Annual Meeting
Réunion Annuelle

Ottawa,

June 2 - 6, 1980

Canadian Association of Paediatric Surgeons
l'Association Canadienne de Chirurgie Infantile
programme détaillé

programme schedule

June 2 - 6, 1980
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 in 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 commonest cause of death in childhood. Now 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.
C.A.P.S. SOCIAL ACTIVITIES
CHATEAU LAURIER

Monday, June 2, 1980

Welcoming Reception
Sylvia & Stan Mercer's
210 Buena Vista Road
Ottawa, Ontario
7:00-9:00 p.m.

Tuesday, June 3, 1980

Annual Banquet
Royal Ottawa Golf Club
Aylmer Road
7:00 p.m.

PROGRAMME SOCIALE C.A.P.S.

lundi, 2 juin, 1980

Reception d'accueil
Sylvia & Stan Mercer's
210 Buena Vista Road
Ottawa, Ontario
7:00 h-9:00 h

mardi, 3 juin, 1980

Banquet Annuel
Royal Ottawa Golf Club
Aylmer Road
7:00 h
ROYAL COLLEGE OF PHYSICIANS AND SURGEONS
GENERAL INFORMATION

Registration and the Hospitality Lounge will be located in the Burgundy Room, Mezzanine Level, Chateau Laurier Hotel.

REGISTRATION HOURS
Tuesday, June 3 — 2 p.m. to 6 p.m.
Wednesday, June 4 — 9 a.m. to 4 p.m.
Thursday, June 5 — 9 a.m. to 4 p.m.
Preregistration is encouraged. The Hospitality Lounge will be open Wednesday and Thursday from 9 a.m. to 4 p.m.

TOURS
All tours will depart from the MacKenzie Street Entrance of the Chateau Laurier with pick-up service at the neighbouring hotels. These tours have been specially arranged for our group and preregistration is recommended as numbers are limited. Any tour tickets remaining, after preregistration, will be available at the registration desk in the Burgundy Room.

“PARTICIPATION”: FRIDAY A.M., JUNE 6
Arrangements have been made for golf and racquet sports. Please consult the preregistration forms. An early reply is essential.

SCIENTIFIC PROGRAM
The following sessions of the Scientific Program are felt to be of general interest. You are welcome to attend.

WEDNESDAY, JUNE 4 — 9 A.M.
Medical Archives — Chateau Laurier.
Palliative Care of the Terminally Ill — National Arts Centre.

THURSDAY, JUNE 5 — 9 A.M.
Rights of Children and Adolescents — National Arts Centre.

WEDNESDAY, JUNE 4

TOUR I — OTTAWA LANDMARKS (All day)
Tickets: $15.00 (All inclusive)
Departure: Chateau Laurier — 9:15 a.m., MacKenzie Street
          Holiday Inn — 9:30 a.m., Main Lobby
          Skyline Hotel — 9:45 a.m., Main Lobby
In the morning, a guided tour of the Parliament Buildings, including the Peace Tower, and the renowned National Art Gallery has been arranged. Following lunch at the picturesque Green Valley Restaurant, you may visit the Experimental Farm, including the tropical greenhouses, the Arboretum and the floral displays. A scenic drive along the Rideau Canal and a visit to the Japanese Embassy will complete the day. The tour will end by approximately 5 p.m. at the hotels.
Tour will be bilingual.
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<td><strong>Welcoming Reception</strong></td>
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TOUR II — ANTIQUES (All day)
Tickets: $15.00 (All inclusive)
Departure similar to Tour I
The morning includes a visit to the historic Mill of Kintail, the estate of the late Dr. Robert Tait MacKenzie, a highly respected sculptor and doctor. Later, there will be time to browse through “The Wooden Shuttle”, a delightful weaving shop. A full course luncheon will be served in the Pine Room.
In the afternoon, you will visit the intriguing antique shops in the Lanark countryside. Lanark county has a picturesque landscape and interesting historical background.
Return to your hotels by 5 p.m.
Tour will be conducted in English.

SYMPOSIUM I — MEDICAL ARCHIVES
9:00 a.m.
Renaissance Room (Chateau)
CHAIRMAN: H. Rocke Robertson, Archivist, Royal College

9:00 Introduction
9:05 The Penfield Papers: William Feindel, Director, Montreal Neurological Institute
9:45 From Archival Sources to Medical Historical Writings: Toby Gelfand, Hannah Professor of the History of Medicine, University of Ottawa
10:25 What are Medical Archives?
W.I. Smith, Dominion Archivist, Public Archives of Canada
Presentations will be given in English.

SYMPOSIUM II — PALLIATIVE CARE
9:00 a.m.
Salon (National Arts Centre)
A film highlighting the new National Film Board production on the Palliative Care Service of the Royal Victoria Hospital in Montreal. This film runs for approximately one hour.
Presentations to be given in English.

PARLIAMENT
1:30 p.m.
Arrangements have been made for those interested in attending the question period at 2 p.m. in the House of Commons.
Guides will be in the Main Lobby of the Chateau Laurier Hotel at 1:30 p.m.
Guides will be bilingual.

THURSDAY, JUNE 5

TOUR III — BYWARD MARKET
10:00 a.m. (approximately 2 hours)
Tickets: $4.00
Departure: Chateau Laurier (Main Lobby)
This is a walking tour through the Market Area accompanied by two guides.
Included in the tour are visits to the Royal Mint, Notre Dame Basilica, quaint antique shops, restored and renovated specialty shops, and the farmers' selling stalls.

Guides will be bilingual.

GENERAL SESSIONS

SESSION I — FILM AND DISCUSSION
9:00 a.m.
Cock and Lion Lounge (Chateau)

ROUND AND ROUND
MODERATOR:
Anyone can change. This is the difficult challenge taken up with varying degrees of success by the men, women and adolescents in the story. Their problems are anyone's concerns, raising children, adolescence, loneliness, marital strife, and alcoholism. This thought provoking film is about people who want to lead a more satisfactory life.

Follow-up discussion.
Presentations to be given in English.

SEANCE II — FILM AVEC DISCUSSION DIRIGÉE
9h
Salon (La Salle Renaissance)
Titre: FUIR
ANIMATEUR:
Notre société a fait du suicide une maladie honteuse et du suicidaire un fou qu'on relève a l'oubli ou qu'on exploite par le sensationnalisme. Ce film, produit dans le cadre du programme société nouvelle, expose le témoignage et le vécu quotidien d'une femme, qui vit au bord de la crise, prête à faire le grand saut.

Cette présentation sera donnée en français.

THURSDAY, JUNE 5

THE RIGHTS OF CHILDREN AND ADOLESCENTS
CHAIRMAN: J. BRUMMITT, Calgary

0900
Salon (National Arts Centre)

0900 — INTRODUCTION
J. Brummitt, Associate Professor, Divisions of Pediatrics and of Community Health Sciences, University of Calgary.

0905 — DO PARENTS OWN THEIR CHILDREN?
Norman Fost, Department of Pediatrics, University of Wisconsin School of Medicine, Madison, Wisconsin.
0935 — LEGAL ASPECTS OF THE RIGHTS OF CHILDREN AND ADOLESCENTS
Philippe Massy, Lawyer, Montreal.

1005 — CHILDREN AND ADOLESCENTS AS EXPERIMENTAL SUBJECTS
S. Segal, Professor of Pediatrics, University of British Columbia, Vancouver. Presentations to be given in English.

LUNCHEON — Speaker — The Honourable Jean-Luc Pépin, Minister of Transport
Tickets: $12.00
Departure: Chateau Laurier, 11:30 a.m. — MacKenzie Street
            Skyline Hotel, 11:45 a.m. — Main Lobby

TOUR IV — FIRESTONE ART COLLECTION
Tickets: $7.50
Departure: Chateau Laurier, 2:00 p.m. — MacKenzie Street

A red double decker bus will bring you to the home of Dr. Firestone in Rockcliffe, where Dr. Firestone will personally conduct the viewing of his world famous collection.

Following this tour there will be a strawberry and champagne reception at the Royal College.
The viewing will be conducted in English.

SOCIAL ACTIVITIES

WELCOMING RECEPTION AND INAUGURATION OF A NEW MEDICAL HISTORY EXPOSITION
Public Archives Building
Tuesday, June 3
6:30 p.m. to 8:00 p.m.

The official opening of the exposition under the auspices of the Hannah Institute of Medical History and the Public Archives will be followed by a reception and a no-host bar.

The reception is sponsored by the Hannah Institute of Medical History, the Faculty of Health Sciences of the University of Ottawa and the Royal College of Physicians and Surgeons of Canada.

ROYAL COLLEGE CONVOCATION
Ballroom (Chateau Laurier)
Wednesday, June 4
7:00 p.m. to 8:00 p.m.

The Convocation ceremony which introduces new Fellows to the Royal College will be highlighted by the conferring of an Honorary Fellowship on his Excellency, the Governor General.

Following the Convocation, everyone is invited to a reception in honour of the new Fellows in the Banquet Room of the Chateau Laurier.
SOCIAL EVENING
National Arts Centre
Thursday, June 5
7:30 p.m. to 1:00 a.m.

The Terrace and Lobby of the National Arts Centre will be the site for the social evening on Thursday, June 5th, starting at 7:30 p.m. The evening activities will include a buffet dinner, Rideau Canal cruise, music provided by the National Press Club Jazz Band and a discotheque.

Tickets: $30.00 per person.

FUTURE MEETINGS

ROYAL COLLEGE OF PHYSICIANS AND SURGEONS

1981  Toronto
1982  Quebec
1983  Calgary
1984  Montreal
1985  Vancouver
1986  Toronto
1987  Winnipeg
1988  Quebec
1989  Montreal
1990  Edmonton
CANADIAN ASSOCIATION OF PAEDIATRIC SURGEONS
L'ASSOCIATION CANADIENNE DE CHIRURGIE INFANTILE

PRESIDENTS
1967-1972    Harvey Beardmore     Montreal
1973-1974    Colin Ferguson     Winnipeg
1975-1976    Jim Simpson       Toronto
1977-1978    Sam Kling         Edmonton
1979-1980    Pierre Paul Collin  Montreal

SECRETARY-TREASURER
1967-1973    Barry Shandling     Toronto
1974-1978    Gordon Cameron    Hamilton
1978-        Frank Guttman     Montreal
CANADIAN ASSOCIATION OF PAEDIATRIC SURGEONS
L'ASSOCIATION CANADIENNE DE CHIRURGIE INFANTILE

DIRECTORS
President
Past President
3rd of Three Years
2nd of Three Years
1st of Three Years
Secretary-Treasurer

Pierre Paul Collin
Sam Kling
Phil Ashmore
Clint Stephens
Angus Juckes
Frank Guttman

COMMITTEE CHAIRMEN
Nominating
Programme
Local Arrangements
Membership and Credentials
Publications
Health Care Data
Ethical and Moral Issues
Education Fund
Liaison to the Royal College
Archivist
World Federation
Post Graduate Education

Sam Kling
Robert Filler
Stan Mercer
Angus Juckes
David Girvan
William Taylor
Frank Guttman
Colin C. Ferguson
Clinton Stephens
Barry Shandling
Harvey Beardmore
Harvey Beardmore
CANADIAN ASSOCIATION OF PEDIATRIC SURGEONS
Tuesday, June 3, 1980
CHILDRENS HOSPITAL OF EASTERN ONTARIO

Chairperson: The President, Pierre-Paul Collin, Montreal, Quebec

9h00  Annual Business Meeting

10h00  Coffee

10h30  The Fred McLeod Lecture
       Investigative and Operative Techniques in Thoracic Surgery
       Douglas Cohen, Camperdown, New South Wales

Chairperson: Gary Mackie, Montreal, Quebec

11h15  The Vulnerability of the Vas (II)
       B. Shandling, J.S. Janik, Toronto, Ontario

11h30  Anatomical Variants of SACS of Inguinal Hernia and
       Persisting Processus Vaginalis
       J.T. Momoh, Nigeria

11h45  True Cryptorchidism: The Value of Testicular Venograms
       S.Z. Rubin, R. Gershater, Toronto, Ontario

12h00  Testicular Tumors in Treated and Untreated Maldescended
       Testes
       J.D. Fonger, R.M. Filler, W.D. Rider, Toronto, Ontario

12h15  Testicular Feminization Syndrome (Androgen Insensitivity)
       D. Marshall, London, Ontario

12h30  Lunch (Board Room)

Chairperson: Raymond Cloutier, Ste Foy, Quebec

14h00  The Many Faces of Pulmonary Sequestration
       P.P. Collin, P. Braun, Montreal, Quebec & Geneva, Switzerland

14h15  Epidermoid Cyst of the Spleen Managed with Partial
       Splenectomy
       G.S. Cameron, G.Y.P. Lau, Hamilton, Ontario

14h30  Traumatic Diaphragmatic Hernia in Children
       C.A. Stephens, S.D. Adeyemi, Toronto, Ontario

14h45  Squamous Epithelium in the Tracheal Mucosa of Patients
       with Type C Esophageal Atresia
       R.S. Bloss, H.E. Beardmore, Montreal, Quebec
Tuesday, June 3, 1980

15h00 Secondary Bronchial Arterial Malformation  
N. Wiseman, Winnipeg, Manitoba

15h15 Femoral Hernia in Children  
D. Marshall, London, Ontario

15h30 Tumours of the Jaw in Children  
P. Soucy, Ottawa, Ontario

Chairperson: Pierre-Paul Collin, Montreal, Quebec

16h00-17h00 Panel Discussion on Pediatric Surgery in the Third World  
H. Beardmore, Montreal, M. Allen, Toronto—Panelists
Wednesday, June 4, 1980

CHATEAU LAURIER

Chairperson: Robert Filler, Toronto, Ontario

8h30  Panel Discussion on Pediatric Intensive Care
       Pulmonary Aspects of Intensive Care
       P. Duncan, Winnipeg, Manitoba
       Complications of Ventilatory Support in Neonates
       P. Waugh, Quebec City, Quebec
       Continuous Monitoring of Intracranial Pressure
       J. Barker, Toronto, Ontario
       Temperature Regulation in Critically Ill
       J. Rosales, Montreal, Quebec
       Monitoring of Cardiovascular System
       P. Ashmore, Vancouver, B.C.

10h30  A Review of Pediatric Parenteral Nutrition
       R. Postuma, Winnipeg, Manitoba
       Assessment of Hepatic Function After Hepato-
       Porta-Enterostomy For Biliary Atresia Using
       TC-Diethyl-Iva
       D. Hitch, J.C. Leonard, W.P. Tunell, E.I. Smith,
       Oklahoma City, Oklahoma
Thursday, June 5, 1980

CHATEAU LAURIER

Chairperson: Raymond Postuma, Winnipeg, Manitoba

8h15 Surgical Complications of Mucocutaneous Lymph Node Syndrome (Kawasaki's Disease)
S. Mercer, Ottawa, Ontario

8h30 Malignant Sacrococcygeal Teratomas in Infants and Children
S. Ein, S. Debo Adeyemi, K. Mancer, Ottawa, Ontario

8h45 Cryosurgery for Hemangiomas of the Lips and Oral Cavity
S. Kleinhaus, R.G. Rosen, S.J. Boley, New York, N.Y.

9h00 Carcinoid Tumour Occurring in a Rectal Duplication
A Unique Paediatric Surgical Problem
S.Z. Rubin, K. Mancer, C.A. Stephens, Toronto, Ontario

9h15 Results of Bowel Resection for Crohn's Disease in the Young
D.E. Wesson, B. Shandling, Toronto, Ontario

9h30 Intussusception, The Forgotten Post Operative Obstruction
S.H. Ein, J. Ferguson, Toronto, Ontario

9h45 The Validity of Rectal Biopsy in Relation to Morphology and Distribution of Ganglion Cells
B. Shandling, S. Venugopal, K. Mancer, Toronto, Ontario

10h00 Intestinal Stricture After Necrotizing Enterocolitis
J.S. Janik, S.H. Ein, Toronto, Ontario

Chairperson: Barry Shandling, Toronto, Ontario

10h15 The Child Safety Centre—A New Concept in Childhool Accident Prevention
Douglas Cohen, Camperdown New South Wales
Abstracts
THE FRED MCLEOD LECTURE

Investigative and Operative Techniques in Thoracic Surgery

Douglas Cohen, Camperdown, New South Wales

Douglas Cohen is the distinguished guest of C.A.F.S. and the Royal College this year. Several Canadian pediatric surgical centers will be favoured by his visit. Mr. Cohen is presently Head, Department of Surgery, Royal Alexandra Hospital for Children in Sydney Australia. A medical graduate of the University of Sydney, Douglas Cohen obtained his M. Surgery Degree in 1950 and is a member of many honoured societies among them the Royal Australian College of Surgeons, Specialty Board of Pediatric Surgery; Chairman of the Surgical Section, Australian Pediatric Association and a Founding Member of the Pacific Association of Pediatric Surgeons, of which he is presently President. He has been an examiner for Pediatric Surgery of the Royal Australian College of Surgeons and Chairman of several commissions, the Health Commission of New South Wales-Child Safety Council, and is a lecturer at the University of Sydney. From 1954–1971 he was a Senior Cardiac Surgeon, Adolph Besser Institute of Cardiology.

He has been honoured by many Pediatric Surgical Societies, having been guest lecturer in New Zealand, Singapore, Los Angeles, Colombus, Cincinnati, Israel, London, India and Iran. Mr. Cohen is an avid sailor enabling him thus to join us from across the Pacific.
184 THE VULNERABILITY OF THE VAS(T)

B. Shandling and J.S. Janik
Department of Surgery,
The Hospital for Sick Children,
Toronto

Transsection of the vas deferens is generally considered a disaster. Other manipulations have unpredictable and undocumented effects. In order to delineate the structural changes in the vas after operative manipulation, 40 WISTAR rats (300-350 grams) were divided into four groups. Under penthrane anesthesia both vasa of each animal were isolated without direct instrumentation and subjected to the four manipulations: Group A - grasp with fingers only; Group B-grasp with vascular clamp; Group C-grasp with non-tooth Adson forceps; and Group D-clamp with mosquito hemostat. The area was tagged. Six weeks later each vas was removed, fixed, stained (H&E), and the microscopic appearances examined and recorded.

Six weeks post manipulation all specimens demonstrated both intra and transmural inflammation. 33% of the specimens in Group C demonstrated disruption of the muscle wall at the site of manipulation. In Group D, 100% of the specimens showed mural disruption and marked inflammatory reaction; and 33% had an associated abscess.

These results indicate that these manipulations result in a variable inflammatory reaction which is present six weeks later. Subsequent fibrosis may occlude the lumen. Grasping of the vas with an atraumatic instrument and manual handling have similar results. Grasping with forceps has the potential for appreciable damage. Clamping with a hemostat should be considered as serious as complete transection. Therefore in any surgical procedure the vas deferens should be handled as little as possible.

185 ANATOMICAL VARIANTS OF SACS OF INGUINAL HERNIA AND PERSISTING PROCESSUS VAGINALIS

J.T. Momoh, Pediatric Surgical Unit,
Ahmadu Bello University Teaching Hospital,
Zaria - Nigeria

The anatomical configuration of sacs found in one hundred consecutive children presenting with inguinal hernia and who also had contralateral groin exploration were studied. The object was to correlate these findings with the clinical presentation and also to get an insight into the possible mechanism of closure of the processus vaginalis.

Of the 91 children with unilateral hernia 29 had contralateral patent processus vaginalis. Seven major clinico-anatomical groups were recognised-complete congenital hernia 36%, Funicular hernia 31%, Hernia with encysted hydrocele 14%, Communicating hernia-hydrocele 7%, hernia with hydrocele of cord 1.5%, True hydrocele 1.5% and 'Capillary' Hernia 5%.
From a careful review of the anatomical configurations, three possible mechanisms for obliteration of the processus vaginalis are put forward: (i) Localised closure of sac above the epididymis followed by progressive fibrotic obliteration of the tunica portion in a cephalic direction. (ii) Initial compression of entire sac into a narrow tubular structure by surrounding tissue pressure followed by progressive fibrotic obliteration in a cephalic direction. (iii) Initial segmentation of the tunica portion of sac followed by fibrotic obliteration as above.

186 TRUE CRYPTOCHIDISM: THE VALUE OF TESTICULAR VENOGAMS

S.Z. Rubin, R. Gershater,
Department of Surgery and Radiology,
North York General Hospital and
I.O.D.E. Children’s Centre, Toronto

The causes of true impalpable testes are testicular agenesis, testicular atrophy, or intra abdominal undescended testis. When the situation is bilateral, hormonal studies are useful. Operative inability to locate the testicle is not diagnostic of testicular absence. The development of the vas is not always related to development of the testicle.

The presence of a testicular vein excludes gonadal agenesis. The visualization of the pampiniform plexus indicates a formed testicle and accurately gives its anatomical site.

During 1979, four testicular venograms in unilateral impalpable testes were performed. General anesthesia was used for the first patient only. There were no diagnostic complications. All four patients underwent explorative operations which confirmed the testicular venographic findings. There were two patients with unilateral testicular agenesis, one patient was unilateral testicular atrophy and one patient had an intra abdominal undescended testis.

Testicular venography is a safe practical diagnostic investigation in young males with true cryptorchidism.

187 TESTICULAR TUMORS IN TREATED AND UNTREATED MALDESCENDED TESTES

J.D. Fonger, R.M. Filler, W.D. Rider,
The Hospital for Sick Children and
Princess Margaret Hospital, Toronto

It is known that maldescend increases the risk of cancer of the testis. However, the effect of orchidopexy on reduction of tumor risk, alteration of tumor type, or stage at diagnosis is not established. Patients with testicular tumors seen for seminoma (1955-1975) and non-seminoma (1968-1970) were reviewed. 53 of 646 patients (8.2%) had a history of testicular maldescend. In 42 (80%)
maldescent was unilateral and in 6 of these, the tumor developed in the normally descended testis. 20 patients had successful orchiopexy at a median age of 14 yrs. (6-35). Tumor types were seminoma (38), teratoma (7), embryonal carcinoma (6), teratocarcinoma (1), and choriocarcinoma (1).

Average age at diagnosis of seminoma was 38 and non-seminoma 31. Average age at diagnosis of tumor was less for those having successful orchiopexy than for those whose testes were not placed in the scrotum. Earlier stage non-seminomas were found in those having had an orchiopexy. 25 of 38 (66%) seminomas occurred in non-scrotal testes, whereas only 6 of 15 (33%) non-seminomas occurred in a non-scrotal position suggesting that persistent maldescent favours seminoma over non-seminoma. In this retrospective review, no statement can be made about the effect of orchiopexy on tumor risk. However, orchiopexy appears to lead to an earlier diagnosis and it may influence the tumor type which develops.

**188 TESTICULAR FEMINIZATION SYNDROME**
**ANDROGEN INSENSITIVITY**

*Donald G. Marshall,*
*Division of Pediatric Surgery,*
*University of Western Ontario*

Over the past 4 years, 3 infants with Testicular Feminization Syndrome have been diagnosed at operation. Their ages were 6 weeks, 5 months and 7 years. Each presented with at least a large right indirect inguinal hernia that was thought to contain an ovary. At surgery the suspicion that the gonad was a testis was verified by frozen section. The details of operative treatment and follow-up, including treatment of the second side, advice to parents and child, investigation of siblings, and results of the chromosome studies and of A.P.L. stimulation on testosterone levels will be given.

**189 THE MANY FACES OF PULMONARY SEQUESTRATION**

*P.P. Collin,*
*Ste-Justine Hospital, Montreal*

(14) patients with pulmonary sequestration were seen at Ste-Justine Hospital between 1966 and 1978, an average of one a year, approximately. There was a slight male predominance. 50% were above 8 years old and 30% below 2. They were all of the intralobar type, except two, which were, one above and the other within the left diaphragm. Five of the intralobar sequestrations were in the right lower lobe and were associated with some kind of cardiovascular abnormality. The remainder were located in the left lower lobe, as is most frequently seen. The extralobar sequestrations were asymptomatic but 75% of the intralobar type showed either respiratory or circulatory symptoms. The clinical investigation included tomography, bronchography and angiocar-
diography in some cases and aortography in all but one, in which the
diagnosis was made at the time of surgery. Treatment con-
sisted of excision of the involved lobe. Recovery was complete in
all patients. There was one late death, due to congenital ag-
granulocytosis.

190 EPIDERMOID CYST OF THE SPLEEN
MANAGED WITH PARTIAL
SPLENECTOMY

G.S. Cameron, G.Y.P. Lau,
McMaster University Medical Centre, Hamilton

Epidermoid cyst of the spleen is a rare problem for which the
currently recommended treatment is splenectomy. We wish to re-
port what we believe is the first case of splenic epidermoid cyst
managed with partial splenectomy.

A seven year old girl was referred with a one year history of
intermittent pain in the left flank and shoulder, and massive
splenomegaly. Echograms, splenic scan and selective arteriog-
raphy demonstrated a large cyst expanding the upper pole of the
spleen. At operation it was possible to preserve and repair the
uninvolved lower pole. Uncomplicated healing was monitored with
serial radioactive scans. After 5 years the child remains
asymptomatic and her splenic scan is indistinguishable from nor-
mal. Her peripheral blood smear is normal, showing none of the
changes associated with decreased splenic function. There is in-
creasing recognition of the importance of preserving all or part of
the spleen wherever possible.

Our experience indicates that in some cases of splenic cyst it
may be possible to preserve a significant portion of the spleen.
Angiography can provide detailed information regarding seg-
mental blood supply to help identify suitable cases, and radioac-
tive scanning will assist in monitoring the healing process.

191 TRAUMATIC DIAPHRAGMATIC
HERNIA IN CHILDREN

C.A. Stephens, S.D. Adeyami,
Department of Surgery,
The Hospital For
Sick Children, Toronto

A retrospective of 11 children treated for traumatic rupture of
the diaphragm during the period 1950-1977.

All diaphragmatic injuries were due to blunt trauma sustained in
automobile related accidents. Nine of the children had associated
injuries with pelvic or extremity fractures heading the list, followed
by associated head injuries. All ruptures involved the left hemi-
diaphragm.

Six were treated during the acute phase of their injury.

Five presented from 2 months to 3 years following their initial
injury with gastrointestinal or respiratory symptoms.
Repair of the ruptured diaphragm was carried out via an abdominal approach in 10 children. In 1 it was repaired trans-thoracically. There was 1 death in the series - from an associated severe cerebral injury.

There were no post-operative complications in 5 of the survivors. In the other five relatively minor complications developed related mainly to infection or atelectasis.

192 SQUAMOUS EPITHELIUM IN THE TRACHEAL MUCOSA OF PATIENTS WITH TYPE C ESOPHAGEAL ATRESIA

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Respiratory difficulty following tracheoesophageal fistula repair is a common occurrence, with tracheomalacia, gastroesophageal reflux, and recurrent fistula often implicated. We present two cases with squamous epithelium in the tracheal mucosa which were associated with recurrent tracheoesophageal fistula and persistent difficulty in clearing respiratory secretions. Both patients had been treated initially with fistula ligation and end-to-side anastomosis of the esophagus. When recanalization of the fistula occurred, the fistula was divided and closed. One patient expired from pneumonia after three recurrent tracheoesophageal fistula repairs. The other has recurrent attacks of bronchitis. At autopsy, one had squamous epithelium in the entire tracheal mucosa. The other had stratified squamous epithelium in the tracheal biopsy taken during closure of the recurrent fistula. Squamous epithelium in the trachea may be responsible for chronic respiratory difficulty and recurrence of the fistula following tracheoesophageal fistula repair.

193 SECONDARY BRONCHIAL ARTERIAL MALFORMATION ASSOCIATED WITH CHRONIC GRANULOMATOUS DISEASE AND ASPERGILLUS LUNG INFECTION

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Two siblings presented with an unusual secondary bronchial arterial malformation occurring in the clinical setting of chronic granulomatous disease complicated by Aspergillus pulmonary sepsis. Both patients presented with clinical signs of right upper lobe pneumonia. In addition they were noted to have loud bruits over the right chest. Chest X-ray revealed pulmonary parenchymal, pleural and bone involvement and angiographic examination demonstrated large bronchial arterial malformations.
It is important to the surgeon to be aware of this vascular abnormality since pulmonary resection is often the treatment of choice in the management of chronic granulomatous disease with invasive pulmonary sepsis. Although this clinical association has not been previously described a somewhat similar finding has been reported in children with cystic fibrosis.

194  FEMORAL HERNIAS IN CHILDREN

Donald G. Marshall,
University of Western Ontario
Division of Pediatric Surgery, London

This report covers a personal experience of 11 children from 16 months to 10 years of age operated upon for femoral hernias. In only one was the diagnosis not made until operation. None had a previous exploration for an inguinal hernia, as has so often been reported. Only one presented with acute incarceration and only one child had bilateral femoral hernias. The sex incidence has been about equal. Discussion will include etiology, diagnosis and differential diagnosis, and details of treatment.

195  TUMOURS OF THE JAW IN CHILDREN

P. Soucy, The Children's Hospital of Eastern Ontario, Ottawa

All cases of tumours of the mandible and maxilla in children up to the age of 16, seen at the Children's Hospital of Eastern Ontario, over a 5 year period are reviewed.

Clinical manifestations and radiological features are presented with emphasis on differential diagnostic criteria.

Principles of management are reviewed.

196  A REVIEW OF PEDIATRIC PARENTERAL NUTRITION

Ray Postuma, Children's Hospital, Winnipeg and the Department of Pediatrics and Surgery, University of Manitoba

The use of Parenteral Nutrition in 1000 consecutive patients during a 10 year period (1970-1979) at the Children's Hospital, Winnipeg, will be reviewed with respect to indications, age of patients, type of solutions, duration and benefits of therapy, metabolic and septic complications and costs.
197 ASSESSMENT OF HEPATIC FUNCTION AFTER HEPATO-PORTO-ENTEROSTOMY FOR BILIARY ATRESIA USING TC-DIETHYLIIDA

D.C. Hitch, J.C. Leonard, W.P. Tunell, E.I. Smith, Division of Pediatric Surgery, Department of Surgery, University of Oklahoma, Oklahoma City, Oklahoma

From October 1978, 9 patients with proven extra-hepatic biliary atresia were entered on a prospective study to assess post-operative hepatic function using 99M-Technetium-Diethyl-Acetanilide-inodiacetic acid. None of the patients died during the study. Seven patients are considered to have had clinically successful operations, with a median post-operative serum bilirubin of 1.5 mg%. Functional secretion of To-Diethyl-IDA was determined 20 times by computer generation of time activity curves. Change in the secretion phase of the hepatic curve was correlated with serum and bile bilirubin, bile bilirubin secretion, and bile bilirubin clearance. Improvement in hepatic function as documented by the different, but interrelated, methods of bilirubin clearance was characterized by an increase in the clearance of the isotope by the liver and a decrease in the proportion of renal secretion. To-Diethyl-IDA is a qualitative, non-invasive means of serially determining hepatic function in infants with biliary atresia. Use of this agent will allow accurate comparison of operative procedures employed in the treatment of biliary atresia.

198 SURGICAL COMPLICATIONS OF MUCOCUTANEOUS LYMPH NODE SYNDROME (KAWASAKI DISEASE)

Stanley Mercer, Department of Surgery, Children's Hospital of Eastern Ontario, University of Ottawa, Ottawa

Kawasaki's Disease is essentially a grouping of symptoms and signs and is diagnosed by exclusion. Eight cases have been documented with the Children's Hospital of Eastern Ontario, Ottawa, since 1976.

It is associated with acute non calculous distension of the gall bladder and with greater or lesser degrees of widespread vasculitis. Three such cases are described, including one of profound widespread intestinal and gall bladder vasculitis and gangrene ending in death. The surgical implications are discussed.

199 MALIGNANT SACROCOCCYGEAL TERATOMAS IN INFANTS AND CHILDREN

Sigmund H. Ein, S. Debo Adeyemi, Kent Mancer, Hospital for Sick Children, Toronto

Eleven cases of malignant sacrococcygeal teratoma were treated at the Hospital for Sick Children, Toronto over 25 years.
Most were females, and only two were neonates. The presence of symptoms almost always indicates local extension or distant metastases. According to Altman's classification, all but 2 of the malignant tumors were types III and IV. The majority of tumors were embryonal adenocarcinoma. The resectability rate was low and only the two newborns still survive.

200 CRYOSURGERY FOR HEMANGIOMAS OF THE LIPS AND ORAL CAVITY
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Pediatric Surgical Service,
Department of Surgery, Montefiore Hospital & Medical Center, Albert Einstein College of Medicine, New York, N.Y.

Hemangiomas of the lips and oral cavity present special problems of bleeding and interference with speech and deglutition. These complications as well as cosmetic considerations often make it impossible to await the spontaneous involution which usually occurs. The capacity of cryosurgery for controlled destruction of tissue without bleeding prompted us to evaluate this modality to accelerate the involution of selected angiomias around the oral cavity.

Two children with hemangiomas of the tongue, and two with lesions of the lips have been managed with repeated applications of cryosurgery. The indication was recurrent hemorrhage in three children, for cosmetic improvement of a hemangioma of the upper lip in one. Freezing was performed under general anesthesia employing liquid nitrogen in a free flow system through hollow copper probes. Tissue freezing was controlled by visualization of the "ice ball" and by thermocouples. Temperatures of -20°Centigrade were produced within the hemangioma for periods of up to three minutes.

Complete control was achieved in three children with bleeding.

Some reduction in size of all these lesions was achieved, and a marked response in two. There were no complications. The technique of, and results with, this modality are illustrated.

201 CARCINOID TUMOUR OCCURING IN A RECTAL DUPLICATION: A UNIQUE PAEDIATRIC SURGICAL PROBLEM
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The unique occurrence of a carcinoid tumour in a rectal duplication is described. Carcinoid tumours of the rectum have never previously been reported in childhood.

During the previous 45 years at The Hospital for Sick Children, Toronto, a total of 13 cases of carcinoid tumour occurred as incidental findings in the appendix. No recurrences were noted after simple appendectomy.
documented with the Children's Hospital of Eastern Ontario, Ottawa, since 1976.

It is associated with acute non calculous distension of the gall bladder and with greater or lesser degrees of widespread vasculitis. Three such cases are described, including one of profound widespread intestinal and gall bladder vasculitis and gann

202 RESULTS OF BOWEL RESECTION FOR CROHN'S DISEASE IN THE YOUNG

Drs. D.E. Wesson, B. Shandling,
The Hospital for Sick Children, Toronto

Thirty patients (21 boys) less than 19 years of age underwent bowel resection for Crohn's disease between 1965 and the present. The mean age at surgery was 14 years (range 6 to 8 yrs).

Early Results. There were no postoperative deaths. Two patients developed enterocutaneous fistulae. Six others had minor complications.

Late Results. The follow-up ranged from 0.25 to 14 years (median 6.3, median 5.0 yrs). There were no late deaths. Three patients developed enterocutaneous fistulae. Two experienced temporary adrenal insufficiency. Two have mild malabsorption. Six have a permanent ileostomy. Seventeen developed clinical and/or radiological evidence of recurrence. Seven required reoperation for recurrent Crohn's disease. Six of these seven are now well.

Thirteen of the 18 patients for whom adequate data are available achieved catch-up growth in weight. Eleven of the 15 patients for whom adequate data are available achieved catch-up growth in height.

At present, 19 are well without clinical or radiological evidence of disease. Seven are well with minimal recurrent disease. Four have active Crohn's disease.

Surgery for Crohn's disease can be carried out with low morbidity and mortality. Despite a high recurrence rate worthwhile palliation may be expected. A high proportion of patients achieve catch-up growth.

203 INTUSSUSCEPTION THE FORGOTTEN POST-OPERATIVE OBSTRUCTION

Sigmund H. Ein, J. Ferguson,
The Hospital for Sick Children
Toronto

In the last 18 years there have been nine instances of post-operative laparotomy bowel obstruction which turned out to be due to an intussusception. The age of these children ranged from two months to 15 years and the laparotomy in all cases was a major one. The bowel obstruction caused by the intussusception was clinically evident within one to two weeks from the laparotomy in seven children and within one month in the other two. Moreover
the obstruction which developed after the usual post-operative laparotomy ileus was persistent and unresponsive to the usual non-operative treatment including normal barium enema in a few. There was no palpable abdominal mass and no rectal bleeding. Only at surgery was the correct diagnosis discovered and in seven of nine, intussusceptions involved only small bowel, usually ileo-ileo. Two intussusceptions were ileo-colic in nature and seven of the nine intussusceptions needed only manual reduction. The post-operative recovery was then uneventful. Therefore, any post-laparotomy bowel obstruction which persists longer than expected warrants a barium enema if possible and a laparotomy if necessary to diagnose and treat what may be an intussusception.

THE VALIDITY OF RECTAL BIOPSY IN RELATION TO MORPHOLOGY AND DISTRIBUTION OF GANGLION CELLS

Barry Shandling, S. Venugopal, Kent Mancer,
The Hospital for Sick Children, Toronto

A sequential series of over 100 pediatric cadavers was used to obtain rectal biopsies. The autopsy material was from infants who had died of causes unrelated to bowel problems. Most had had respiratory distress syndrome. Many were extremely premature and/or of very low birthweight. Using the punch biopsy technique, tissue was obtained from the rectal mucosa and submucosa and examined for the presence and morphology of ganglion cells. Three degrees of maturation of infantile ganglion cells have been identified and these will be presented and discussed. Biopsies of rectal mucosa taken 1 cm. proximal to the pectinate line had ganglion cells present in 95% of specimens. Biopsies taken at 1.5 cm. from the pectinate line had ganglion cells present in 100% of cases.
205  INTESTINAL STRicture AFTER NECROTIZING ENTEROCOLITIS

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Between 1974 and 1979, 20 of 175 neonates with NEC developed 26 intestinal strictures in both small (25%) and large bowel (75%) locations. Stricture developed after nonoperative therapy (13/127); after laparotomy for perforation (2/33); and after drainage under local anesthesia for perforation (5/15). Obstruction occurred 3-66 weeks after the diagnosis of NEC and was confirmed by X-ray.

Surgical therapy varied according to clinical status and consisted of proximal decompressive enterostomy with subsequent resection in (8/18) and primary resection in (10/18). Two neonates died before stricture resection. Morbidity was (4/18), mortality (1/18).

Various stages of wound healing from edema and acute inflammation to dense fibrosis were noted in pathologic specimens. Fibrosis was most marked in the submucosa and most consistently found in specimens resected three months after proximal decompression. Other stricture specimens showed varying degrees of acute inflammation.

Stricture should be expected in any child with a history of NEC and signs of intestinal obstruction. Surgical treatment of this complication of NEC can have a high rate of success if tailored to clinical condition. In the desperately ill child or the child with multiple problems, proximal decompressive enterostomy with resection after 3 months favors more complete resolution of acute NEC and is therefore safer.
FOND D'ÉDUCATION

Le fond d'éducation permet d'inviter chaque année d'éminents chirurgiens pédiatiques étrangers pour enseigner dans différents centres médicaux du Canada. Il permet également à notre association de déléguer un conférencier en chirurgie pédiatrique lors de la réunion de la Société Canadienne de Pédiatrie. Il rend possible une participation élaborée de notre association au programme scientifique du Congrès Annual du College Royal des Médecins et Chirurgiens du Canada. Il nous aide enfin à défayer le coût de la réunion annuelle de l'Association Canadienne de Chirurgie Infantile.

Des particuliers, des associations appartenant ou non au domaine médical, ainsi que différentes agences philanthropiques s'intéressant au progrès de la chirurgie infantile ont bien voulu contribuer à ce fond.

L'objectif de l'Association est d'accroître le capital à un niveau tel que l'intérêt annuel soit suffisant pour défayer le coût de ce programme.

Le fond d'éducation est enregistré auprès du Gouvernement Fédéral et toute contribution est déductible d'impôt. L'administration de ce fond est consignée dans un rapport annuel.

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