History of Paediatrics which drives our ingenuity

Dr. Jyoshna Shivaprasad and Dr. Jesheela

Abstract
A synopsis on Paediatrics in India is incomplete without a mention of the individuals responsible for its development. The history of Paediatrics is dated back since the 14th century. There were several pioneers involved who coined the term 'Paediatrics' and brought it into existence.

Keywords: History of medicine, centuries, ancient, paediatrics, children

Introduction
Paediatrics has become a recognised speciality by the stimulus added by many individuals beginning from the 14th century to the 21st century. It has been a challenging speciality in terms of the very genuine difficulty of dealing with a young child with a life threatening condition or a terrified parent of an acutely ill infant. The quest for medical knowledge began from the European Renaissance and travelled a long way until it reached India.

History: 14th to 17th Centuries

- European Renaissance
- Scottish Universities
- Vesalius
- Dr. John Caius
- College of Physicians

In this prelude we limit discussions to the evolution of knowledge in the medical field, recognising that the emergence of the European renaissance saw wide changes and developments in societies throughout Europe. These changes precipitated a progressive period of evolution in education and in the development in the medical field. In consequence of the gradual progress in understanding of disease, the place for hospitals in the care of adults and subsequently hospitals for the treatment of children developed. The earlier development of special groups within medicine was confined largely to the “thinkers” (physicians) and to the “doers” (surgeons) but specialties such as paediatrics had not developed, nor any thought of the British Society for the History of Paediatrics and Child Health until the 21st century.

Galen (c.130AD to 210 AD) was of Greek origin but this profound philosopher and researcher moved to Rome where he spent most of his life. In the medical field, his pronouncements from Italy were held as facts for over a thousand years before major challenges to his definitions in anatomy and in other spheres emerged.

The extent of the mobility of individuals in search of higher education was surprising as travel took considerable time and was not comfortable. Moving forward to the European
Renaissance this mobility was evident for instance Vesalius. Born in Belgium he moved via the Netherlands to Leuven, then Paris and to centres in Italy where his main contributions were recorded.

- St Andrews - 1413
- Glasgow - 1451
- Aberdeen – 1495
- Edinburgh – 1583

In the 15th and 16th centuries there were four universities established in Scotland whereas in England the much older Cambridge and Oxford university’s controlled higher education and the development of the other universities did not occur until the 19th century. The pattern which became common was for Scottish doctors to travel to the continent for further studies to Europe although some did travel to England. A limiting factor was the development of the College of Physicians of London (1518) which originally was empowered to exert local control of medical practice but within a decade had its authority extended to the whole of England. To become a member you had to be asked to attend for interview/examination and with the rivalry between the south and the north Scottish graduates, particularly those from Edinburgh, were regarded more as enemies rather than colleagues. It could be difficult to obtain an invitation and therefore be authorised to establish a practice in the south.

The eighteenth century was a time of remarkable change in the medical field in Britain. This saw the development of an awareness and then action on the huge mortality there was present in the young age group where half died in the first decade of life.

A social conscience gradually emerged and Thomas Coram (1668 – 1761) was the first persistent activist in stimulating the provision of care for abandoned children. In 1724 the collapse of the South Sea Company altered Coram’s plans and having retired from his position as a sea captain he was appalled by the sights he saw in London of abandoned infants and children. He sought support for an institution to care for these children and ultimately he achieved his aim after 17 years of hard and exhausting work to receive Royal assent from King George II to establish the Foundling Hospital in central London in 1742 and currently remains as the Coram Foundation. Although initially called the Foundling Hospital the meaning of the word hospital has changed from the eighteenth century where it was more indicative of an educational activity rather than as a treatment centre for those with illness.

With attention to the care of children was gradually emerging a Scottish family were active in this area in London. George Armstrong (1719-1789), whose brother John (1709-1779) had qualified in medicine at Edinburgh, followed his brother as a student under the famous Munro family in that city. He followed John to London. George set up a practice in Hampstead as a Surgeon and Apothecary. He was not challenged by the Company of Surgeons. George later moved his dispensary to Red Lion Square in 1769 where his Clinic for the Infant Poor became established.

George’s older brother John had qualified from Edinburgh and proceeded to London where he was prevented from practicing medicine for 30 years. George had the concept of a hospital for children but never achieved the support necessary for this development. George did move from Hampstead to Red Lion Square in 1769 where he held a Dispensary for the Poor under the title of Surgeon. The development of children’s dispensaries was delayed for many decades and George’s desire to see the development of a children’s hospital in London was delayed until 1852 when Dr. Best with the able assistance of Dr. Bence-Jones achieved the opening of Great Ormond Street hospital. Armstrong was a good doctor but a poor financier and he failed to leave a continuing clinic or to achieve his aim of developing a hospital for children. The failure of George Armstrong’s dispensary resulted in setback to this development of dispensaries for children until Dr. Davis established one in 1816 (see subsequent section).

History: 18th Century

- Thomas Coram
- George Armstrong
- Dr. William Cadogan
- Dr. William Hunter
- Dr. John Hunter
- Dr. Edward Jenner

Hogarth’s cartoon suggesting effects of vaccination by Jenner

The eighteenth century was a time of remarkable change in the medical field in Britain. Vesalius (1514-1564) was a major contributor to the new approaches. He stimulated interest and learning by his public dissections and lectures. This followed his discovery that Galen’s pronouncements had been based on animal studies rather than on humans. Accuracy was greatly improved from that given by previous teachers where a technician dissected and a poorly informed lecturer spoke on the subject to his audience.

In the 16th century a contemporary of Vesalius was Ambrose Paré (1510-1590), the French surgeon who became the medical advisor to the French King. He laid down the
five duties of surgeons:
- to remove what is superfluous
- to restore what has been dislocated
- to separate what has grown together
- to reunite what has been divided
- to redress the defects of nature

History: 19th Century

Dr John Bunnell Davis established a clinic which over the next century had seven different titles, starting with the Universal Dispensary for Children in London and ending in the 20th century as the Royal Waterloo Hospital for Children and Women. Davis was a man of tremendous energy and drive and set up the clinic in 1816. In 1824 the clinic had a staff of three physicians and three surgeons but the unexpected death of Dr Davis deprived it of its dynamism and forward drive. Inpatient admission was delayed to 1856.

In 1842 Dr Charles West was appointed as a physician (aged 28) to the Royal Universal Infirmary for Children and Women. Davis was a man of tremendous energy and drive and set up the clinic in 1816. Within two months he had arranged a meeting held in Dr Bence Jones house and from that progress was made to develop the Hospital for Sick Children in Great Ormond Street (GOS) which opened in 1852. The Board of the Hospital for Sick Children appointed Dr Charles West and Dr William Jenner, Physicians, and Mr G D Pollock, Surgeon who was followed by Mr Athol Johnston. Dr West like some other paediatricians before and after had a personality which could raise significant divisions of opinion and break working relationships. Attitude of Dr West and at least some of his colleagues at the outset was that there were no surgical problems in childhood, which demanded special skill or study. He opposed appointment of a surgeon but the Board ruled otherwise.

Following the earlier pattern in Europe, Britain in the second half of the 19th century had an “epidemic” of hospitals - there being 38 Children’s Hospitals by 1888. Elizabeth Lomax in her book Small and Special records the ‘explosion’ of children’s hospitals in the second half of the 19th century. This also was the time at which the term paediatrics came into use instead of the clumsier ‘diseases of children’ and has been documented by Professor Peart in the Archives of the Diseases of Children (2011).

History: 20th to 21st Centuries
- Dr. George Frederic Still
- BPA 1928
- BAPS 1953
- RCPCH 1996
- BSHPCH 2002

Dr John Bunnell Davis was a man of tremendous energy and drive and set up the clinic in 1816. He opposed appointment of a surgeon but the Board ruled otherwise.

That paediatrics was becoming a recognised specialty was furthered by the stimulus added by individuals but in particular by the bachelor Dr. George Frederic Still (1868-1941). He was appointed as the first Professor of Paediatrics in England by King’s College and he was also on the staff of the Hospital for Sick Children, GOS. An interesting description of the man was given by his sister that – “he loved children, but with the exception of his mother and the Queen, I have never heard him utter a favourable word on mothers in general”. Clearly he was not susceptible to female charm. Still was a major force in the establishment of the British Association of Paediatrics (BPA) and was the first President of the Association.

The establishment of the British Association of Paediatric Surgeons (BAPS) was not till 25 years later in 1953. It is interesting that Charles West attempted to obstruct a surgical appointment at the Hospital for Sick Children as “surgical” children in his view did not require specialist surgeons nor a special environment unlike children with medical disorders. In contrast some other Children’s hospitals such as Glasgow appointed the same number of surgeons as physicians on the development of the children’s hospitals. The number of patients attending the surgical clinics significantly exceeded those attending medical clinics through the 20th century.

By the latter part of the century the BPA moved toward separation from the ‘adult’ physicians to develop their own College. This was achieved in 1996 when the Royal College of Paediatrics and Child Health were established with Dame June Lloyd as President and the BPA was terminated.

Two years later the History section of the College was formed by Dr David Stevens.

The History Section of the Royal College of Paediatrics and Child Health has moved on and in 2002 under the guidance of Professor Peter Dunn it become the British Society of the History of Paediatrics and Child Health (BSHPCH).
retaining its association with the Royal College of Paediatrics and Child Health and also an official link with the British Society of the History of Medicine.

The BHIPCH is open to all who have an interest in the History of Paediatrics and Child Health from any of the multiple aspects which the affect infants and children and their welfare.

The Indian scenario
In the mid 40’s, there were just 12 to 15 Paediatricians in the whole of India. Presently, the number has just risen. Paediatric practice constitutes about 30% of general practice. However, even in the present days, only 10% of teaching time is being devoted to the subject at the undergraduate level. Unfortunately, in most universities, the subject constitutes only a section of one of the papers in General Medicine. Fortunately, in some of the states, Paediatrics has achieved the status of an independent subject at the undergraduate level examination.

The Diploma in Child Health (DCH) was started by the College of Physicians and Surgeons (CPS) of Bombay at the B. J. Hospital and Bai Jerbai Wadia Hospital for children in 1944.

A few years later, the Department of Paediatrics, Irwin Hospital, Delhi started the DCH examination and several candidates passed out by 1957-58. The Doctor of Medicine (MD) courses in Paediatrics in most parts of the country started in the 50’s. The National Academy of Medical Sciences started its examinations in 1964 and presently gives a degree of the ‘Diplomate of National Board’.

Though, the degrees in Paediatrics were to come later, the medical colleges in Bombay were giving importance to the subject much earlier. Here, Paediatrics was given a separate status by creation of the B. J. Hospital for Children and the Bai Jerbai Wadia Hospital for Children in 1928 and 1929 respectively. A separate department of Paediatrics was started later at the Nair Hospital and T. N. Medical College in 1948 and was headed by Dr. Shantilal C. Seth.

Paediatricians have been actively involved in research and communication. These have appeared as many quality peer-reviewed journals including Indian Pediatrics, Indian Journal of Pediatrics etc.

Technology has progressed in leaps and bounds over the past two decades. Fortunately, this advantage has become available to us in the form of newer radio-imaging techniques, serological tests, and other sophisticated metabolic tests. It has now become possible to study body function at a sub-cellular and molecular level. This has resulted in our ability to diagnose and manage a number of inherited disorders amongst others. The benefit of antenatal diagnosis for some disorders has now become possible. The World Summit for Children of which India is a signatory, set up certain goals in 1990. Important among these are: 33% reduction in the under 5 death rate; 50% reduction in rate of malnutrition among under 5 children; 90% immunization against vaccine preventable diseases by 1 year of age; eradication of polio, elimination of neonatal tetanus, 90% decrease in the measles cases and 95% reduction in measles deaths; 50% decrease in deaths due to diarrhoea; 33% decrease in deaths due to acute respiratory infections (ARI); and basic education for all children.

Paediatricians are working on an individual basis as well as collectively (through the IAP) along with the GOI and the NGO’s to achieve these goals.

It is hoped that with the co-ordinated efforts of the Paediatricians and the health authorities, the child of tomorrow will not be a target for many of the infectious diseases, malnutrition, and other preventable illnesses. Hopefully, concentrated efforts would take care of social problems such as child labour, sexual abuse, drug addiction, problems of street children, etc. This can ensure a bright future for the children of tomorrow.

References