

Children's Surgery

Recent History of Children's Surgery in Aberdeen: circa 1960-Current

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Introduction

Children's surgery, with few exceptions, is a component part of the clinical remit of most surgical specialties. The exception to this rule is in the case of general surgery where children's surgery has now separated adult and paediatric practices into two distinct specialties-General Surgery and Paediatric Surgery.

Historically, however, (and up to 1988), the tradition in Aberdeen had been for the most recently appointed adult general surgeon to take a position in the Children's Hospital (RACH) and assume responsibilities for the General Surgery of Childhood. On occasion, the new appointee may have had no specific training in this element of surgery despite it being a component part of general surgery training for all at that time. Some of the adult general surgeons (notably PF Jones and SS Miller,) had had specific supplemental training in the relatively new specialty of Paediatric Surgery and had expressed children's surgery as a specialist interest. However from 1988 onwards, Aberdeen followed most of the country and paediatric surgery became a distinct specialty with its own dedicated, specifically trained consultant surgeon base.

That same pattern of expressing a specific commitment to children's surgery as a significant part of their clinical duties and therefore a special interest, also occurred in some other specialties (notably orthopaedic surgery), whereas in others, e.g. otolaryngology, plastic surgery and neurosurgery, it was deemed as an integral part of their clinical duties. This pattern of practice continues to the current time and the following description of surgical specialties, past and present, may overlap with the description of those specialties where paediatric and adult practice were considered part of the entirety of clinical duties.

Surgical Specialties

1. General Surgery
2. Paediatric Surgery
3. Orthopaedic Surgery
4. Plastic Surgery
5. Otolaryngology
6. Ophthalmology
7. Maxillofacial Surgery/Orthodontics
8. Accident and Emergency/Casualty
9. Cardiothoracic Surgery
10. Neurosurgery
11. Supporting Services
 - Radiology
 - Anaesthesia

1.0 General Surgery

As described above some general surgeons had no responsibilities to the Children's Hospital (or had previously had responsibilities which they then dropped on the appointment of a new general surgeon into Aberdeen). Others had a specific interest in children's surgery and continued their practice in children's surgery irrespective of other adult appointments.

General surgeons who had a time-limited clinical commitment to Royal Aberdeen Children's Hospital (RACH) included Messrs Norman Logie, Norman Matheson, Andrew Foote (prior to appointment as cardiothoracic surgeon) and Alan I Davidson. All general surgeons were on an NHS contract (with honorary University appointments) and there were no academic appointments at consultant level. Usually three consultants were in post at RACH at any point in time

The exceptions to this, however, were Professor Peter Jones, and Mr Stanley Miller who continued their commitment to RACH throughout the entirety of their appointment as consultant NHS adult surgeons.

PF Jones was appointed as a consultant surgeon with responsibilities in adult (colorectal) and Paediatric surgery in 1957 having been a senior registrar at the Middlesex Hospital. He made major contributions in academic surgery, writing numerous papers and textbooks and had a special interest in the acute abdomen with his publication "*Emergency Abdominal Surgery In Infancy Childhood And Adult Life*", going through three editions. In 1966 he was appointed a clinical reader in surgical paediatrics at the University of Aberdeen and in 1983 he was appointed to a personal chair in clinical surgery. He was also surgeon to the Queen in Scotland between 1977 to 1985. He retired from surgical practice in 1985 and died of a stroke on 17th of August 2009.

Stanley Miller became a consultant in General and Paediatric Surgery in Aberdeen in 1976 having been a senior registrar in Aberdeen but also spending one year as a visiting clinical fellow at the Hospital for Sick Children in Great Ormond Street, London. He succeeded Mr Bill Michie to work alongside Mr Norman Matheson in General Surgery (Ward 9 ARI) but retired on the grounds of ill-health and died in July 1996. He was the first surgeon in the

United Kingdom to perform a laparoscopic pyloromyotomy for infantile hypertrophic pyloric stenosis.

On his appointment as a consultant general surgeon to Ward 50 ARI, Mr Matthew Koruth who had a principle adult specialty interest in hepatobiliary surgery, had an appointment to RACH for a short period of time before relinquishing this on the appointment of a second paediatric surgeon to RACH.

Since then, no subsequent appointments were made in adult general surgery with responsibilities for RACH.

2.0 Paediatric Surgery

Paediatric surgery had emerged as a distinct specialty (separate from adult general surgery) in major centres in the UK and in Scotland the Scottish Society of Paediatric Surgeons had its inaugural meeting in 1948. In Aberdeen the pattern of adult surgeons practising in children's surgery continued until the appointment of the first full-time paediatric surgeon in 1988. This trend in specialising in paediatric surgery had emerged later in Aberdeen than in Edinburgh and Glasgow and only became established in Dundee in 2010.

The initial staffing profile involved George Youngson being established as the first full-time paediatric surgeon along with Stanley Miller working part-time at the Children's Hospital. Stanley Miller was replaced with another full-time paediatric surgeon in 1991 (George Ninan). Youngson and Ninan and were joined subsequently with Anies Mahomed as a third full-time paediatric surgeon in 1995. On the departure of Ninan, a number of locum posts were filled (Hobeldin and Rajesh) with a third substantive appointment being made in 2000, Mr Chris Driver.

The clinical commitments of the paediatric surgery department extended beyond Grampian (previously only neonatal emergencies had been transferred from Inverness to Aberdeen and all moderate to major Paediatric surgery from Orkney and Shetland had likewise been referred). The increase in consultant numbers allowed an outreach service to be established in Elgin and latterly (2007) an elective outreach service was implemented in Raigmore Hospital, Inverness.

This outreach service has expanded to involve clinic attendances in Orkney, Shetland and Fraserburgh urology appointments in Inverness and Tayside.

With the increase in clinical commitment so the staffing increased to the following profile

- Yatin Patel-(thoracic and colorectal)
- Melanie Clark-(colorectal and general)
- Adnan Salloum -(general and urology)
- Chris Driver-(urology and oncology)
- Gillian Winter -Associate Specialist-(trauma and simulation)

*subspecialty interests in parenthesis.

A number of National Managed Clinical Networks have also subsequently emerged in Scotland for rare and super-specialist conditions (e.g. disorders of sexual differentiation, chest wall deformities, diaphragmatic hernia care requiring extracorporeal membrane oxygenation, some cancers and organ transplantation) These occasionally require children to be transferred to other hospitals throughout Scotland and the UK with Aberdeen consultants contributing to the clinical networks of many of these conditions but otherwise Aberdeen is self-sufficient in its provision of Paediatric Surgery.

Teaching and Training.

Paediatric surgery in Aberdeen contributes to the training of General Surgery of Childhood which remains in the curriculum in adult general surgery and is of particular value for surgeons working in remote and rural settings, as well as the Northern Training Consortium in paediatric surgery involving Aberdeen, Glasgow, Edinburgh, and Newcastle.

The Department is also involved in teaching fourth year undergraduate medical students, all of whom have a one-week exposure to paediatric surgery during their surgical block.

The Department as part of the foundation year training programme with a four month attachment being offered to FY1 doctors and GP ST trainees.

3.0 Orthopaedic Surgery

Paediatric orthopaedic surgery is a distinct speciality component of orthopaedic practice given the specific nature of orthopaedic conditions affecting children in several disease processes. Similarly, the pattern of bone injury is generally different from adult bone and soft tissue trauma with some commonality, however. Treatments however tend to be child specific and as a consequence the number of orthopaedic surgeons with a specific interest in paediatric orthopaedics has been restricted.

over the time period in discussion, the following had specific commitments to RACH:-

Mr Ian McKenzie (congenital dislocation of the hip and Perthes disease)

Mr Alexander Adam (General and Talipes)

Mr James McLaughlin (Hip Surgery)

Mr Tom Scotland. (Gen Orthopaedics and Sarcoma Network)

In more recent times this has also increased to 6 surgeons with paediatric sessional commitments – and specific areas of subspeciality interest - included Mr Simon Barker and Tim McDougall , Leanora Mills, Michael Reidy, Neil Forrest, Felicity Peace and *****.

4 Paediatric Plastic Surgery

All plastic surgeons had a paediatric component to their practice. Apart from Ian Muir who established the Department (see below) all surgeons were involved in the emergency rota as were the registrars.

IFK Muir MBE

Ian Muir came to Aberdeen in 1969 from Mount Vernon Centre for Plastic Surgery with an already established and distinguished reputation in plastic and burns surgery. He had developed the “Muir and Barclay formula” for fluid resuscitation following Burns injury and had been elected president of the British Association of Plastic Surgeons. He served in the Royal Navy and was appointed as a consultant at the West Middlesex Hospital.

He relocated to Aberdeen following the death of his wife five years earlier, where he established the plastic surgery and burns unit. He was appointed Hunterian Professor at the Royal College of surgeons of England in 1983. He had particular skills and cleft palate surgery and for the first 10 years of practice he was single-handed.

He established a dedicated burns unit in Ward 5 Woodend General Hospital. This was a temperature-controlled and airflow managed facility designed to avoid infection and reduce the catabolic response to major burns. Its location produced challenges particularly for the anaesthetic and critical care staff involved, but optimised survival opportunities and allowed early skin grafting to take place in the Woodend theatres.

Children’s burns care was provided in the HDU cubicles in adjacent to the general surgical inpatient ward (Ward 2).

Ian was noted for his scholarly approach to surgery as well as a great patience and meticulous technique. He had a gentle bedside manner of particular value in his paediatric practice. He retired in 1986 but continued his research at the medical school on skin substitutes for skin grafting using tissue culture. He was president of the Aberdeen Medico Chirurgical Society

He died following a stroke in 2008.

Colin Rayner

Colin Rayner was appointed as a plastic surgeon in Aberdeen in 1977 having previously been Senior Registrar in Plastic Surgery in Withington Hospital Manchester. In 1991 he was

appointed to Birmingham Accident Hospital and University of Birmingham plastic surgical unit. He shared in the general plastic surgical duties of RACH.

Oliver Fenton

Oliver Fenton succeeded Ian Muir as consultant plastic surgeon at RACH. His particular interest was in urethral surgery (hypospadias and epispadias). He later transferred to Huddersfield

Successors to these initial three included:-

- John Holmes
- Pralhad Kolhe
- Michaela Davis
- Ivan Depasquale

all of whom shared in the general plastic surgical duties at RACH.

Major burns in children were extremely uncommon but in that event, children had to be transferred to an intensive care unit either in Edinburgh or Glasgow. Aberdeen had high dependency facilities and a dedicated burns unit but children requiring ITU were transferred via a retrieval team to Royal Children's Hospital, Glasgow. This arrangement applied to all disciplines in RACH. In recent years Jennifer Greenhowe was appointed with a specialist interest in paediatric Congenital Hand surgery and has also expanded the local management of Paediatric Burn Care.

5 Paediatric Otolaryngology (ENT)

This is a high volume /low acuity practice in the main. Routine procedures included grommet insertion and adeno-tonsillectomy.

Complex airway surgery (rare), as above, required intensive care and therefore was /is transferred to Royal Hospital for Children, Glasgow

Routine elective lists in the 1960s and 70s for adenoids/tonsillectomy and grommets were performed by Dr Nina Gillan, Associate Specialist, whose practice was restricted to this type

of surgery. She was notable for the speed of her surgery and a low complication rate. A number of other consultants had routine elective lists including:-

- Leslie Wills
- Ken McLay
- Bill Newlands
- Frank Stafford
- Akhtar Hussein,

Active consultants include Derek Veitch, Prof Kim Ahsee, Clive Brewis, Bhaskar Ram, Sangeta Maini.

All include children in their practice.

6 Paediatric Ophthalmology

Like ENT, a few conditions and procedures occupied the vast bulk of clinical care. Strabismus surgery and tear duct probing were the most commonly performed procedures, Rare conditions (eg retinoblastoma) were transferred to UK (Birmingham) referral centres for their initial care with follow up care being provided locally.

The main work of this department was carried out in out-patients where visual testing was carried out by optometrists with oversight where required by ophthalmic surgeons. The consultants of the 1960s and 70s included Mr Charles Cockburn, who donated to the University of Aberdeen to establish the Cockburn chair in Ophthalmology.

Dr W S Milnes was appointed in 1974 after Cockburn's retiral and Miss Fiona Bennet led the department followed by Dr PK Ray.

Prof J V Forrester who was appointed to the chair in 1984, developed a strong international reputation in research and built a well respected department including colleagues such as Frank Green and Hattam Atta. Frank Green led the paediatric duties for the department.

Much of the routine surgery on children was performed by My Alistair Rennie

Although Ophthalmology has a free standing eye clinic for adults in the Foresterhill site all clinical services for children were contained in RACH.

7 Maxillo-facial Surgery/dentistry/ Orthodontics

Much of the orthodontic /dental/maxillofacial surgery focussed on dental extractions , particularly with special needs children with comorbid conditions. This was the highest volume practice in any department in RACH but the vast majority were performed on an outpatient basis. All required general anaesthesia.

Orthodontic procedures (eg dental braces) were similarly on outpatient provision and Mrs Hewage along with Neil Kerr provided that service . Management of children with facial palatal clefts was also part of that practice. Cleft surgery had initially been performed under the care of Mr Muir and was continued under the care of Mr Kohle but a national decision was taken to centralise the service which, from 2008, continued with all surgery being performed in the maxillofacial units of Yorkhill hospital Glasgow and subsequently Royal Hospital for children Glasgow. Nonoperative care continued with the specialist nurse in Aberdeen supported by speech and language therapists in RACH.

Accident and Emergency Care

Aberdeen has always (since 1927 and before) had its own dedicated Paediatric Accident and Emergency (A&E) (casualty) department. In the 60s and 70s the department was staffed by the three surgical house officers working in the surgical unit at RACH. They attended all casualties and were heavily reliant on the very able advice of the departmental nursing staff (sister Moir et al) to consult and refer appropriately. Following advice from the General Medical Council that preregistration doctors should not be the mainstay of medical staffing in A&E/casualty departments, the junior doctor staffing was then converted to rotating Senior House Officers and an Associate Specialist (Dr Diane McGregor) who treated/referred and were overseen by the A&E consultants of Aberdeen Royal infirmary (Mr Graham Page and Mr Alistair Matheson).

That arrangement continued until approximately 1988 when Mr Tom Beattie was appointed as Paediatric A&E consultant at RACH. He continued this single-handed post until 1994 when he transferred to Royal Hospital for Sick Children in Edinburgh. From the time of his appointment however all middle grade staff at A&E in RACH were on rotation from the adult Department.

On his departure, a rota of all the consultant A&E staff included duties at RACH and on transfer of the hospital to its new site adjacent to ARI, the two units were located side-by-side albeit with designated entrances and waiting areas for the children's department. Resuscitation areas were separated by a sliding wall and the dedicated adult and children nursing staff were provided for the two collocated units.

9 Cardiothoracic Surgery

The practice of cardiothoracic surgery was limited at RACH to ligation of patent ductus arteriosus and neonates who had failed medical treatment for this condition. All other major congenital cardiac anomalies and conditions such as coarctation of the aorta were transferred to the Royal Hospital for Sick Children in Edinburgh for treatment by Mr Willie Bissett and his staff.

Similarly treatment of all thoracic conditions (e.g. bronchopulmonary sequestration and congenital lobar emphysema) were transferred to Edinburgh until the appointment of Professor George Youngson after which all thoracic surgery was retained in RACH.

PDA ligation were carried out by Mr John Cockburn and Mr AV Foote.

10 Paediatric Neurosurgery

In the main, major elective Paediatric Neurosurgical conditions such as excision of medulloblastoma and other brain tumours were carried out in under the care Mr James Steers but traumatic brain injuries requiring immediate surgical intervention (e.g. extradural haematoma) and emergency shunt placement for Hydrocephalus/spina bifida were performed by the on duty consultant neurosurgeon Aberdeen Royal infirmary. These comprised Mr Bob Fraser, Mr Chris Blaiklock Mr George Carr, Mr David Curry and latterly Mr Pragnesh Bhatt.

Emergency shunt revision for blockage/infection was similarly carried out at RACH. More complex procedures, e.g. ventriculostomy, were usually transferred to Edinburgh.

This pattern of clinical practice has been consistent across recent decades and managed clinical networks for the East Coast and West Coast of Scotland have subsumed Aberdeen's elective neurosurgical practice for children. Emergency surgery however is continued on site as befits the urgency of the clinical situation.

11.0 Supporting services

Paediatric Anaesthesia

The anaesthetic department has always had a separate rota and clinical duties in Royal Aberdeen Children's Hospital. The anaesthetist supporting this since 1960 included:

- Dr Edith Beveridge
- Dr Mike Tunstall
- Dr George Robertson
- Dr Wyn Parry
- Dr George Smith
- Dr Abdul Sheikh
- Dr Alison Campbell
- Dr Graham Johnson
- Dr Gordon Byers
- Dr Graham Wilson
- Dr Tom Englehart (moved to Toronto)
- Dr Kay Davies
- Dr Alan Barnett
- Dr Claire Wallace
- Dr Tim Jagelman

These anaesthetists had a significant commitment to paediatric anaesthesia but often had other clinical duties including obstetric anaesthesia, maxillofacial, ENT, and general surgical support. They also provided clinical staffing in the high dependency unit and would be responsible for ventilating children on site until such time as a transport team arrived from Edinburgh Glasgow to transfer the children to intensive care when this was required. Certain individuals, notably Dr Mike Tunstall had substantial research commitments and indeed Dr Tunstall was the inventor of Entonox and joined forces with Dr George Russell, consultant paediatric respiratory physician along with Professor Alec Campbell, Professor of Child health and helping establish the first neonatal unit in Aberdeen in 1962.

Paediatric Radiology

Two radiologists had major commitment to the Children's Hospital from the 1960s onwards. Dr Archie Stewart established the department and it was continued by Dr Elizabeth Stockdale. They were both supported by several other colleagues from the radiology

department Dr Karen Duncan, Lesley Gomersal and Dr Shonagh Walker with paediatric radiology becoming a subspecialty within general radiology services. The appointment of Deniz Morgan and Bilal Sethi expanded the range of specialist radiological services available.