



## ***Introduction***

In 2002 Child Neurology was accepted on the European level as a subspecialty of Paediatrics as well as of Neurology. In the process of the definition of the specialty, a European training programme, the syllabus of Child Neurology was compiled and accepted. As a means to implement the syllabus in the training of Child Neurology specialists in the European countries, the Committee of National Advisors in Child Neurology (CNA) and the European Paediatric Neurology Society (EPNS) in 2004 agreed to activate a Training Advisory Board as a joint effort. The Training Advisory Board includes 4 delegates from the CNA, 4 from the EPNS' Education and Training Committee and the president and secretary of the EPNS. The European Academy of Childhood Disability is represented by one delegate. The Board is chaired by the chairperson of the CNA.

The intention of the Training Advisory Board is to offer to national child neurology societies the opportunity to work together with them to evaluate the national training system. The ultimate aim is that the trainees of each European country be expected to reach a quality of training that is in accordance with the European training programme as defined by the Syllabus.

The Estonian Paediatric Neurologists have volunteered to have the Estonian training evaluated in accordance with this aim and as a pilot for the evaluation programme of the Training Advisory Board.

## ***Evaluation visit***

Lars Palm and José Carlos Ferreira visited the Children's Hospital at Tartu University Hospital in November 2007 on the invitation of the Estonian group of Paediatric Neurologists. Discussions were held with Professor Tiina Talvik, Estonian delegate to the CNA and former head of the Department of Paediatrics of Tartu University and Children's Clinic of Tartu University Hospital, now senior consultant of Paediatric Neurology in Tartu, Dr Anneli Kolk and Dr Valentin Sander, current heads of the Departments of Paediatric Neurology in Tartu and

in Tallinn Children Hospital. Interviews were made with doctors active in paediatric neurology, trainees in paediatrics and in paediatric neurology as well as with PhD students.

A concluding meeting was held with Professor Toomas Asser, Dean of the Faculty of Medicine at Tartu University, Professor Vallo Tillmann, head of the Departments of Paediatrics, Dr Sulev Haldre, President of the Estonian Society of Neurologists and Neurosurgeons, Docent Heli Grünberg, representative of postgraduate teaching as well as above-mentioned child neurology colleagues.

## ***Paediatric Neurology in Estonia***

Estonia has 1,4 million inhabitants and an estimated 300 000 children. There are two centres of paediatric neurology, in the Children's Hospital of Tartu University Hospital and in Tallinn Children's Hospital, situated in the two main cities of the country. Both centres are integral parts of the respective Departments of Paediatrics but with dedicated wards and staff.

Paediatric neurology is not a recognised specialty and there are no official subspecialties of paediatrics in Estonia. All doctors engaged in paediatric neurology are specialists in paediatrics, by exception in neurology, and have further training in paediatric neurology. There are 8 paediatric neurologists working in each of the paediatric neurology centres and another 4 in paediatric departments of General Hospitals in small cities. There is one foreseeable retirement in the next 5 years.

There is no national society of paediatric neurology in Estonia. All paediatric neurologists are members of the Baltic Child Neurology Society and the Estonian Society of Neurology and Neurosurgery. There are lively interactions with centres in Scandinavia and in Western Europe.

General rehabilitation is a specialty separate from paediatrics. Trainees in general paediatrics should have one month of neurodisability training. The trainees in general rehabilitation may have a period of paediatric training on a voluntary basis, and there is a mutual interaction between neurodisability/rehabilitation and paediatric neurology. Habilitation of children with neurological or neuromuscular disorders including cerebral palsy is being conducted at the paediatric hospital, neurology wards and in Haapsalu Rehabilitation Hospital and in specialised Kindergartens.

In each of the Tallinn and Tartu hospitals there is one colleague responsible for the clinical neurophysiology departments.

There is a high level of neuropsychology at both the main centres.

## ***Clinical Training***

Tartu University Hospital is the only centre in Estonia where paediatric neurology training takes place. Currently there are 3 trainees, two just beginning and one in the final part of training. Doctors who specialise in paediatric neurology complete full paediatric residency in advance which at present takes 3 years including 4 to 6 months neonatology and 4 months paediatric intensive care. The schedule hitherto followed for training in paediatric neurology, apart from training in the main specialty also encompasses 6 to 8 months neurodisability and (re)habilitation, 3 months neonatal neurology, 3 to 4 months child psychiatry, 3 months

neurophysiology, 1 month neuropsychology and 1 month in neurometabolic disorders as well as in neurogenetics. A period of adult neurology is desirable but in reality can not always be arranged. There is an individual tutoring system. Trainees pass an oral examination at the end of the paediatric neurology training.

Neuropathology is the subject of a special course in neuroscience school, epilepsy is part of the general paediatric neurology study period and neuro-oncology is included in the basic paediatric training. Special attention is given to Ethical Issues and Academic work while Management and Organisational Issues are not part of the programme.

Courses on specific subjects abroad have been attended by trainees, and there has been an informal exchange in the form of visits from foreign specialists to Tartu. This is an important part of the training as Estonia is a country with a small population and limited resources.

At present there is no officially recognised national medical specialty training program but such programmes are currently being developed. There is an intense debate as to whether paediatric subspecialties, including paediatric neurology shall be recognised. As a consequence the total duration of paediatric neurology training is not yet decided upon.

### ***Scientific training***

The recent and present trainees in paediatric neurology have started PhD studies and research before going into the training programme. They have been conducting the research projects in parallel with their clinical training. Active research is being conducted by the Paediatric Neurology Research Group which belongs to the Centre of Excellence of Clinical and Molecular Medicine of Tartu University.

### ***Comments and recommendations***

In spite of its small size and its turbulent modern history, Estonia keeps a high standard of paediatric neurology clinically and scientifically. Up to now paediatric neurology training has been conducted in an informal way without any official recognition of the specialty and without a recognised training programme.

- The specialty status of paediatric neurology in Estonia should be defined and officially recognised. Posts intended for paediatric neurology should be advertised as such and recognition of the specialty makes the recruitment and employment procedures clear. The recognition of paediatric neurology defines the specialist in interest of patients and colleagues alike, who then know what experience, knowledge and skill can be

expected. A defined specialty is of legal value for specialist as well as employer, not least in connection with international work inside and outside the European Union.

- The paediatric neurologist besides acute paediatric neurology needs experience in fields like neurodisability, neuropsychiatry, neurology, clinical neurophysiology, neurogenetics, neuro-imaging and several others to be mentioned. The recommended content and duration of this training is stated in the European Syllabus of Paediatric Neurology, accepted by the European Boards of Paediatrics and of Neurology in 2002. The present ad hoc training programme in Estonia largely accords with the European Syllabus but training in adult neurology and in pediatric (re)habilitation has to be ascertained.
- The specialty training in Estonia is being re-organised into a programme including a common trunk of paediatrics followed by further in-depth studies. To make it possible to cover paediatric neurology training, enough time has to be available on top of the common trunk, normally 3 years. Training periods in neighbouring fields have to be defined as mandatory and to be arranged with mutual agreement on supervision, responsibilities, content, timing and cost.
- The present group of paediatric neurologists is reasonably young with only one expected retirement in the next 5 years. However, with 20 paediatric neurologists working in Estonia there is a need for continuous training of 3 young colleagues in the sub-specialty to maintain current levels. To cover expansion of the medical field and unexpected retirements or emigration more trainees are needed.  
(After full training in paediatrics a doctor will normally be around 30 years of age. Given an average retirement age of 65 one can expect the doctor to work for 35 years in the field. In reality paediatric neurology training up to independent skill after basic paediatrics takes up to 5 years depending on personal situation and level of scientific activity. Thus for 7 paediatric neurologists there has to be at least 1 trainee.)
- In Europe it is most common to organise paediatric neurology as a subspecialty of paediatrics, although in some countries it is connected rather to neurology and even as an independent specialty. Whichever way is chosen a training programme that defines the core curriculum, the spectrum of skills and competencies as well as aims of training of the future specialist needs to be developed.

- The limited size of the paediatric population makes it important that trainees are given the possibility to train for significant periods abroad.