical illness in patients in ICU was graded according to the PRISM score.  
Results (Mean ± SD; MEF = minimal enteral feeding)

![Graph showing MDA levels in different conditions](image)

There was no correlation between MDA level and cytokine production or PRISM score.  
Conclusions: PN causes a significant elevation in free radical activity in both stable infants in the ward and critically ill infants in ICU. The addition of minimal enteral feeding to PN does not reduce free radical activity. We hypothesise that the PN solution directly initiates free radical production.

Senior author:  
Dr. Agostino Pierro  
Reader and Consultant in Paediatric Surgery;  
Division of Clinical Sciences; Institute of Child Health & Great Ormond Street Hospital for Children NHS Trust; University of London  
30 Guilford Street  
London WC1N 1EH UNITED KINGDOM  
Phone: +44(0)171 242 9789 ext 2641  
Fax: +44(0)171 404 6181  
E-mail: A.Pierro@ich.ucl.ac.uk
PECTUS DEFORMITIES IN CHILDREN:
A NINE-YEAR EXPERIENCE

P. Mandhan, K.W. Ashcraft, R. Sharp, P. Murphy, C. Snyder, T. Holder
Children Mercy Hospital, Kansas City, MO USA

In nine-years 129 children with pectus deformities were seen in our department. Boys were more affected and three had a history of trauma. Positive family history was in 7 children. Associated anomalies and scoliosis were identified in 49 children. Excavatum deformity was noted earlier. On clinical judgement 36% had severe, 46% moderate and 2% mild defects. Cardiopulmonary symptoms were recorded in 66 children before surgery and symptoms relieved in majority following surgery. Surgery was done in 123 patients. The average age at operation was 7.7 years and 13.4 years in pectus excavatum pectus carinatum respectively. Operative procedure consisted of bilateral resection of costal cartilages with preservation of perichondrial sheaths and anterior wedge osteotomy of sternum with no strutting. Satisfactory long-term results were achieved in 95% and in three cases revision surgery was done. We conclude that children with moderate to severe pectus deformities require surgical correction for both physiological as well as cosmetic reasons. Early repair of pectus excavatum deformity is efficacious in providing suitable body contour and to allow normal growth of the lungs once structural compression of the chest wall is relieved. Surgery is safe, does not require blood transfusion, complications are minimal and the long-term results are satisfactory.

Senior author:
Dr. Keith W Ashcraft
Department of Surgery, Children Mercy Hospital
2401 Gillham Road, Kansas City, Missouri 64
E-mail: Parkash@nicl.khi.sdnpk.upd.org
25-YEAR EXPERIENCE WITH LYMPHANGIOMA IN CHILDREN

A. Al-Qahtani, L.T. Nguyen, J.M. Laberge
The Montreal Children’s Hospital, Montreal (Quebec) CANADA

**Purpose:** The management of lymphangioma in children is challenging because complete resection is difficult to achieve and recurrences are not uncommon. We reviewed our experience to assess the risk factors for recurrence and the role of non-operative treatment.

**Method:** A retrospective study over a period of 25 years. 186 patients with 191 lesions (5 patients with de novo lesions in different sites) were treated. There are 98 males and 88 females. Average age: 5 years (range 1 day to 20 years). Average size: 8 centimeters in diameter. Histo-cytologic confirmation was obtained in all patients. Sites: Head and neck 88 patients (48%), trunk and extremities 76 patients (42%), visceral location (abdominal and thorax) 18 patients (10%). Treatment: Macroscopic complete excision 145 patients (150 lesions of which 5 recurrences in different sites), partial excision 10 patients, aspiration 5 patients, laser excision 10 patients, biopsy only 4 patients, drainage and biopsy 2 patients, injection of sclerosing agents in 10 patients.

**Results:** There were 54 recurrences; 44 underwent reexcision (5 of them more than once), 5 regressed spontaneously on follow-up. 5 other recurrences were stable and not progressing. Recurrences were found: 100% after aspiration, 100% after injection, 40% after incomplete excision, 24% after macroscopic complete excision. There were no significant differences between those who had their surgery immediately at the time of diagnosis (101) and those who had delayed surgery (85) in terms of outcome. Complications beside recurrences were found on 35 patients (18%) of which one recurrent nerve injury, one facial nerve injury, one bowel obstruction and one chyloous leak. There were no significant complications of re-operation for recurrences.

**Conclusion:** There were less recurrences in macroscopic complete excision. Aspiration and injection obviously have the highest recurrence rate. Risk factors included: location, size and complexity of lesions.

**Senior author:**
Dr. J.M. Laberge
The Montreal Children’s Hospital
Department of Surgery, McGill University
2300 Tupper Street, Suite C-1134
Montreal (Quebec) H3H 1P3
Phone: (514) 934-4388 Fax: (514) 934-4341
E-mail: mcoresur@mcgill.ca
NEONATAL OXIDATIVE LIVER METABOLISM
IN AN ANIMAL MODEL OF SEPSIS

C. Romeo, S. Eaton, P.A. Quant, L. Spitz, A. Pierro
Institute of Child Health and Great Ormond Street Hospital for Children
London, UNITED KINGDOM

Background: Elevated levels of reactive oxygen species (e.g. $H_2O_2$), reported in septic neonates, may be the mediators of liver impairment via their effect on oxidative energy metabolism.

Purpose: To test the hypothesis that elevated levels of $H_2O_2$ impair neonatal oxidative metabolism.

Methods: An in vitro model of sepsis was developed in hepatocytes isolated from neonatal (11d-13d) rats. The cells respiring on palmitate were exposed to $H_2O_2$. Oxygen electrodes, light microscopy with Trypan Blue exclusion and electron microscopy were used to assess the effects of $H_2O_2$ on: (i) mitochondrial respiration ($O_2$-cons) and (ii) cellular morphology. In further studies myxothiazol and oligomycin, inhibitors of mitochondrial respiration, were added to hepatocytes to investigate whether $H_2O_2$ acted at the mitochondrial level.

Results: $O_2$-cons was inhibited by the range of [H$_2$O$_2$] studied (Fig. 1). Light microscopy showed a 20% decrease ($p < 0.05$) in $H_2O_2$-treated cells viability. Electron microscopy showed mitochondrial swelling and damage to the cellular, nuclear and mitochondrial mem-branes. Total inhibition of oxidative phosphor-ylation obtained using saturating concentrations of myxothiazol and oligomycin in the absence or presence of $H_2O_2$ demonstrated that 30% of cellular oxygen consumption was non-mitochondrial and $H_2O_2$-insensitive.

Conclusion: $H_2O_2$ has the potential to impair mitochondrial respiration and/or liver morphology. We hypothesize that $H_2O_2$ may play a role in the biochemical pathogenesis of liver dysfunction associated with sepsis.

Senior author:
Dr. Agostino Pierro
Reader and Consultant in Paediatric Surgery;
Division of Clinical Sciences; Institute of Child Health & Great Ormond Street Hospital for Children NHS Trust; University of London;
30 Guilford Street, London WC1N 1EH (U.K)
Phone: +44(0)171 242 9789 ext 2641 Fax: +44(0)171 404 6181
E-mail: A.Pierro@ich.ucl.ac.uk
Differential Energy Metabolism in Conjoined Twins

M.R. Powis, A. Pierro, L. Spitz, E.M. Kiely
Institute of Child Health and Great Ormond St Hospital
London, UNITED KINGDOM

Background: Conjoined twins often have different body composition and growth rate prior to separation. This may be due to differences in energy metabolism.

Purpose: To investigate the energy expenditure, body composition and calorie intake of thoracopagus conjoined twins with shared hepatic circulation but separate gastrointestinal tracts.

Methods: The twins were studied at two periods: i) Pre- separation (age: 73 days). ii) Post-separation (age: 97 days). Calorie intake over the study periods was carefully documented. Respiratory gas exchange was measured by computerised indirect calorimetry. The post-separation weight ratio of Twin A:Twin B was used to approximate the pre-separation weights. Body composition (total body fat) was calculated from skinfold thickness and anthropometric measurements.

Results:

<table>
<thead>
<tr>
<th></th>
<th>Pre-separation</th>
<th>Post-separation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Twin A</td>
<td>Twin B</td>
</tr>
<tr>
<td>Fat free mass (kg)</td>
<td>2.79</td>
<td>2.79</td>
</tr>
<tr>
<td>Total body fat (kg)</td>
<td>0.61</td>
<td>0.95</td>
</tr>
<tr>
<td>Calorie intake</td>
<td>146.49</td>
<td>98.46</td>
</tr>
<tr>
<td>Resting energy expenditure (kcal/kg/day)</td>
<td>35.96</td>
<td>49.54</td>
</tr>
</tbody>
</table>

Conclusions: This study illustrates the difference in energy metabolism in a set of thoracopagus conjoined twins. We speculate that Twin A was supplying nutrients to Twin B resulting in increased energy expenditure pre-separation, which would explain the lower calorie intake and higher fat mass of Twin B.

Senior author:
Dr. Agostino Pierro
Reader and Consultant in Paediatric Surgery
Division of Clinical Sciences; Institute of Child Health & Great Ormond Street Hospital for Children NHS Trust; University of London
30 Guilford Street London WC1N 1EH (U.K)
Telephone: +44(0)171 242 9789 ext 2641 Fax: +44(0)171 404 6181
E-mail: A.Pierro@ich.ucl.ac.uk
POOR OUTCOMES OF GASTROINTESTINAL PERFORATIONS IN
CHILDHOOD ABDOMINAL NON-HODGKIN'S LYMPHANGIOMA

N.L. Yancher, J. Bass
Children's Hospital of Eastern Ontario (Ottawa) CANADA

With modern chemotherapeutic protocols and advances in medical care, the outcome of intra-abdominal non-Hodgkin's lymphoma (NHL) in children can be excellent for limited disease. Advanced disease, however, is associated with increased tumor aggression and requires more rigorous adjuvant therapy. Hence, complications early in the course of the disease process or its management may lead to a fatal outcome. Specifically, significant morbidity can be encountered in these children in the presence of perforation of the gastrointestinal tract. We reviewed our experience with this disease, and present two cases of children with abdominal NHL which poignantly demonstrate these points. In both, inadvertent entry into the bowel occurred at the time of laparotomy for tumor biopsy. In the first case, intestinal wall was included in the biopsy specimen; in the second, laparotomy unmasked an already sealed-off perforation secondary to tumor invasion. Sepsis ensued in both cases. In the first, this resulted in repeated delays in chemotherapy, and the child succumbed to the disease. In the second, chemotherapy was continued, and although the small bowel leak was controlled, the initial insult hampered marrow recovery and host defenses, resulting in fatal sepsis. Fifteen cases of abdominal NHL at our institution were examined, with an overall mortality of 40%. This increased to 100% in the presence of perforation. This data and other reported cases in the literature indicate that intestinal perforation associated with abdominal lymphomas in children portends an extremely poor prognosis. All attempts to avoid this complication should be made, including avoiding direct tumor biopsy whenever possible.

Senior author:
Dr. Juan Bass
Children's Hospital of Eastern Ontario
401 Smyth Road
Ottawa (Ontario) K1H 8L1
Phone: (613) 737-2799 Fax: (613) 738-4840
E-mail: jbash@cheo.on.ca
PERINEAL HEMANGIOMA, ANORECTAL MALFORMATION AND GENITAL ANOMALY: A NEW ASSOCIATION

S. Bouchard, S. Yazbeck, M. Lallier.
Hôpital Sainte-Justine, Montreal (Quebec) CANADA

Two patients presented as term baby girls with anorectal and genital malformations with extensive perineal hemangiomas. The first patient had a vestibular anus with a perineal hemangioma involving the bladder, rectal and vaginal walls. Skin ulcerations required a transverse loop colostomy for wound care. The vulva, urethral opening and clitoris were deviated to the left, and she had near absence of her labia minora, and abnormal labia majora. The second patient had an anus displaced anteriorly and deviated to the right. The external anal sphincter was hypertrophic on the left and atrophic on the right. Rectal exam revealed agenesis of the right levator ani and a dentate line located at the skin level. She had a large perineal, sacral, vaginal, para-rectal and retroperitoneal hemangioma and developed extensive skin ulcerations. She had only a hemiclitoris located to the left of the midline, near absence of labia minora and hypertrophied labia majora. The urethra was displaced to the left and opened in the vestibule. Both patients had a spinal malformation (tethered cord and spina bifida) and a normal karyotype. Steroids and interferon allowed near complete resolution of hemangiomas in both patients. We were impressed by the similarity of these 2 cases and could not find any previous description of this association.

Senior author:
Dr. Salam Yazbeck
Hôpital Sainte-Justine
3175 Côte Ste-Catherine
Montreal (Quebec) H3T 1C5
Phone: (514) 345-4688   Fax: (514) 345-4964
E-mail: chirhsj@point-nct.com
PRENATAL PERCUTANEOUS NEEDLE DRAINAGE OF CYSTIC SACROCOCCYGEAL

S. Kay, S. Khalife, J.M. Laberge, K.S. Shaw
The Montreal Children's Hospital, McGill University
Royal Victoria Hospital, McGill University
Montreal (Quebec) CANADA

Prenatal ultrasound (U/S) permits in-utero diagnosis of sacrococcygeal teratoma (SCT), follow-up of tumor size, and the early identification of complications, allowing for a more timely and appropriate delivery. The recommended management of large SCTs is delivery by cesarean section (C/S) to prevent dystocia, tumor rupture, hemorrhage and death. However, even delivery by C/S can be difficult, necessitating a large hysterotomy that adds to maternal morbidity.

We report on 2 cases of cystic SCTs where prenatal percutaneous drainage allowed for an uncomplicated vaginal delivery. In the first case, a large unilocular cystic SCT was diagnosed at 31 weeks gestation on prenatal U/S. The fetus was in breech and the mass was steadily increasing in size, preventing spontaneous version. At 37 5/7 weeks, the cyst was percutaneously drained under U/S guidance with a spinal needle allowing for successful external version. Repeat drainage just before induction of labor permitted a successful vaginal delivery. In the second case, the cystic SCT was percutaneously drained just before induction of labor at term, again allowing for an uncomplicated vaginal delivery.

Prenatal percutaneous needle drainage of cystic SCTs offers an alternative to C/S that results in decreased risks for both mother and fetus.

Senior author:
Dr. K.S. Shaw
The Montreal Children's Hospital, Department of Surgery
2300 Tupper, Suite C-1134
Montreal (Quebec) H3H 1P3
Phone: (514) 934-4497 Fax: (514) 934-4341
E-mail: mcorsur@mch.mcgill.ca
PYLORIC STENOSIS: A CLINICAL PATHWAY APPRAISAL
OF COST EFFECTIVENESS OF CARE

Julie R. Glasson, K. Sulenski, R.L. Moss, B.M. Smith, C.T. Albanese,
R.W. Jennings, M.R. Harrison, E.D. Skarsgard
Lucile Packard Children's Services, UCSF Stanford Healthcare
Palo Alto, CA USA

Background: Market forces within the managed care environment encourage movement of pediatric surgical patients away from specialized centers to decrease costs. To demonstrate that quality subspecialty care can be delivered competitively, we developed a clinical pathway for treatment of pyloric stenosis (PS).

Methods: Cost of treatment for consecutive patients with PS were stratified and compared before (n=26) and after (n=12) pathway implementation.

Results: Average length of stay was reduced from 2.7 to 1.5 days with no readmissions. Total direct cost per patient was reduced from $3318 to $2210 (33% cost savings). Other important cost saving variables included duration of recovery room stay and acuity level of postoperative nursing unit.

Conclusions: Development of the PS pathway resulted in significant cost savings with preservation of quality of care.

Senior author:
Dr. Erik D Skarsgard
Division of Pediatric Surgery
725 Welch Road, Palo Alto, CA 94304
Phone: (650) 723-6439  Fax: (650) 725-5577
E-mail: Erik.Skarsgard@LPCH.Stanford.Edu
CAPS EXPERIENCE WITH E-ABSTRACTS

R. Postuma
Canadian Association of Paediatric Surgeons
Winnipeg (Manitoba) CANADA

CAPS invited abstracts submission by e-mail for the 1998 Annual meeting. A total of 125 abstracts were received; 68 (54%) were e-mail submissions, including 20 sent also by surface mail. The e-mail submissions were by electronic form (46%) and as attachments (54%). Four e-mailed papers were disqualified; of the remaining 121 abstracts, 54 (44%) were accepted for 52 presentations. The acceptance rate of e-mailed abstracts was 56% vs. 31% in non e-mailed abstracts.

The experience with e-abstracts is considered very successful and should become the standard for future meetings. E-abstract submission saves time and is less costly. Tables and graphs were easily received in this manner. Also, is it now time to set up a CAPS sponsored, peer reviewed, electronic journal of pediatric surgery?

Senior author:
Dr. Ray Postuma
AE 201–840 Sherbrook Street
Winnipeg (Manitoba) R3A 1S1
Phone: (204) 787-4203 Fax: (204) 787-4618
E-mail: rpostuma@caps.ca
VIDEO ASSISTED CURE OF A NEONATAL ESOPHAGEAL ATRESIA

O. Reinberg, N. Lutz, M.A. Bernath
Centre Hospitalier Universitaire Vaudois, Lausanne, SWITZERLAND

This 7 min. video presents the cure of an esophageal atresia in a full term newborn performed under a video-assisted procedure.

It shows the benefits of this new approach, offering a mico-surgical vision of the operating field.

As it is a teaching procedure, it shows how this new technique provides an excellent control of all the junior surgeon's manipulations.

Sponsoring CAPS member: Dr. Salam YAZBECK
Senior author:
Dr. Olivier Reinberg
Service de Chirurgie Pédiatrique
Centre Hospitalier Universitaire Vaudois
CH-1011 Lausanne-CHUV
Phone: +41 21 314 30 72 Fax: +41 21 314 30 76
E-mail: olivier.reinberg@chp.unil.ch
REVISITING THE ROLE OF ROUTINE RETROPLEURAL DRAINAGE
AFTER REPAIR OF ESOPHAGEAL ATRESIA WITH DISTAL
TRACHEOSOPHAGEAL FISTULA

S. Kay, K.S. Shaw
The Montreal Children's Hospital, Montreal (Quebec) CANADA

Background: To review routine retropleural drainage in esophageal atresia with distal tracheoesophageal fistula (EADTEF).

Methods: The charts of 52 patients diagnosed with EADTEF between 1987 and 1997 were reviewed. Data collected included: gestational age, birth weight, associated congenital anomalies, respiratory status, operative technique and timing, size of gap, tension on the anastomosis, complications related to the drain, and esophageal anastomotic leak (incidence, diagnosis, and treatment).

Results: The 52 patients were stratified using Waterston's Classification: Class A 13/52 (25.0%), Class B 27/52 (51.9%), Class C 12/52 (23.1%). Forty-seven patients underwent a single stage extrapleural repair. Only one leak was identified in this single stage group, diagnosed on routine post-op day 7 contrast esophagogram. The patient was classified as Waterston Class C, was well at the time, and had only minimal amounts of serosanguinous retropleural drainage. The only other leak was in a Class C patient who had undergone a staged repair because of an initial long gap. None of the favorable Waterston class patients suffered a leak.

Conclusions: A routine retropleural drain placed near the anastomosis may not be necessary in all cases of EADTEF. Good prognosis patients (Waterston Class A and B) who undergo an uncomplicated extrapleural repair without undue tension do not appear to benefit from having a chest drain in place and there is potential for complications. In complicated cases however, retropleural drainage remains indicated.

Senior author:
Dr. K.S. Shaw
The Montreal Children’s Hospital, Department of Surgery
2300 Tupper, Suite C-1134
Montreal (Quebec) H3H 1P3
Phone: (514) 934-4388 Fax: (514) 934-4341
E-mail: mcorsur@mch.mcgill.ca
MECKEL'S DIVERTICULA:
A 15 YEAR CLINICOPATHOLOGIC REVIEW

K.W. Gow, J.F. Magee, H.R. Nadel, E.M. Webber
British Columbia's Children's Hospital, Vancouver (British Columbia) Canada

Background: Meckel's diverticulum is the most common congenital anomaly of the gastrointestinal tract. We reviewed our experience with Meckel's diverticula to study the clinical presentation and association with ectopic mucosa. We further sought to review all 99mTc pertechnetate scans performed with corresponding pathologic specimens to determine the sensitivity, specificity, positive and negative predictive values.

Methods: A retrospective chart review of all patients between 1982 and 1997 in our institution with 99mTc pertechnetate scan or a diagnosis of Meckel's diverticulum.

Results: A total of 85 patients (63 boys, 22 girls) had a Meckel's diverticulum diagnosed during admission including 52 symptomatic, 21 asymptomatic, and 12 post-mortem patients. Symptoms included bleeding (58%), intussusception (23%), perforation (12%), obstruction due to a band (10%), others (8%). Pathology revealed that of all patients with Meckel's diverticula, 45% had only gastric mucosa, 2% had only pancreatic mucosa, 8% had both, and 45% had no ectopic mucosa. When looking at only those specimens that had gastric mucosa, 88% presented with symptoms with 65% presented with bleeding, 12% as intussusception, and 5% as perforation. A total of 259 99mTc pertechnetate scans were performed on 243 patients including 158 boys and 85 girls. The ability to identify ectopic gastric mucosa in a Meckel's diverticulum by nuclear scan was: Sensitivity - 76.7%, Specificity - 99.1%, Positive predictive value - 92.0%, Negative predictive value - 97.0%.

Conclusions: Patients with symptomatic Meckel's diverticula tended to have bleeding, intussusception and perforation as the most common means of presentation. Gastric mucosa is the most common ectopic mucosa and when present will tend to present with bleeding in most patients. 99mTc pertechnetate scan for Meckel's diverticulum remains an excellent test to assess for ectopic gastric mucosa.

Senior author:
Dr. Eric M. Webber
B.C. Children's Hospital
4480 Oak Street, Rm A242-A
Vancouver (British Columbia) V6H 3V4,
Phone: (604) 875-3744 Fax: (604) 875-2721
E-mail: Kenneth W. Gow: kgow@unixg.ubc.ca
NECROTIZING ENTEROCOLITIS:
EXTENT OF DISEASE AND OPERATIVE TREATMENT

L. Fasoli, R. Turi, L. Spitz, E. Kiely, D. Drake, A. Pierro
Institute of Child Health and Great Ormond Street Hospital for Children
London UNITED KINGDOM

AIM: 1) To evaluate the results of surgical treatment of NEC according to the extent of disease; 2) to establish if resection of the ileo-cecal (IC) valve represents a poor prognostic factor.

METHODS: We reviewed all cases of NEC (n=161) treated in our hospital during the last 11 years, of these 83 required surgical intervention. Definitions: focal = disease in a single intestinal segment; multifocal = disease in 2 or more intestinal segments; pan-intestinal = majority of small and large bowel involved.

MAIN RESULTS: mean ± SD; § number of patients.

<table>
<thead>
<tr>
<th></th>
<th>Focal</th>
<th>Multifocal</th>
<th>Pan-intestinal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Resection + Anastomosis</td>
<td>Stoma ± Resection</td>
<td>Resection + Anastomosis</td>
</tr>
<tr>
<td>n=18</td>
<td>1.6 ± 0.8</td>
<td>2.1 ± 1.3</td>
<td>n=26</td>
</tr>
<tr>
<td>weight (kg)</td>
<td>19 ± 15</td>
<td>19 ± 13</td>
<td>32 ± 47</td>
</tr>
<tr>
<td>TPN days</td>
<td>0</td>
<td>0</td>
<td>2 (8%)</td>
</tr>
<tr>
<td>TPN &gt;3m §</td>
<td>33 ± 19</td>
<td>42 ± 21</td>
<td>40 ± 49</td>
</tr>
<tr>
<td>hosp. stay (d)</td>
<td>4 (22%)</td>
<td>1 (14%)</td>
<td>5 (19%)</td>
</tr>
<tr>
<td>recurrence §</td>
<td>42%</td>
<td>14%</td>
<td>33%</td>
</tr>
<tr>
<td>stricture §</td>
<td>4 (22%)</td>
<td>1 (14%)</td>
<td>5 (19%)</td>
</tr>
<tr>
<td>survival §</td>
<td>16 (89%)</td>
<td>6 (38%)</td>
<td>22 (85%)</td>
</tr>
</tbody>
</table>

One (3%) of the patients who underwent resection and primary ileo-colic or colo-colic anastomosis died compared with 5 (33%) of the patients who had resection and primary ileo-ileal anastomosis. Two of the 4 neonates who had multiple primary anastomoses died. Neonates who had the IC valve removed (n=40) had a lower incidence of post-NEC strictures compared to patients who retained the IC valve (n=43). Survival rate, duration of TPN and hospital stay were not affected by the removal of IC valve.

CONCLUSIONS: 1) Resection and primary anastomosis is a valid treatment option in both focal and multifocal NEC with the best results achieved when the disease is limited to the colon. 2) Removal of IC valve is not associated with a worse prognosis demonstrating that neonates with NEC adapt rapidly to the loss of IC valve.

Senior author:
Dr. Agostino Pierro
Reader and Consultant in Paediatric Surgery
Division of Clinical Sciences; Institute of Child Health & Great Ormond Street Hospital for Children NHS Trust; University of London;
30 Guilford Street London WC1N 1EH (U.K)
Phone: +44(0)171 242 9789 ext 2641 Fax: +44(0)171 404 6181
E-mail: A.Pierro@ich.ucl.ac.uk
DIAPHRAGMATIC PLICATION FOR EVENTRATION
OF THE DIAPHRAGM IN CHILDREN

D.M. Notrica, K.A. Macken, G. Teague, M.C. Stovroff
Emory University School of Medicine, Atlanta, GA USA

Background: Surgical plication of the elevated hemidiaphragm was first used successfully to treat diaphragmatic eventration (DE) by JMW Morrison in 1923. Since that time, surgical plication has become a frequently performed surgical procedure for congenital and acquired eventrations of the diaphragm.

Methods: This report reviews the results of all diaphragmatic plications performed at a children's hospital during the 8 year period from 1988 through 1997. Thirty-five patients underwent diaphragmatic plication during this time - 6 congenital (CDE), 2 acquired and non-iatrogenic (ANDE), and 27 iatrogenic (IDE) following cardiac surgery.

Results: Of the CDE, 3 required surgery for respiratory distress at birth while 3 presented later with recurrent ipsilateral pneumonias. Both of the ANDE's presented with recurrent ipsilateral pneumonias. The IDE's all presented with inability to extubate or remain extubated following cardiac surgery. All 5 patients plicated for recurrent pneumonias have done well with no new pneumonias in 12-48 months of follow-up. Two of the three patients plicated for respiratory distress were extubated and weaned to room air within 48 hours. The other patient developed NEC and died 135 days later, having never been extubated. In the IDE group, the median ventilator time prior to plication was 10 days (ave=15.7, SD=1.4) The survivors (82%) were extubated a median of 4 days (ave=6.0, SD=3.0) following surgical plication.

Conclusion: These results suggest that surgical plication decreases the incidence of recurrent ipsilateral pneumonias in children with diaphragmatic eventration. Plication also appears to be an effective method of shortening ventilator time for patients with eventration secondary to phrenic nerve paralysis.

Sponsoring CAPS member: Dr. Kurt Heiss
Senior author:
Dr. Mark C. Stovroff
1195 Woods Circle
Atlanta, GA 30324
Phone: (404) 814-1305 Fax: (404) 727-3396
E-mail: kmacken@sph.emory.edu
"POOP AND SCOOP": MUCOUS FISTULA REFEEDING IN NEONATES WITH SHORT BOWEL SYNDROME

Children's Hospital at Hamilton Health Science Corporation
Hamilton (Ontario) CANADA

Background: Neonates with enterostomies commonly suffer from a functional short bowel syndrome (SBS) and have a greater the risk of electrolyte and fluid loss with poor weight gain. We describe our experience with refeeding stoma effluent into mucus fistula in neonates.

Methods: A 5-year (1993-97) chart review of neonates with stomal effluent refeeding was undertaken. Demographics, medical history, surgical procedures, timing and duration of refeeds were reviewed. Enteral and total parenteral nutritional (TPN) requirements, electrolyte and acid-base disturbances were recorded.

Results: Six neonates (gestational ages of 27-38 weeks, birth weights of 533-3400gm) were identified with nutritional and/or electrolyte complications prior to the commencement of refeeding. Enterostomy indications included necrotizing enterocolitis (n: 2), intestinal atresia type 3b (n: 1), complications from ruptured omphalocele (n: 1), congenital adhesive band obstruction (n: 1) and midgut volvulus following congenital diaphragmatic hernia repair (n: 1). Weight gain during refeeding ranged from 5-25gm/kg/day with duration of refeeding lasting 16 days-28 weeks (two neonates were refed at home) until reanastomoses were done 6-44 weeks after the original surgery. There were no complications and TPN requirements were diminished or eliminated.

Conclusions: This technique represents a simple and safe method which lessens the need for TPN and electrolyte supplementation in neonates with enterostomies and SBS prior to reanastomosis.

Senior author:
Dr. J.M. Walton
Children's Hospital at Hamilton Health Sciences Corporation
1200 Main St W, Rm 4E3
Hamilton (Ontario) L8N 3Z5
Phone: (905) 521-2100 ext. 5231 Fax: (905) 521-9992
Email: waltonj@fhs.csu.mcmaster.ca
The diagnosis of imperforate anus is usually made at birth because of the obvious physical abnormality or the inability to pass meconium, but several patients have presented beyond the early newborn period. We reviewed all new cases of imperforate anus treated here during the past 10 years, focusing on the time of presentation. Over a ten year span 116 new cases of imperforate anus were seen here, of whom 15 patients (9 girls and 6 boys) presented beyond the early newborn period. Of the delayed presentations, one male infant was diagnosed at 2 weeks of age and another girl at age 14 years. The remaining 13 presented between 3-11 months of age because of increasing difficulties with stooling, usually related to the introduction of solid foods. All had low lesions (i.e., perineal fistulas in boys, and vestibular or perineal fistulas in girls). Nine patients had at least one other feature of the VACTERL complex. The surgical correction was difficult in several cases because of the massive colonic dilation secondary to the chronic obstruction.

Conclusions: Clearly, most cases of imperforate anus are diagnosed at birth, but a significant number of the milder lesions may not be recognized until later. Therefore, this condition must be considered in older babies and children presenting with constipation, particularly if there is other evidence of VACTERL-type malformations.

Senior author:
Dr. Eric M. Webber
B.C. Children’s Hospital
4480 Oak Street, Rm A242-A
Vancouver (British Columbia) V6H 3V4
Phone: (604) 875-3744 Fax: (604) 875-2721
E-mail: emwebber@unixg.ubc.ca
LONG TERM OUTCOME OF THYROID SURGERY IN CHILDREN:
A 30-YEAR EXPERIENCE

M. Lallier, I.G. Desjardins, D. St-Vil, M. Giroux
Hôpital Sainte-Justine, Montreal (Quebec) CANADA

A retrospective chart review of all patients who underwent thyroid surgery from 1966 to 1996 at a single institution was done. Long term follow-up was obtained by reviewing the chart of patients transferred to adult institution or by a telephone call. Of the 104 patients, 73 girls and 31 boys with a mean age of 13.3 years had thyroid surgery for thyroid nodules (87 patients), MEN syndrome (14) and miscellaneous (3). Investigations include radionuclide imaging (70%), cervical ultrasonography (58%), CT scan (20%) and recently fine needle aspiration (9%). The operative procedures were lobectomy ± isthmectomy in 45 patients, subtotal thyroidectomy (38) and total thyroidectomy (21). Post-op complications include two permanent hypoparathyroidism but no recurrent laryngeal nerve damage. Histologic examination findings of the resected specimen revealed a benign lesion in 58% of cases and a malignant lesion in 42% of the 87 patients with thyroid nodules, 43% (37 patients) were found to have a follicular adenoma, 36% (31 patients) had a well differentiated thyroid carcinoma (WDTC) and 21% other benign lesions. Of the 31 patients with cancer, 24% developed recurrent disease following maximal surgical and medical (I\textsubscript{131}) treatment at initial diagnosis. With a mean follow-up of 13 years (range 8 months to 30 years), disease free survival is 100%. Thyroid nodules should be rapidly investigated in children because of a significant potential of malignant lesion (36% in the present study) with an aggressive but safe surgical technique and post-op I\textsubscript{131} for recurrent or metastatic lesions of WDTC, thyroid disease in children has an excellent prognosis.

Senior author:
Dr. J.G. Desjardins
Hôpital Sainte-Justine
3175 Côte Ste-Catherine
Montréal (Québec) H3T 1C5
Phone: (514) 345-4688 Fax: (514) 345-4964
E-mail: jiangd@global.com
FIBROMATOSIS: CLINICAL AND PATHOLOGIC FEATURES SUGGESTIVE OF RECURRENTNESS

J. Baerg, J.J. Murphy, J.F. Magee
British Columbia's Children's Hospital, Vancouver (British Columbia) CANADA

Purpose: Fibromatoses represent a spectrum of non-neoplastic proliferative spindle cell tumors frequently identified in childhood. They do not metastasize but may be locally aggressive. This study was undertaken to identify clinical and pathologic features suggestive of recurrence.

Methods: Clinical records and microscopic sections of 55 cases identified between 1982-1995 were analysed. One pathologist reviewed all case sections (J.F.M.). All were confirmed fibromatoses.

Results: 25 females and 30 males who ranged in age from 1 month to 14 years were identified. 18 tumors (33%) were congenital. Diagnoses included: 27 musculoaponeurotic fibromatoses- (9 recurred), 4 visceral fibromatoses (1 unresectable), 6 infantile myofibromatoses, 7 calcifying aponeurotic fibromas, 4 digital fibrous tumors of childhood and 7 fibromatosis colli. Overall recurrence rate was 27% (15/55). Clinical follow-up of 3-15 years was completed for all cases. None metastasized. Overall survival was 98% (54/55). One patient who died was born with an intra-abdominal aggressive fibromatosis which involved vital structures and was unresectable. Infantile myofibromatoses involuted spontaneously. The remainder, including recurrences, were controlled with surgical resection.

Conclusion: Clinical features suggestive of recurrence were: age of presentation above 5 years, extremity location, adherence and incomplete resection. Pathologic features suggestive of recurrence were: tumor at margins, mitoses, necrosis and inflammation.

Sponsoring CAPS member: Dr. G.K. Blair
Senior author:
Dr. J.F. Magee
4480 Oak Street, Rm A242
Vancouver (British Columbia)
Phone: (604) 875-2667 Fax: (604) 875-2721
E-mail: GBLAIR@wpog.childhosp.bc.ca
MESENTERIC FIBROMATOSIS:
CASE REPORT AND REVIEW OF THE LITERATURE

S. Al-Jadaan, A. Al-Rabeeah
King Fahad National Guard Hospital, Riyadh, SAUDI ARABIA

Mesenteric fibromatosis is a rare, benign fibrous lesion that is found in the bowel mesentery or the retroperitoneum. Its biologic behavior is intermediate between benign fibroma and fibrosarcoma. Fibromatosis is characteristically locally invasive and tends to recur, but does not metastasize. Most reported cases were in older individuals, and there is a frequent association with familial polyposis coli, previous trauma and hormonal imbalance. We report a case of mesenteric fibromatosis in a two year, and eight month old girl, who presented to our hospital with a history of abdominal pain for one month, and was discovered to have an abdominal mass, following investigations, she was found to have a solid mass, in the mesentery of the proximal small intestine, in close association with the superior mesenteric vessels. The mass was excised followed by resection of a segment of small bowel (50 cm long), due to ischemia. Pathology report confirmed the diagnosis of fibromatosis.

In conclusion mesenteric fibromatosis though very rare does occur in young children and presents a management challenge.

Senior author:
Dr. A. Al Rabeeah
King Fahad National Guard Hospital
P.O. Box 22490
Riyadh 11426, SAUDI ARABIA
Phone: 966 1 252-0320  Fax: 966 1 252-0123
E-mail: arabeeah@hotmail.com
We report the case of a 9 month old infant presenting with obstructive jaundice. Preoperative investigation revealed distention of the extrahepatic biliary tract. Urine analysis was positive for cytomegalovirus. At laparotomy, a one-centimeter round mass was found within the head of the pancreas, near its upper border and in the course of the common bile duct. Frozen sections could not rule out a malignant process and an hepaticoduodenostomy was constructed. Final diagnosis was juvenile xanthogranuloma. An association between cytomegalovirus and juvenile xanthogranuloma has been reported previously in the literature.

Senior author:
Dr. S. Leclerc
2705 boul. Laurier, #2211
Sainte-Foy (Québec) G1V 4G2
Phone: (418) 654-2259  Fax: (418) 654-2774
E-mail: lecsul@videotron.ca
DESMOID TUMOR OF THE POSTERIOR MEDIATINUM
PRODUCING AIRWAY OBSTRUCTION

Loma Linda University Children's Hospital, Loma Linda CA USA

**Purpose:** The authors present the second reported case of pediatric desmoid tumor of the posterior mediastinum and the first associated with life threatening airway obstruction.

**Methods:** A 12-year-old boy presented with cough and orthopnea. Radiographic imaging including MRI demonstrated a right posterior mediastinal mass markedly compressing the distal trachea and mainstem bronchi. Percutaneous biopsy showed fibroblastic proliferation. At operation, potential airway obstruction prompted placement of femoral cardiopulmonary bypass (CPB) cannulas under local anesthesia. After induction of general anesthesia, adequate ventilation could not be achieved. Attempts at selective bronchial intubation resulted in complete airway obstruction and necessitated CPB. Resection was performed via a right thoracotomy and adequate ventilation was restored following resection. Heparin induced coagulopathy resulted in postoperative hemorrhage from the tumor bed with required reexploration (x2) for control. The boy was discharged home on postoperative day number 16.

**Conclusion:** Posterior mediastinal fibromatosis producing airway obstruction is a rare presentation for pediatric extra-abdominal desmoid tumor. Although posterior mediastinal masses rarely produce airway obstruction, the same anesthetic protocol recommended for symptomatic anterior mediastinal lesions should be followed. Cannulation for CPB prior to induction of anesthesia would be considered for all mediastinal masses causing airway obstruction.

Sponsoring CAPS member: Dr. G.K. Blair
Senior author:
Dr. H. Gibbs Andrews
11175 Campus Street, Room 21111
Loma Linda, CA, 92354
Phone: (909) 824-4619  Fax: (909) 473-4236
E-mail: gandrews@som.llu.edu
PLEUROPULMONARY BLASTOMA: A RARE PATHOLOGY WITH AN EVEN RARER PRESENTATION
M. Lallier, S. Bouchard, M. Di Lorenzo, S. Youssef, H. Blanchard,
J.G. Lapierre, D. Vischoff, M. Tucci
Hôpital Sainte-Justine, Montreal (Quebec) CANADA

Pleuropulmonary blastoma is among the rarest tumors of childhood. Three types have been described (cystic, solid and mixed). To date, bilateral disease has not been documented.

A 5 week old female presented with a history of fever. Chest X-ray demonstrated bilateral diffuse cystic lesions. Bowel obstruction developed requiring laparotomy. Multiple small bowel polyps were resected. The patient was readmitted 4 months later with deteriorating respiratory status. She underwent sequential thoracotomies for resection of multiple bullae under high frequency oscillatory ventilation. Small bowel polypectomies were again required due to obstruction. Lung lesions were compatible with pulmonary blastoma but could not be correlated with intestinal polyposis. Bilateral cystic renal lesions were shown at ultrasound. Her disease progressed despite chemotherapy, with the appearance of metastatic iris lesions. She again underwent laparotomies for multiple recurrent generalized small bowel polyps causing obstruction. Expanding renal cysts affected kidney function and she expired at 14 months of age.

The rare association between pleuropulmonary blastoma and Wilms' tumor or nephroblastomatosis is known but rarely reported. Lacking pathological evidence, we can but speculate that this was the case. We have been unable to demonstrate any histological association between the reno-pulmonary and digestive lesions. Despite many unanswered questions, we are likely dealing with a "syndrome" of sorts with a dire outcome, despite aggressive treatments.

Senior author:
Dr. Maria Di Lorenzo
Hôpital Sainte-Justine
3175 Côte Ste-Catherine
Montréal (Québec) H3T 1C5
Phone: (514) 345-4688  Fax: (514) 345-4964
E-mail: chirhsj@point-net.com
PEDIATRIC ACCIDENTAL DEATHS
IN MANITOBA, CANADA (184-1992)

N. Wiseman, A. Abdo, D.A. Weizman
Winnipeg Children's Hospital, Winnipeg (Manitoba) CANADA

The Canadian childhood traumatic mortality rates are among the highest in the world. The purpose of this study is to describe the demographic profile of accidental death victims among the pediatric population in the Province of Manitoba, and to guide policy makers towards more focused interventions to prevent such accidental deaths.

The study has a descriptive design based on the analysis of data extracted from the Pediatric Death Review Committee (PDRC) of the College of Physicians and Surgeons of Manitoba database pertaining to all deaths within the pediatric age group (29 days to 14 years). From this database, all traumatic deaths between the years 1984 and 1992 (197 cases) were extracted if the immediate cause of death was in the category of injury and poisoning.

The results of the study reveal that the incidence of traumatic deaths among the Native population is higher compared to other ethnic groups. Despite only accounting for 15.8% of the total population 15 years and younger, Natives account for 40.6% of all traumatic deaths. While only 23.9% of all traumatic death victims lived in Winnipeg, 38.6% treated and 35.5% died in Winnipeg. The majority of these fatal accidents occurred during the summer except for infants where the majority of deaths occurred in the winter. Despite 40% of accidents occurred at home, motor vehicle collision especially among girls (42.6% compared to 28.7% for boys) was the single leading cause of accidents. This was not true for infants where burns and/or smoke were the major cause. In the majority of cases the accident could have been avoided.

This study points out several demographic and safety factors that appear to influence the incidence of pediatric traumatic deaths in the Province of Manitoba. These factors must be recognized in any planning strategy geared towards minimizing this tragic problem.

Senior author:
Dr. N. Wiseman
AE206-840 Sherbrook St.
Winnipeg, Manitoba, R3A 1S1
Phone: (204) 787-2682 Fax: (204) 787-2028
E-mail: nwiseman@hsc.mb.ca

accidents = related to poor soc.- econ. situations.
COST FACTORS IN CANADIAN PEDIATRIC TRAUMA

A. Dueck, D. Poenaru, D. Pichora
Queen’s University, Faculty of Medicine, Kingston (Ontario) CANADA

**Purpose:** To estimate the costs of Canadian pediatric trauma and identify cost predictors.

**Methods:** We reviewed all pediatric (<18 years) traumatic injuries with an Injury Severity Score (ISS) ≥ 4 seen over 6 years at a regional trauma centre. All hospital-based costs were included.

**Results:** Patient demographic and cost data follow.

<table>
<thead>
<tr>
<th>Main mechanism</th>
<th>N</th>
<th>Age</th>
<th>ISS</th>
<th>PTS*</th>
<th># body regions</th>
<th>Hospital stay (d)</th>
<th>Total cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>MVA</td>
<td>154</td>
<td>13.8</td>
<td>21.4</td>
<td>7.1</td>
<td>1.7</td>
<td>14.8</td>
<td>$8,778</td>
</tr>
<tr>
<td>Fall</td>
<td>26</td>
<td>9.8</td>
<td>11.7</td>
<td>8.9</td>
<td>1.1</td>
<td>4.0</td>
<td>$5,016</td>
</tr>
<tr>
<td>Sports</td>
<td>24</td>
<td>11.7</td>
<td>12.1</td>
<td>9.4</td>
<td>1.1</td>
<td>12.1</td>
<td>$5,695</td>
</tr>
<tr>
<td>Other</td>
<td>17</td>
<td>10.5</td>
<td>16.5</td>
<td>8.3</td>
<td>0.9</td>
<td>4.0</td>
<td>$3,229</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>221</td>
<td>12.8</td>
<td>18.8</td>
<td>7.7</td>
<td>1.5</td>
<td>12.5</td>
<td>$7,583</td>
</tr>
</tbody>
</table>

*PTS = Pediatric Trauma Score.

Total cost correlated directly with age (r=.29, p<.001) and ISS (r=.34, p<.001) and inversely with PTS (r=-.20, p=.003). Presence of extremity injuries correlated significantly with total cost (r=.22, p<.001) and PTS (r=-.25, p<.001) but not with ISS. Logistic regression identified trunk injury, ISS and PTS as the main determinants for survival.

**Conclusion:** The cost of pediatric trauma in Canada can be predicted from admission data and trauma scores. Cost of extremity injuries is significant and predicted by PTS not ISS.

**Senior author:**
Dr. Dan Poenaru
Kingston General Hospital
76 Stuart Street
Kingston (Ontario) K7L 2V7
Phone: (613) 548-3232    Fax: (613) 545-3205
E-mail: poenarud@KGH.KARI.NET
ANTENATAL DIAGNOSES OF CONJOINED TWINS

A.P. Dickson, S. Rimmer, A. Bianchi, N.K. Alizai
St. Mary's Hospital, Department of Foetal Therapy, Manchester, ENGLAND

Background: To evaluate antenatal ultrasound in the management of conjoined twin pregnancies.

Methods: Specialist scanning has defined diagnosis and specific anatomical abnormalities in conjoined twins allowing informed counselling of parents. Parents were counseled by at least three different parties. Detailed anatomical information has been gathered post-termination, or postnatally.

Results: Ten conjoined twin pregnancies were identified. Two pregnancies presenting in the 3rd trimester with serious abnormalities, but unsuitable for termination, had single heart lesions and died soon after birth. Six pairs were diagnosed in early pregnancy with severe abnormalities preventing surgical separation of normal viable babies. In all, parents elected termination. Post termination assessment confirmed ultrasound impressions. Two pregnancies diagnosed as omphalopagus twins, showing fusions of the liver and possibly upper G.I. tract, were continued to delivery. Set 1 had liver fusion only, and post separation are thriving. Set 2 had fusion of the liver and major abnormalities of the upper G.I. tract necessitating emergency surgery on Day 2 of life. These twins died of necrotising enterocolitis at age 5 weeks prior to separation.

Conclusions: Antenatal ultrasound reliably diagnoses conjoined twins, and provides accurate information regarding the anatomical abnormalities. Parents will elect to continue with pregnancy if a viable outcome can be anticipated.

Sponsoring CAPS member: Mr. A. Pierro
Senior author:
Mr. A. Dickson
Dept Foetal Therapy, St. Mary's Hospital, Hathersage Rd.
Manchester, M13 9WL, England
Phone: 0161-7957000 Fax: 0161-7415609
E-mail: PIERINAK@aol.com
THE ROLE OF PROPHYLATIC CHOLECYSTECTOMY DURING SPLENECTOMY IN CHILDREN WITH HEREDITARY SPHEROCYTIOSIS

A. Sandler, G. Winkel, K. Kimura, R. Soper
The University of Iowa Hospital and Clinics, Iowa City, IA USA

Hereditary Spherocytosis is an autosomal dominant disorder associated with an intrinsic defect in the red blood cell membrane often necessitating splenectomy. When cholelithiasis is present, these patients undergo cholecystectomy at the same operative setting as splenectomy. Following splenectomy alone, it is uncertain whether the amount of hemolysis is adequately decreased to prevent subsequent gallstone formation.

PURPOSE: Prompted by a mother’s request for prophylactic cholecystectomy of her child with hereditary spherocytosis and no gallstones, this study set out to evaluate the frequency in which symptomatic cholelithiasis develops in children treated by splenectomy alone.

METHODS: All patients less than 18 years old with hereditary spherocytosis who underwent splenectomy without cholecystectomy at our institution during the past 27 years were included in this study. A retrospective chart review and patient follow-up was performed. Gall stones were excluded in these patients either by preoperative ultrasound, or by intra-operative palpation of the gallbladder. The main study outcomes of this group included: documented cases of cholelithiasis, subsequent need for cholecystectomy secondary to cholelithiasis, and questionnaire to determine the incidence of “sub-clinical” cholelithiasis (not reported to a physician).

RESULTS: Twenty-three subjects were identified who met the inclusion criteria. Complete follow-up data was obtained for seventeen of these patients (74%). The mean age at splenectomy was 6.9±0.8 years, while the mean follow-up was 14.5±2.3 years. No patients in this series have subsequently undergone cholecystectomy, nor has any had either clinical or sub-clinical evidence of cholelithiasis since splenectomy.

CONCLUSIONS: Prophylactic cholecystectomy at the time of splenectomy is not indicated in patients with hereditary spherocytosis who do not have gall stones.

Senior author:
Dr. Anthony Sandler
The University of Iowa Hospitals and Clinics
200 Hawkins Drive, Iowa City, IA 52242
Phone: (319) 356-1766 Fax: (319) 356-8378
E-mail: asandler@surgery.uiowa.edu
GASTRO-OESOPHAGEAL REFLUX IN CHILDREN WITH CONGENITAL ABDOMINAL WALL DEFECTS

A. Koivusalo, R.J. Rintala, H. Lindahl
The University of Iowa Hospital and Clinics, Iowa City, IA, USA

Aim of study: Gastro-oesophageal reflux (GOR) is considered common in patients with congenital abdominal wall defects (CAWD). Our aim was to find out the frequency of GOR in children with CAWD, and in particular, whether there is difference between patients with omphalocele and gastroschisis.

Patients and methods: Forty-two children, 19 with gastroschisis, and 23 with omphalocele were examined for GOR at the median age of 12 months (range 1-132). Oesophagogastroduodenoscopy with biopsies were performed on all patients. Eighteen patients underwent 24h pH-monitoring.

Results: GOR was detected in thirteen patients. All but one of the thirteen had either macroscopic or microscopic oesophagitis. One patient had pathological pH monitoring only. In children with omphalocele the incidence of GOR was 10/23 (43%), whereas in gastroschisis patients the incidence was 3/19 (16%). The median age of omphalocele patients with GOR was significantly lower (7 months) than the median age of those without GOR (72 months) (p=0.02). In patients with gastroschisis age made no difference. Six of 32 patients (19%) with primary fascial closure (small defects) had GOR, but seven of ten patients (70%) with large defects had GOR (p<0.01).

Conclusions: CAWD patients, especially those with omphalocele and a large defect, have a high incidence of GOR complicated by oesophagitis during the first few years of life.

Senior author:
Dr. Harry Lindahl
PL 281
FIN-00029 HYKS Finland
Phone: +358-0-4715241 Fax: +358-0-4716711
E-mail: harry.lindahl@helsinki.fi
ABDOMINAL WOUND DEHISCENCE IN CHILDREN: A PROSPECTIVE ANALYSIS OF 445 PATIENTS

D.A. Smith, H.V. Firor
Southern Illinois University School of Medicine
and St. John Medical Center, Springfield, IL USA
University of Illinois College of Medicine at Peoria
and Saint Francis Medical Center, Peoria, IL USA

Purpose: Many risk factors have been proposed as contributing to the development of wound disruption. We analyzed a variety of factors to determine their significance.

Methods: A series of 445 consecutive patients undergoing laparotomy were prospectively followed for the development of fascial dehiscence.

Results: Six patients (1.3%) had dehiscence, two early (0.45%) at 9.5 ± 0.70 days and four late (0.90%) at 82.3 ± 27.8 days. There were no mortalities associated with dehiscence. Location of the wound was not significant (p=0.10) nor was patient age (p=0.43), gender (p=0.67), suture material used (p=0.19), medical condition i.e. ASA level (p=0.42), or contamination of the wound i.e. wound class (p=0.57). Prematurity was a significant risk factor (p<0.008) as was steroid use (p<0.004), age of the wound (p<0.003) with incisions made through a previous scar at highest risk, mass closure of transverse wounds (p<0.007) and closure of stomas (p<0.0001).

Conclusions: Our dehiscence rate compares quite favorably to collected pediatric series (0.45% vs 1.1%). We recommend using a layered closure for transverse incisions. Increased care should be exercised in closing patients with a history of prematurity or steroid use, when closing a stoma, or when operating through scar tissue.
LONG TERM OUTCOME OF EARLY VASCULAR THROMBOSIS IN
PEDIATRIC LIVER TRANSPLANTATION

T. Yandza, D. St-Vil, J.M. Laberge, H. Blanchard
Hôpital Sainte-Justine, Montreal (Québec) CANADA

Introduction: The aim of this study was to determine the outcome of the primary liver graft submitted to early vascular thrombosis and surviving more than one year after pediatric hepatic transplantation.

Methods: From February 2, 1986, to January 31, 1997, 100 liver grafts were implanted in 89 pediatric patients. The overall rate of vascular thrombosis was 20% (20/100). Nine children whose primary liver graft survived more than one year were included in the study (5 boys and 4 girls aged 12 m to 132 m). In all cases, the diagnosis of vascular thrombosis was made within the first postoperative month and consisted of 5 HAT, 3 PVT, and 1 HAT + PVT. Early thrombectomy was successfully performed in 4 patients (2 HAT, 2 PVT) and failed in one (1 HAT + PVT). The follow-up period was between 12 m and 144 m (median: 60 m).

Results: Among the children with HAT, 1/5 (thrombectomy) was reoperated 6 months after transplantation for repair of a choledocojunostomy stenosis. A second child developed symptomatic portal hypertension related to regenerative nodular hyperplasia with normal liver function. The remaining three patients (one successful thrombectomy) are doing well. All patients have normal liver function tests. The 3 children with PVT have normal liver function test with moderate portal hypertension in one. The patient with both HAT and PVT has a severe portal hypertension and is a candidate for a portosystemic shunt.

Conclusion: Liver graft loss secondary to early vascular thrombosis is infrequent when the graft survives the first year post-transplant. After that time, the overall graft survival is 89%. Most surgical procedures after the first year are conservative. Early thrombectomy may help in improving long term results of vascular thrombosis.

Sponsoring CAPS member: Dr. Dickens St-Vil
Senior author: Dr. Thierry Yandza
Mailing address: Hôpital Sainte-Justine
3175 Côte Ste-Catherine
Montréal (Québec), H3T 1C5
Phone: (514) 345-4688 Fax: (514) 345-4964
E-mail: chirhsj@point-net.com
REPEAT PULLTHROUGH SURGERY FOR COMPLICATED HIRSCHSPRUNG DISEASE: INDICATIONS, TECHNIQUES, AND RESULTS

J.C. Langer
Washington University School of Medicine, St. Louis, Missouri USA

**Background:** Most children with Hirschsprung disease do well after a pullthrough procedure. In the occasional child in whom the operation fails, a repeat procedure may be necessary.

**Methods:** Eight children aged 20 mo. to 9 yr. underwent repeat pullthrough over 3 years. Original pullthroughs (6 Soave, 2 Swenson) were done 12 to 95 months prior to presentation at our centre (median 36 mo.). Indications for revision were unresponsive stricture (3) and acquired aganglionosis (5). One also had segmental intestinal neuronal dysplasia. One child with stricture following a Swenson had a repeat Swenson. The other 7 were reconstructed using a Duhamel. Five had a stoma prior to or at the time of repeat surgery.

**Results:** Follow-up was 6 to 32 mo. (median 11 months). Complications included wound infection (2), anastomotic bleeding (1), stoma stenosis (1), leak after stoma closure (1), anastomotic narrowing (2), and persistent septum (1). Four patients have normal stool patterns. One has intermittent encopresis. Three have persistent obstructive symptoms from sphincter hypertonicity, which have been managed nonoperatively.

**Conclusions:** Repeat pullthrough can be done safely in selected patients. Duhamel reconstruction is preferred for technical reasons, and a stoma is not always necessary. Outcome is generally favorable, but persistent symptoms from anal sphincter hypertonicity are common.

**Senior author:**
Dr. Jacob C. Langer
St. Louis Children’s Hospital, Room 5S60
One Children’s Place, St. Louis, MO 63110
Phone: (314) 454-6022 Fax: (314) 454-2442
E-mail: langerj@msnotes.wustl.edu
THE SWENSON PROCEDURE FOR HIRSCHSPRUNG'S DISEASE:
COMPARISON OF LAPAROSCOPIC TO OPEN APPROACH

J.M. Walton, P.G. Fitzgerald, S.K. Mayer, C. Law,
B. Carreon, D. Girvan, S. Yazzbeck
Children's Hospital, Geisinger Medical Center
Children's Hospital of Western Ontario
Hôpital Sainte-Justine
Hamilton, Danville, London, Montreal CANADA

Background: We compared laparoscopic Swenson pullthrough (LSP) to the standard open Swenson pullthrough (OSP), done in either single or multiple stage procedures, to determine safety and short term efficacy.

Methods: A retrospective and prospective study of Swenson pullthrough for Hirschsprung’s disease (HD) at four centers was performed looking at clinical presentation, management, operating room times, length of stay and outcomes. Three centers performed laparoscopic Swenson pullthroughs 1,2,3.

Results: Forty eight charts of HD were reviewed in which a Swenson pullthrough was performed. Twenty-one patients underwent attempted LSP (1995-1998) while 27 patients underwent OSP (1992-1997). Birth demographics, extent of disease, age and weight at diagnosis, age and weight at time of pullthrough and time to first bowel movement were similar in each group. Surgical time for the LSP was longer (241 vs. 198 min; p<0.0001). The LSP group had a shorter time to first feed (p<0.01) and shorter post-operative stay (p<0.05). One LSP was completed open for unrecognized long segment HD. One OSP leaked and required a colostomy while another developed a post-operative intussusception.

Conclusions: These early results demonstrate the safety of LSP. The data also suggests post-operative benefits in the laparoscopic group which need to be more systematically investigated.

Senior author:
Dr. J.M. Walton
Children’s Hospital at the Hamilton Health Sciences Corporation
1200 Main St W, Rm 4E3
Hamilton (Ontario) L8N 3Z5
Phone: (905) 521-2100 ext. 5231 Fax: (905) 521-9992
E-mail: waltonj@hs.usr.mcmaster.ca
PEDIATRIC GENERAL SURGERY PRACTICE PATTERNS AND OUTCOME

K. Clark, D. Poenaru, I. Kamal
Queen's University, Kingston (Ontario) CANADA

Background: Common pediatric surgical procedures are often performed by adult as well as pediatric surgeons, with significant geographic variations. This study compared outcomes of the 2 practice patterns.

Methods: The hospital records of all infants with pyloric stenosis and inguinal hernia operated over 6 years at 3 Ontario hospitals were reviewed. Two practices involved academic pediatric surgeons (PS) and one involved adult general surgeons (AS).

Results: Patient demographics and outcomes by practice type are shown below.

<table>
<thead>
<tr>
<th>Pyloric stenosis</th>
<th>N (%)</th>
<th>Postop stay (d)</th>
<th>Wound infection</th>
<th>Mucosal perforation</th>
<th>Vomiting &gt;24h</th>
<th>Repeat pyloromyotomy</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS 61 (80.3%)</td>
<td>2.9</td>
<td>4.9%</td>
<td>6.6%</td>
<td>9.8%</td>
<td>1.6%</td>
<td></td>
</tr>
<tr>
<td>AS 15 (19.7%)</td>
<td>5.2</td>
<td>21.4%</td>
<td>7.1%</td>
<td>21.4%</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>p (Mann-Whitney)</td>
<td>.02</td>
<td>.04</td>
<td>.94</td>
<td>.23</td>
<td>.62</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inguinal Hernia</th>
<th>N (%)</th>
<th>Ex-premie</th>
<th>Postop stay (d)</th>
<th>Emergency OR</th>
<th>Wound infection</th>
<th>Recurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS 156 (62.4%)</td>
<td>31.4%</td>
<td>2.0</td>
<td>10.3%</td>
<td>1.4</td>
<td>0.7</td>
<td></td>
</tr>
<tr>
<td>AS 94 (37.6%)</td>
<td>35.1%</td>
<td>2.2</td>
<td>22.3%</td>
<td>1.2</td>
<td>4.8</td>
<td></td>
</tr>
<tr>
<td>p (Mann-Whitney)</td>
<td>.55</td>
<td>.59</td>
<td>.01</td>
<td>.89</td>
<td>.04</td>
<td></td>
</tr>
</tbody>
</table>

Logistic regression analysis identified the practice type as the key factor in the occurrence of complications for both pyloric stenosis and inguinal hernia.

Conclusions: These data suggest distinct practice patterns for pediatric and adult surgeons performing common infant procedures, with prolonged hospitalization and increased complication rates in unspecialized practices.

Senior author:
Dr. Dan Poenaru
Kingston General Hospital
76 Stuart Street
Kingston (Ontario) K7L 2V7
Phone: (613) 548-3232 Fax: (613) 545-3205
E-mail: poenarud@KGH.KARI.NET
DOES FORMAL RESEARCH DURING A GENERAL SURGERY RESIDENCY PREDICT INCREASED ACADEMIC PERFORMANCE?

J.G. Raffensperger, S.R. Luck
Children's Memorial Hospital

Background: This study was undertaken to determine characteristics which influence practice patterns in pediatric surgery.

Methods: Data on 27 pediatric surgery residents from one institution was reviewed and correlated with practice activities. Seven did formal research during general surgery. Eight had clinical or research fellowships of various kinds between general and pediatric surgery training.

Results: Twenty-six residents passed board examination in pediatric surgery and practiced the specialty. One was not recommended for boards and never practiced pediatric surgery. Twelve surgeons are in full-time academic practice; 13 have academic affiliations; 1 practices overseas at a major children's hospital. Six surgeons are professors; 19 are assistant or associate professors. Three became program directors of Pediatric Surgery training programs. Thirteen have published 20 or more manuscripts. Four of the surgeons have done basic research while in practice; only 1 of these performed research during general surgery training. Of the 6 with a formal research rotation during general surgery, 1 never practiced this specialty and only 1 is in academic practice. Fifteen surgeons are 45 years of age or older and each of these have practiced over 12 years. Two surgeons died of cancer. One no longer practices pediatric surgery after sustaining a mild cerebrovascular bleed. Sex, race, college, medical school, or type of general surgery residency did not influence practice patterns.

Conclusions: Formal research during general surgery does not enhance eventual academic activity. Extra training between general and pediatric surgery correlated most closely with academic productivity during practice. The benefit of adding extra years of training should be weighed in relation to the total years of expected productivity of each surgeon.

Sponsoring CAPS member: Dr. Geoff K. Blair
Senior author:
Dr. John G. Raffensperger
1902 N. Orchard Street
Chicago, Illinois  60614
Phone: (312) 951-8329   Fax: (773) 880-4588
E-mail: r-kreuger@nwu.edu
A CASE OF DELAYED SPLENIC RUPTURE

N. Caron, K.W. Gow, G.K. Blair, J.J. Murphy III  
British Columbia's Children's Hospital, University of British Columbia  
Vancouver (British Columbia) CANADA

The non-operative approach to splenic injury in children has been well established. With cost containment becoming an increasingly important issue in patient care, some have advocated a shorter course of observation. We present a case of a 9 year old boy who suffered a splenic injury following a 10 meter fall from a tree. On arrival he was hemodynamically stable with an admission hemoglobin of 107 g/l. CT Scan demonstrated a severe splenic laceration (Grade III). He was initially observed in the Intensive Care Unit for 48 hours and remained hemodynamically stable. His hemoglobin remained stable and he did not require any blood transfusions. He did well until the sixth hospital day when he became acutely hypotensive. At laparotomy, active bleeding from an extensive hilar laceration was found. He underwent a splenectomy and made a smooth recovery. While some have advocated earlier discharge for patients with splenic injuries, this case illustrates the potential hazards of delayed splenic rupture, a potential problem which to date has been infrequently described in pediatric literature.

Senior author:  
Dr. James J. Murphy III  
B.C. Children’s Hospital  
4480 Oak Street, Rm A242-B  
Vancouver (British Columbia) V6H 3V4  
Phone: (604) 875-2667 Fax: (604) 875-2721  
E-mail: Dr. Nadine Caron: nadiner@unixg.ubc.ca
OBSERVATIONS OF SPLENIC TRAUMA:
WHEN IS A LITTLE TOO MUCH

M.S. Irish, R. Brown, A.J. McCabe, P.L. Glick
The Children's Hospital of Buffalo, Buffalo, NY USA

A 12-y/o male was conservatively managed for a grade II splenic laceration. Upon discharge, he was instructed to avoid contact sport, running and strenuous physical activity. 37 days later, after diving off the side of a swimming pool, he developed abdominal pain, nausea and diaphoresis. On admission he was hemodynamically unstable. A diagnostic peritoneal lavage revealed gross blood. At laparotomy, a fractured spleen was found and splenectomy was performed. He recovered without complication. This case questions the activity restrictions placed on patients with conservatively managed splenic trauma. Avoidance of only contact sport and heavy exertion may be inadequate. Pooled data of the causes of delayed traumatic splenic rupture is necessary.

Sponsoring CAPS member: Dr. Rick Pearl
Senior author:
Dr. Michael G Caty
The Children’s Hospital of Buffalo
219 Bryant Street
Buffalo, New York 14222
Phone: (716) 878-7301   Fax: (716) 878-7998
E-mail: mcaty@acsu.buffalo.edu
AN UNUSUAL BILE DUCT INJURY IN A CHILD FOLLOWING BLUNT ABDOMINAL TRAUMA

S. Bin Yahib, A. Al-Rabeeah, A. Al-Sammarrai
King Fahad National Guard Hospital, Riyadh, SAUDI ARABIA

Bile duct injuries are rare in children especially after blunt trauma. Less than 15 cases were reported in the English literature. This paper reports a three-year-old child who sustained blunt abdominal trauma resulting in liver and small bowel injuries. The initial management at another hospital included repair of those injuries. However, the post-operative course was complicated by biliary leak and further investigations showed a bile-duct injury with major leak. He was referred to our institution for further management. Endoscopic retrograde cholangiography and radioisotope scanning confirmed such injury. At laparotomy there were injuries of both right and left hepatic ducts. Anomaly of bile duct course was noted. The right hepatic duct was repaired primarily and the left one was repaired with Roux-Y hepatico-jejunostomy. The outcome of this child was good and excellent drainage was documented by biliary scan. At one-year follow-up, the patient is symptom free.

In conclusion, bile duct injuries are very rare in children after blunt trauma. Anomalies of bile ducts may be a contributing factor to such injuries. High index of suspicion and the use of radioisotope scans and/or ERCP may help diagnose such injuries.

Senior author:
Dr. A. Al Rabeeah
King Fahad National Guard Hospital
P.O. Box 22490
Riyadh 11426, SAUDI ARABIA
Phone: 966 1 252-0320 Fax: 966 1 252-0123
E-mail: arabeeah@hotmail.com
SEAT BELT TRANSECTION OF THE PARARENAL VENA CAVA IN A FIVE YEAR OLD CHILD: SURVIVAL WITH CAVAL LIGATION

R.S. Abrams, J.M. DeCou, M.W.L. Gauderer
The Children's Hospital of Greenville, Hospital System, Greenville, SC USA

Background: Seat belts are a known cause of intra-abdominal, retroperitoneal, as well as vertebral injury. Inferior vena cava (IVC) disruption due to this type of blunt trauma is rare, and less than 20% of all patients who reach the hospital alive eventually survive. Review of the recent literature on major vessel injury suggests that survival is even less common among the few reported children.

Case Report: A minivan rear-ended a slow moving truck at approximately 75 miles per hour. The occupants, two parents and their three children (ages 8 years, 5 years, and 16 months), all wearing seat belts, were severely injured. The 20 kg five-year-old girl’s hypotension was initially stabilized following crystalloid resuscitation. Her CT scan demonstrated a massive retroperitoneal hematoma with extravasation of contrast in the region of the right renal vessels, and a right renal fracture. In addition, the infrarenal IVC was noted to be expanded, while the pararenal IVC was collapsed. At celiotomy, using direct pressure to control hemorrhage, the completely transected proximal and distal IVC, as well as the right renal vein, were individually ligated. Blood loss was massive. In addition to crystalloids, blood products equaling twice her blood volume were transfused. A duodenal injury and a vertebral fracture were also diagnosed. Retroperitoneal hematoma and bowel edema prevented abdominal wall closure and a temporary “silo” was placed. Layered closure became possible two days later. Bilateral lower extremity edema gradually resolved over one week. A body cast was employed for spinal stabilization. She was discharged from the hospital after 14 days, joining her other family members who also survived. Four months later the child is well and ambulating normally.

Conclusion: Inferior vena cava disruption can be suspected on CT scan in patients with extensive retroperitoneal hematoma. Ligation, rather than reconstruction, and a staged approach provided effective damage control surgery in this child. Although there is still a need for further improvements in automobile passenger restraining devices, this family owes its survival to the use of presently available seat belts for the children, and the combination of seat belts and air bags for the adults.

Sponsoring CAPS member: Dr. Geoffrey K. Blair
Senior author:
Dr. Michael W.L. Gauderer
Chief, Department of Pediatric Surgery
The Children's Hospital of Greenville Hospital System
890 W. Faris Road, Suite 440
Greenville, South Carolina 29605-4253
Phone: (864) 455-5070 Fax: (864) 455-4170
E-mail: mgauderer@ghs.org
AN UNUSUAL PRESENTATION OF CONTINUOUS GASTRIC AND ESOPHAGEAL DUPLICATION PASSING THROUGH A DUPLICATED DIAPHRAGMATIC HIATUS

D.M. Notrica, M.A. Gilger, D.E. Wesson
Baylor College of Medicine and Texas Children's Hospital, Houston, TX USA

Gastric duplications are a rare and heterogeneous group of alimentary tract duplication. Gastric duplications present with a wider variety of clinical symptoms than other duplications and present unique diagnostic and therapeutic challenges.

The case of a 12 month old child with nonbilious vomiting since early infancy is reported. Feedings were strongly association of abdominal discomfort, sweating and irritability which were relieved by vomiting. His symptoms progressively worsened with transition to solid food.

Evaluation with an upper gastrointestinal series and small bowel follow-through identified an unusual intestinal loop passing into the mediastinum in an oblique fashion which appeared to fill retrograde from the duodenum. This intestinal loop became distended with barium during the study and apparently caused the symptoms associated with feedings.

At laparotomy, the child was found to have a complete duplication of the stomach along the lesser curve with a duplicated esophagus passing through a separate esophageal hiatus just to the left of the true esophageal hiatus. Transhiatal blunt esophagectomy, partial resection of the fundus, stapled marsupialization of the long gastric duplication and Nissen fundoplication were performed. In follow-up, the child is eating and gaining weight with no recurrent symptoms.

Senior author:
Dr. David E. Wesson
6621 Fannin, MC 3-2325
Houston, TX 77030
Phone: (713) 770-3135 Fax: (713) 770-3141
E-mail: davidw@bcm.tmc.edu
ULTRASOUND AND THE WOODEN FOREIGN BODY

S. Rubin, M. Szpakowicz, H. Dunlap
Children's Hospital of Eastern Ontario, Ottawa (Ontario) CANADA

Background/purpose: Exact localization of wooden, non-radiopaque, soft tissue foreign bodies may be frustratingly difficult. The use of ultrasonography, diagnostically and intraoperatively has been reported. This study aims to define the ideal method of ultrasonography in the localization and removal of soft tissue wooden foreign bodies.

Method: All suspected wooden foreign bodies underwent ultrasonography. A 7.5 to 10 MegaHz linear small parts transducer was used. An echogenic area corresponding in shape to the suspected foreign body with posterior shadowing similar to calcification is diagnostic.

Results: The exact location, depth from the overlying skin and size of the foreign body can be measured.

Conclusion: Ultrasonography, strictly adhering to the above methodology, is a very effective tool in the management of retained soft tissue wooden foreign bodies.

Senior author:
Dr. S. Rubin
CHEO
401 Smyth Avenue
Ottawa (Ontario) K1H 8L1
Phone: (613) 737-2340 Fax: (613) 737-4840
ASSOCIATION CANADIENNE de CHIRURGIE PÉDIATRIQUE

30ième

Réunion Annuelle

TORONTO

25-28 Septembre 1998
TRENTIÈME Congrès Annuel

ASSOCIATION CANADIENNE de
CHIRURGIE PÉDIATRIQUE

25-28 Septembre 1998

Toronto Marriott Eaton Center
525 Bay Street
Toronto (Ontario) CANADA
M7Y 2W1

(416) 597-9200
PROGRAMME SCIENTIFIQUE ET SOCIAL

Vendredi, le 25 septembre 1998

09:00 - 17:00 Réunion du Conseil de l'ACCP
17:00 Inscription
19:00 - 22:00 Réception de Bienvenue -- Toronto Marriott Eaton Center

Samedi, le 26 septembre 1998

07:00 - 13:00 Inscription
07:00 - 07:55 Petit Déjeuner
07:30 - 13:00 Exposition
07:55 - 08:00 Môt de Bienvenue et Ouverture du Congrès
08:00 - 10:00 PREMIÈRE Session Scientifique
10:00 - 10:30 Pause-Santé
10:30 - 11:30 DEUXIÈME Session Scientifique
11:30 - 12:30 Fred MacLeod Lecture
12:30 Lunch
14:00 - 15:00 TROISIÈME Session Scientifique
15:00 - 16:00 Surgeons on the "Firing Line"

Dimanche, le 27 septembre 1997

07:00 - 12:30 Inscription
07:00 - 08:00 Petit Déjeuner
07:30 - 13:00 Exposition
08:00 - 10:00 QUATRIÈME Session Scientifique
10:00 - 10:30 Pause-Santé
10:30 - 11:30 CINQUIÈME Session Scientifique
11:30 - 12:30 "2 minutes / 2 diapos"
12:30 Déjeuner d'Affaire des Membres
19:00 Réception du Président
19:30 Banquet du Président -- Toronto Marriott Eaton Center

Lundi, le 28 septembre 1998

07:00 - 12:00 Inscription
07:00 - 08:00 Petit Déjeuner
07:00 - 13:00 Exposition
08:00 - 10:00 SIXIÈME Session Scientifique
10:00 - 10:30 Pause-Santé
10:30 - 12:30 Septième Session Scientifique
12:30 Ajournement
MOT DE BIENVENUE DU PRÉSIDENT

Chers membres de l'ACCP et chers invité(e)s,

Le congrès de cette année représente une occasion spéciale dans l'histoire de notre association. En effet, c'est le 30e anniversaire de l'Association Canadienne de Chirurgie Pédiatrique et avons tous hâte au congrès qui se tient à Toronto du 25 au 28 septembre 1998.

L'Association Canadienne de Chirurgie Pédiatrique est née en janvier 1969 à Vancouver quand 27 chirurgiens pédiatres de tous les coins du pays se réunirent, motivés par leur souci du bien-être et des bons soins des enfants.

Nous avons par la suite grandi pour devenir aujourd'hui une organisation avec des membres tout autour du globe et avec un congrès annuel reconnu pour la grande qualité de son programme scientifique permettant la participation de tous les congressistes à des discussions ouvertes. Cette tradition continue encore cette année.

Arlene et Siggie Ein qui sont nos hôtes n'épargnent jamais aucun effort pour nous assurer d'un congrès mémorable. Arlene a prévu des activités spéciales pour souligner cet anniversaire. Le comité du programme avec son président, le Docteur Geoffrey K. Blair, nous préparent un excellent programme scientifique qui est la principale caractéristique de notre réunion annuelle. Je suis certain que ce programme stimulera des discussions intéressantes de la part de tous les congressistes.

Toronto est une des villes les plus intéressantes avec des possibilités de visites et loisirs très diversifiées. Par ailleurs, le mois de septembre est une excellente période pour faire du tourisme en Ontario avec beaucoup d'activités qui ont lieu près de Toronto, pour ceux qui veulent en profiter pour prendre quelques jours de vacances après le congrès.

Nous espérons que vous vous joindrez à nous pour rendre cet anniversaire inoubliable.

Je souhaite très sincèrement à tous un excellent congrès.

David P. Girvan, M.D.
Président
Association Canadienne de Chirurgie Pédiatrique
À PROPOS DE
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 Nouveau-Nés Porteurs de Malformations Congénitales

Bien que la majorité des nouveau-nés porteurs de malformations congénitales graves puissent être opérés avec succès, il arrive souvent 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 pédiatrique, 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 fonds d'éducation fut créé afin de pouvoir soutenir ce programme.
Le Fonds 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 pédiatrique conférencier à la réunion annuelle de la Société Canadienne de Pédiatrie. Le Fonds 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 Fonds 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 Fonds 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:

Salam Yazbeck, M.D.
Secrétaire-Trésorier de l’ACCP
Hôpital Sainte-Justine
3175, Côte Ste-Catherine
Montréal (Québec) CANADA
H3T 1C5

 Téléphone (514) 345-4688
Fax (514) 345-4964
E-mail Secretary@caps.ca
PRÉSIDENTS

1967-1973 Harvey Beardmore Montréal
1973-1975 Colin Ferguson* Winnipeg
1975-1977 Jim Simpson* Toronto
1977-1979 Sam Kling Edmonton
1979-1981 Pierre-Paul Collin Montréal
1981-1983 Barry Shandling Toronto
1983-1985 Gordon Cameron Hamilton
1985-1987 Stanley Mercer Ottawa
1987-1989 Alex Gillis Halifax
1989-1991 Jacques C. Ducharme Montréal
1991-1993 Sigmund H. Ein Toronto
1993-1995 Angus Juckes Regina
1995-1997 Jean G. Desjardins Montréal
1997-1999 David P. Girvan

* décédé

SECRÉTAIRES-TRÉSORIERS

1967-1974 Barry Shandling Toronto
1974-1978 Gordon Cameron Hamilton
1978-1983 Frank M. Guttman Montréal
1989-1995 Ray Postuma Winnipeg
1995- Salam Yazbeck Montréal
MEMBRES FONDATEURS

ALLEN Michael
ASHMORE Phillip
BEARDMORE Harvey
CAMERON Gordon
COLLIN Pierre-Paul
DESIARDINS Jean G.
DUCHÂRME Jacques C.
DUVAL Frederick
FALLIS James
FERGUSON* Colin
GILLIS Alex
GUTTMAN Frank M.
JUCKES Angus
KARN* Gordon
KENNEDY Richard
KLIMAN Murray
KLING Samuel
MARSHALL Donald
MARSHALL Russell
MERCER Stanley
MURPHY David
OWEN* Herbert
SHANDLING Barry
SHRAGOVITCH* Israël
SIMPSON* James
STEPHENS* Clinton
TURCOT* Jacques

* décédé

Le premier CONGRÈS ANNUEL eut lieu le 22 janvier, 1969 à VANCOUVER
LES ARMOIRIES
DE
L'ASSOCIATION CANADIENNE DE CHIRURGIE PÉDIATRIQUE

Le Blason

Au gauche, un bistouri droit entouré d'un serpent alors qu'à droite se tient un enfant, tout argent.

Au sommet se trouvent trois feuilles d'érable ainsi que la date 1967.

Devise: "Je le pensay, Dieu le guarit".

Description

Le rouge et le violet des armes sont les couleurs du Collège Royal des Médecins 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'Esculape 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 (1967).

La devise est une citation d'Ambroise Paré, père de la chirurgie moderne.
PROCHAINS CONGRÈS DE L'ACCP

31e Congrès Annuel  
24-26 Septembre 1999  
MONTREAL

32e Congrès Annuel  
22-24 Septembre 2000  
OTTAWA
COMMUNICATION DES RÉSIDENTS

Les présentations faites par les résidents en chirurgie sont jugées par un panel constitué de membres du Comité de Publication. Il y a deux catégories: celui du meilleur travail clinique et celui du meilleur travail expérimental. Chaque prix est de 500$. 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 de Président.

PRIX POUR LES MEILLEURES COMMUNICATIONS DES RÉSIDENTS 1997

MEILLEUR TRAVAIL CLINIQUE

Dr. Miriam C. WHITE

"Sensitivity and cost effectiveness of radiology vs olive palpation."
M.C. White, J.C. Langer, S. Don, M.R. Debaun
Washington University, Department of Surgery, Radiology and Pediatrics
St.Louis, MO USA

MEILLEUR TRAVAIL EXPÉRIMENTAL

Dr. Michael S. IRISH

"Contractile properties of intralobar pulmonary arteries and veins in congenital diaphragmatic hernia:
An initial look at the nitric oxide-cGMP pathway of vasodilation"
M.S. Irish, P. Kapur, D.A. Bambini, J. Russell, B.A. Holm, R.H. Steinhorn, P.L. Glick
The Buffalo Institute of Fetal Therapy of the Children's Hospital of Buffalo
The State University of New York at Buffalo School of Medicine and Biomedical Sciences
Buffalo, NY USA

FÉLICITATIONS AUX DOCTEURS WHITE ET IRISH !!
VISITEZ NOTRE SITE INTERNET

www.caps.ca
CONFÉRENCIER INVITÉ

Docteur Richard K. REZNICK, M.D.


Après avoir pratiqué la chirurgie pendant deux ans, le Docteur Reznick entreprit deux ans de surspécialisation; une année en pédagogie chirurgicale à l'Université Southern Illinois et une année en chirurgie colorectale à l'Université du Texas à Houston.


Il est membre de 12 sociétés savantes. La bibliographie de notre conférencier invité est impressionnante. Elle compte 56 publications, 13 chapitres de livre, 103 présentations et 67 conférences sur invitation.

Le Docteur Reznick est très actif en recherche sur l'évaluation des enseignés et des enseignants. Au cours des 9 dernières années, il obtint plus de 300,000$ en subventions de recherche dans ce domaine.

Depuis le début de sa résidence en chirurgie générale, le Docteur Reznick a reçu un très grand nombre de distinctions pour son travail comme chirurgien et comme pédagogue.

L'ACCP est heureux d'inviter le

DOCTEUR RICHARD K. REZNICK

à donner la conférence annuel Fred MacLeod
Le sujet de sa conférence est:
"POUR DES APPTITUDES ADAPTÉES AU NIVEAU D'ENTRAÎNEMENT"