This book provides an authoritative overview of the global development of surgical paediatrics. Biographical accounts of key people who developed this relatively new speciality, many of whom are now household names, are presented. The compendium also acknowledges the enormous contribution of imaging (ultrasound/MRI and PET scans), minimal invasive surgery, and fetal surgery, as well as the role of related journals and associations, in the progress of surgical paediatrics.

Many of the contributors have been instrumental to the development of surgical paediatrics in their respective countries, and have considerable worldwide influence on the management of children requiring surgical care. Through their valuable insight and first-hand experience, this book not only shines a light on the past achievements of previous generations of paediatric surgeons, but also serves as a model to encourage future generations to do likewise.
EASTERN EUROPE

Andras W. Pinter

Introduction

Having been asked to give an outline of the development of paediatric surgery in the previously known eastern block of European countries, I had elicited the help of many colleagues in the East and have recorded many of the facts given by them on the development in their area. It is not fully comprehensive as there has been some difficulty in getting details from all sources tapped, but the following is an outline of the development and the experience on development which have been commanded by factors completely outside the medical field.

Belarus

Before 1955 general surgeons took care of surgically ill children in Belarus despite the fact that the first textbook of paediatric surgery in Belarus was already written by Prof A.E. Mangem in 1933. The first paediatric surgical department for 25 children was opened in November, 1955 in Molodechno and the second one in 1956 in Minsk for 30 children. In 1963 Prof S.L. Lybov founded the second paediatric surgical department for 40 children in Minsk and began the epoch of paediatric chest and cardiac surgery in Belarus.

In 1970 the centre of Paediatric Surgery for 240 children was built in Minsk for taking care of children with a wide spectrum of urgent and elective surgical pathology. Prof O.S. Misharev was the first medical director of this department. He established the very first paediatric ICU (1971) and had special interest in laboratory
aspects of homeostasis in children with septic disorders (1975). Some years later departments of paediatric surgery were opened in Grodno, Vitebsk (1964), Mogilev (1965), Brest (1968) and in other cities of Belarus. Now approximately 100 paediatric surgeons work in Belarus.

**Bosnia–Herzegovina**

In 1956 paediatric surgery separated from general surgery and the first department of paediatric surgery was founded as a part of general surgery in Sarajevo. By 1979 paediatric surgery had developed and was recognised as an independent speciality.

The paediatric surgical department in Sarajevo had six units. This department was the basis of the professional and scientific education for students, residents, specialists, and different subspecialists. Paediatric surgery gradually developed in other cities in Bosnia and Herzegovina (Tuzla, Banja Luka, Zenica, and Mostar). Prof Ivan Kafka (1923–1985) played an important role in the establishment of paediatric surgery in Bosnia–Herzegovina. He was educated in Great Britain and after that he started to develop paediatric surgery in Bosnia and Herzegovina. Beside the operations in the field of general paediatric surgery, he introduced neonatal surgery, operative procedure of congenital megacolon by Swenson technique and operative procedure of hypospadias by Ombredane and Denis Browne.

**Bulgaria**

The first Department of paediatric surgery in Bulgaria was founded in 1952 at the Medical University of Plovdiv by Dr Jury Toshev. At the same time the Emergency Hospital “N. I. Pirogov” in Sofia was founded as the first paediatric surgical emergency unit, created by Dr Boris Raponski. Later, in 1964 this unit was structured as the University Department under the leadership of Prof Dimitar Arnaudov. It consisted of three units containing 120 beds: the first abdominal surgical unit, second unit for neonatal and thoracic surgery, and the third Anaesthesiology and Intensive Care Unit. Under the leadership of Prof Ivan Ivantchev (1977–1989) and Prof Angel Bojanov (1990–2000) the Bulgarian paediatric surgery reached a European level in the field of neonatal, thoracic and abdominal surgery. There are 82 board-certificate paediatric surgeons in Bulgaria. There are University departments for paediatric surgery in Sofia Plovdiv, Varna, Pleven and Stara Zagora.

**Czech Republic**

In 1902 a new building of Czech Paediatric Hospital was built in Prague with the first independent department of paediatric surgery. It was headed by Dr Václav Kafka sen. (1869–1946) till his retirement in 1939 (Fig. 1). His performance included the whole spectrum of paediatric surgery of those times. He was interested in plastic and reconstructive surgery, and urological anomalies. He was a master in diagnosing acute abdominal illnesses and also active in paediatric orthopaedic surgery.

In 1956 this independent department of paediatric surgery was upgraded as a teaching institution of Charles University in Prague. It was then headed by Prof Václav Kafka jun. for 12 years.

Fig. 1. Václav KAFKA sen./Czech Rep.
In 1990 the independent Czech Association of Paediatric Surgeons was established.

Estonia

The first person acquiring recognition in the specialty of paediatric surgery in Estonia was Inga Freiberg who specialised in this field in the Leningrad (now St. Petersburg) Institute of Paediatrics in 1952. Later, special wards for surgical treatment of children were set up at the departments of general surgery in Tallinn and in Tartu. Subsequently, specialised departments were established both in Tallinn and Tartu in 1962. The department of paediatric surgery in Tartu University Clinic serves as a study base for the University of Tartu, which was headed by Docent Uudo Reino from 1966 to 2000. The departments of paediatric surgery in Tartu and Tallinn serve paediatric patients with general paediatric surgical, urological and orthopaedic pathologies from birth up to the age of 15 years.

Georgia

Paediatric surgery as an independent specialty started its development in 1913, when the first paediatric surgical department was created in Tbilisi. In 1933, the Paediatric Surgical Faculty was opened and a chair of Paediatric surgery and orthopaedics was founded in Tbilisi, headed by Prof M. Kokochashvili (1933–1964) (Fig. 4). During that period further paediatric surgical departments were opened in major cities of Georgia (Batumi, Sokhumi, Kutaisi, Telavi).

The Georgian Paediatric Surgery Association was founded in 1996. Over the last 15 years, the following operations were successfully implemented: neonatal congenital malformations (esophageal atresia, pulmonary cysts, atelectasis, small and large bowel atresia), correction of orthopaedic, neurosurgical pathologies, and advanced endoscopy (bronchoscopy, video-gastro-duodeno-colonoscopy, urethrocystoscopy). Ultrasound, CT and MRI are routinely used for diagnosis and treatment. Also endoscopic surgery is performed on GI tract.
Hungary

In Hungary, paediatric surgery has been officially acknowledged as an independent speciality, like general surgery or internal medicine, since 1965. However, there is no university chair for paediatric surgery yet. Initially, the speciality exam was allowed only for those who had undertaken specialisation in general surgery. Fortunately, since 1990 the paediatric surgical exit examination can be given without the prerequisite of passing the examination in general surgery, which consists of six years of training.

The 1st Paediatric Department was established in Budapest on the 15 August 1839. Between 1871–1914 László Verebély, as a general surgeon, led a paediatric surgical outpatient unit in the Department. In the year 1914, Aurel Koós was the person who organised the first Paediatric Surgical Ward with a separate operating theatre. He was the “father” of Hungarian paediatric surgeons (Fig. 5). His delicate surgical technique allowed him to not only perform many cases of cleft lip and palate, but some on neonates as well. Many doctors, both from Hungary and abroad, were trained under him. He worked for several decades, till 1957.

Besides Budapest, the other Hungarian cities with a Medical University have units with many sub-specialities for the past several decades. Their chiefs János Dénes (Budapest), István Altorjay (Szeged), Imre Pilaszanovich (Pécs) established paediatric surgery in Hungary.

Latvia

In Latvia, up to the end of the 19th century, surgical care to children was provided by general surgeons. Paediatric surgery in Latvia originated in 1899 when the first children’s hospital was founded in Riga (Fig. 6). The hospital was financially supported by the patron of British origin James Armstead. The first principal of Latvian Paediatric Surgery Department was Paul Klemm, a doctor of German origin.

In 1915 Reinhold Girsengson, who was of Baltic–German origin, became head of the Surgical Department in the Children’s Hospital. After him the paediatric surgeon of Latvian origin Aleksandrs Biezins took up the leadership of the Paediatric Surgery Department (Fig. 7), having had training in Germany, Austria and
France. From 1972 the paediatric surgery clinic was headed by Prof Janis Gaujens.

The Department of Paediatric Surgery of the Children’s University Hospital of Riga has become an up-to-date European Union medical centre of the 21st century, where about 4500 operations are performed annually.

Lithuania

The beginning of Lithuanian Paediatric Surgery as a separate field of surgery dated back to 1895, when the first Department of Paediatric Surgery was established in the Vilnius Red Cross Hospital. More than 40 years later with 16 beds, another unit for paediatric surgery was opened in the Department of Surgery of Kaunas University. Now, the paediatric surgeons are trained in the Medical Faculty of Vilnius University and Kaunas Medical University.

In 1989 Prof Jonas Gradauskas (Vilnius) issued his first book on “Paediatric Surgery”. In 1990, the possibilities for cooperation arise between the leading paediatric surgical units in Europe and the Lithuanian paediatric surgical wards and Lithuanian paediatric surgeons. The equipment in the departments are constantly improving, and innovations, especially minimal surgical intervention, are being introduced in Lithuania.

The 3 Baltic States — Lithuania, Latvia and Estonia — have been organising their biannual international congresses, which are very successful and well-attended meetings over two decades.

Romania

The first children’s hospital in Romania and also in the Balkans was founded in Bucharest in 1858, “Grigore Alexandrescu” Children’s Emergency Hospital was divided into two departments: Paediatrics and Paediatric Surgery. Children up to 14 years of age were admitted. In 1914 a new Department of Paediatric Surgery and Orthopaedics was opened. By 1966 it had 90 surgical, 64 orthopaedic, 50 urological and 30 intensive care beds with 8 operating theatres. The surgeons who led this department were: Prof Iacob Iacobovici (1879–1959), Prof Alexandru Cosacescu (1888–1951), Prof Filip Gottlieb (1897–1966), Prof Dimitrie Vereranu (1909–1994), Prof Mircea Socelea (1925–2006) and Prof Tudor Zamfir (born 1936) (Fig. 8).

Prof Tudor Zamfir was a good surgeon, teacher and academic. He wrote a textbook of Paediatric Surgery and developed an original procedure “Detachment of the triceps in the treatment of elbow
stiffness in extension in children”. This technique is mentioned in Campbell’s “Operative Orthopaedics” textbook.

In 1984 in Bucharest, a completely new hospital was inaugurated, “Maria Sklodowska Curie” Emergency Children’s Hospital. The chief of the Department of Paediatric Surgery was Prof Alexandru Pesamosca (Fig. 9). The modern history of Romanian Paediatric Surgery began with the Prof Alexandru Pesamosca. He was a very skilled surgeon and he had a very long and successful career.

In Romania, paediatric surgery is taught and performed in 9 university cities: Bucharest, Iași, Timisoara, Cluj, Craiova, Tirgu Mures, Constanța, Brașov and Arad. One of the prominent paediatric surgeons who headed these centres was Prof Vasile Fufezan (1928–2000, in Timisoara). He developed two personal techniques. One of them was adding a patch of azygos vein over the end-to-end anastomosis of the oesophageal pouches in esophageal atresia, as a security measure for preventing leakage. His second technique concerned the omphalocele. Due to the lack of synthetic materials, he used the omphalocele membrane, excising the borders and, after reintroduction of the viscera into the abdominal cavity, suturing the membrane to the muscular fascia to close the defect.

Serbia

Pioneer steps in the development of surgical paediatrics in Serbia are closely intertwined with the name of Dr Dimitrije Jovicic. He was trained in Paris and after the end of the 1st World War, he returned from Paris to Serbia as the first faculty educated paediatric surgeon. In 1921 the 1st Department of Child Surgery, headed by Dr Dimitrije Jovicic, was opened at the General State Hospital of Belgrade.

The second person who bears merits for the development of surgical paediatrics in Serbia is Dr Matija Abrozic. It was because of him that the construction of a new children’s hospital building was begun with 180 hospital beds, of which 80 were to be used for surgical paediatrics. The new building, today’s University Children’s Hospital of Belgrade, was constructed according to the strictest European criteria for a children’s hospital. In the period between the 1st and the 2nd World Wars, paediatric surgeons were mainly preoccupied with emergency states and orthopaedic diseases.

A rapid development of surgical paediatrics, as a surgical discipline, occurred in 1947, when paediatric surgery became acknowledged as an obligatory subject in the Belgrade Medical School’s
curriculum and also became a subspecialisation in Serbia. Consequently, the Belgrade Hospital became capable of covering the whole surgical pathology of children, from the neonatal to the teenage period. At the University Children’s Hospital of Belgrade Dr M. Mitrovic (Nis), Dr J. Dzokovic (Novi Sad), Prof Dr D. Jovanovic (Belgrade), Prof Dr D. Bajec, Dr Jelenic and many others completed their paediatric surgical training.

Today Serbia has 152 paediatric surgeons, who, based on the regional principle within secondary and tertiary health protection, cover the whole territory of Serbia. Today there are two paediatric cardio-surgical centres (Institute for Mother and Child and University Children’s Hospital), one Paediatric Centre for Hemodialysis and Kidney Transplantation (UCH) and one Centre for Bone Transplantation (IMCH).

Russia

It is difficult to separate the history of paediatric surgery of the previous Soviet Union from that of present. Five leading paediatric surgeons whose work hallmarked and determined the development of paediatric surgery both in the Soviet Union and Russia in the 20th century have contributed to this synopsis and their contributions are presented.

Ternovskiy Sergey Dmitrievich (1896–1960) was a scientist, a surgeon and a teacher. He was one of the founders of paediatric surgery in the USSR. He led the paediatric surgery and orthopaedics of Pirogov’s 2nd Medical Institute in Moscow from 1943 till he passed away. He was author of 75 scientific workpieces, including three monographs and textbooks on acute thoracic, abdominal and neonatal surgery, surgery of osseous-articular tuberculosis, harelip and corrosive strictures of oesophagus. His textbook was re-printed three times and translated into a many languages.

Isakov Yury Fedorovich (1923–present) was a most outstanding paediatric surgeon and teacher and public figure. Isakov was first engaged by general surgery and later became a paediatric surgeon under the supervision of Prof Ternovsky. In 1966 he was elected to the chair of paediatric surgery of Pirogov’s 2nd Medical Institute in Moscow.

Isakov has written over 400 scientific publications, including 20 monographs, seven textbooks and manuals on subjects of surgery of newborns and children. His courses for thoracic and abdominal surgeries in infants and young children and paediatric endosurgery were well-attended by participants from all over the country.

Stepanov Eduard Alexandrovich (1929–2007) served as Professor of Paediatric Surgery of Pirogov’s in the 2nd Moscow Medical Institute for many years. Stepanov published over 330 scientific works, including seven monographs and two manuals on children’s chest surgery, plastic, abdominal and emergency surgery, permanent magnets application for the closure of intestinal fistulas and proctology.

Bairov Girey Alievich (1922–1999) was one of the most widely known Soviet and Russian paediatric surgeons. In 1951 he was promoted as head of the Institute of Paediatric Surgery in Leningrad (now, St. Petersburg). He published over 380 scientific works, including 17 monographs regarding diagnostic, clinical and surgical treatment of developmental anomalies in children, traumatic shock, purulent-septic and urgent surgery, paediatric reanimation, surgery of the prematures, proctology, orthopaedics and traumatology.

Dolecky Stanislav Jakovlevich (1919–1994) was probably the most widely known Soviet and Russian children’s surgeon internationally. He was one of the organizers of paediatric surgical service in the Soviet Union. In 1958 he was elected to the chair of paediatric surgery of Leningrad Medical Paediatric Institute. Later, he moved from Leningrad to Moscow. In 1959 he became the managing director of paediatric surgery of Central Institute of Postgraduate Education in Moscow. Dolecky has published over 500 scientific works, including 25 monographs (diaphragmatic hernia, obstructions
of colon in first month of life, and portal hypertension). Not only an outstanding surgeon he was also a skilled pianist who entertained many groups of paediatric surgeons to highly entertaining evenings after dinner.

Slovakia

Slovakian paediatric surgery began as a specialty in 1894, when a new hospital building was built in Bratislava. In 1939, Prof Žucha (Fig. 10) arrived in Slovakia. He was a neurosurgeon, but since his early beginnings in the Children hospital he paid intensive attention to paediatric surgery and its development. Since January 1950, Paediatric Surgery became a separate ward in Bratislava. Three years later it became an independent University Department, where neonatal and abdominal surgery, traumatology and orthopaedic procedures were performed in large numbers.

In 1962 Prof Žucha was followed by Prof Kratochvil, who enriched the surgical palette with lung and portal hypertension surgery. He founded a laboratory of surgical pathophysiology to solve various problems of paediatric surgery on an experimental basis; furthermore he established an advanced level of anaesthesiology at resuscitation in his institute.

In 1990, Prof Dr Eduard Pekarovič became the head of the department (Fig. 11). He was a world-acclaimed paediatric surgeon, and has been well-received both in the American and European paediatric surgical communities, where he was well-known as “Eddie”. Prof Pekarovič remains forever a respectable example for being not only a highly knowledgeable, theoretically sound, but also manually skillful surgeon.

Ukraine

In 19th century paediatric surgical cases were treated in general hospitals in Ukraine. First department of paediatrics was established in Kiev in 1899, which had a paediatric surgical ward. In 1900 a “Society of Hospitals” was founded, also in Kiev, where mainly children were treated with diseases of bones and joints. Vira Gedroitz, a student of Caesar Roux of Lausanne, Switzerland, was the first female professor of surgery in Ukraine to have had courses of paediatric surgery in Kiev from 1927 to 1929. The teaching departments of paediatric surgery in Ukraine were established in Kiev (1935), Kharkov (1935), Odessa (1938), and Dnipropetrovsk (1938).

The first operation in a child with Hirschsprung’s disease, which was performed by professor Andrey Shurinok in 1959, gave impetus
for foundation of endotracheal anaesthesia in children. In his article in 1963 he made conclusion that “children have to be operated for Hirschsprung’s disease earlier then two to three years of age”, and that “intratracheal anesthesia allowed for absence of pneumonia and atelectasis cases in post-operative period”. The speciality of paediatric thoracic surgery was founded in Ukraine in 1964. By 1960, seven teaching departments of paediatric surgery were already running in Kiev, Kharkov, Odessa, Dnepropetrovsk, Lviv, Donetsk, and Simferopol.

The first conference of Ukrainian paediatric surgeons was held in 1960 in Odessa and attended by 243 delegates from Ukraine.

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Footnote from the Editors

The editors would add to the content of this chapter, collected and written modestly by a Hungarian surgeon, an appreciation of the marked development of the specialty which has been advanced by the next generation of Hungarian surgeons who have followed the instigators mentioned in the Hungarian section. Andras Pinter (Pecs), Kristof Fuzesi (Szeged), Tibor Verebly (Budapest) and Akos Kiss (Miskolc) (Figs. 12(a)–(d)), three recently retired but

Fig. 12. (a) Fusezi, (b) Kiss, (c) Pinter, (d) Verebly.

Tibor Verebly remains in active clinical practice, with their colleagues have provided rapid and planned developments in the training of paediatric surgeons. With their Hungarian colleagues they have been very successful in advancing paediatric surgical standards and particularly in organising structured training of their junior staff. By their efforts in maintaining active communications with paediatric
surgeons in many countries round the world they have contributed substantially to the development of the specialty and have conducted the European Paediatric Surgical examination now functioning in EEC countries. The very high performance by the Hungarian candidates was recorded by the examiners. Their substantial contribution in Europe has to be acknowledged.