

EPOS fellowship pediatric spine deformity Hacettepe University Ankara/Turkey

Pediatric spine surgeons

Muharrem Yazici

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Surgical treatment alternatives of congenital spine deformities: From casting/growth friendly techniques to complex osteotomies

Hacettepe University is a reference center around the country and region. Especially the Children's Hospital accepts complex cases from all over the country. The pediatric spine unit is busy with the treatment of complex congenital and neuromuscular deformities. Besides, the pediatric spine team has pioneered a number of clinical and experimental investigations, and these studies have been published in prestigious journals. Numerous scientific researches, especially on EOS, are still in progress.

Fellows will have the chance to observe at least 3 surgical cases with congenital scoliosis within 3-4 days. At least two of them will require vertebral osteotomies. They will also have the opportunity to discuss all treatment options on a large number of case examples.

EPOS fellowship pediatric spine deformity UKBB University Childrens Hospital Basel/Switzerland

Pediatric spine surgeons

Carol C. Hasler

Daniel Studer

The Pediatric Orthopaedic Department is an autonomous unit within the UKBB and divided into four subdepartments (Spine, Tumor/Limb deformity, Neuroorthopaedics, Sports/Knee). The team consists of 9 full time staff pediatric orthopaedic surgeons, 1 pediatric neurosurgeon (50%), 1 pediatric hand surgeon, 4 orthopaedic residents and a clinic manager as well as a research and gait lab team.

In total 15000 outpatient visits, 3000 spine clinics visits (incl. Brace and MAGEC clinic, interdisciplinary clinic for complex cases)

In total 700 elective pediatric orthopaedic inpatients, 200 spine operations/year whereof +/- 80 multilevel instrumented fusions.

Full pediatric spine service incl. tumors

Potential focus areas for a fellowship

Navigation/3D image intensifier

Neuromuscular deformities

Early onset deformities

Multimodal spinal cord monitoring under neurophysiologic guidance

Pediatric neurosurgery

Basel is a city with 180000 inhabitants in the german-speaking part of Switzerland at the border of France and Germany located at the river Rhine. Most people also speak French and English. The city

hosts world class art museums (art museum Basel, Beyeler museum). The attractive old city including the university is more than 500 years old. The river rhine, art museum, shopping area and the old part of the city are within 5minutes walking distance of the hospital. Bern, Lucerne, Zurich are reachable within 1 train hour, Geneva and Lausanne 2 hours and most alpine mountain ressorts within 2-3 hours.

EPOS fellowship pediatric spine deformity UMC Turku/Finland

Pediatric spine surgeon

Ilkka Helenius

Olli Pajulo

Our Department serves for the whole scale of pediatric orthopedics at one of our main University hospitals including hand surgery.

Full pediatric Spine service including cervical Spine AND tumours.

Strong experience in Early onset scoliosis AND vertebral column resections.

O arm AND navigation readily available. Good co-operation with adult Spine service including adult deformities.

Historical city of Turku established on 1300 AD & good flight connections. Former capital of Finland. Bilangual (Finnish, Swedish), every Finn speaks English.

EPOS Fellowship Pediatric Spine Deformities Dana Children's Hospital, Tel Aviv, Israel

Pediatric spine surgeons

Dror Ovadia

Amit Sigal

The pediatric Orthopaedic department in the Tel Aviv Medical Center is the largest of its kind in Israel. The department consists of 9 pediatric orthopaedic surgeons each having a subspecialty (limb deformity, sport injuries, foot surgery, hip and pelvis, neuromuscular and of course spine deformities), and one pediatrician who treats patients with metabolic bone disease. Patients are referred to our department from all over Israel and occasionally even from countries abroad.

On an average week we have 4 full day outpatient clinic, 7 operating theatres (2-3 of which are devoted to spine surgery), and academic activity which includes seminars held once a week, journal clubs, gait lab analysis etc.

Fellows will be able to participate in 3 spine surgeries taking place on Monday evening, Tuesday morning and Thursday morning which usually consist of AIS, complex neuromuscular cases usually requiring fusion to the pelvis, early onset scoliosis of different etiologies treated with different surgical procedures including MAGEC growing rods, hemivertebra resections, EDF casting etc.

Fellows will also be encouraged to take part in the academic activities of the department (seminars, journal club) and to hold a round table case discussion session with a two spine surgeons of the team.

Tel Aviv is a vivid 24/7 city built along the sea shore of the Mediterranean Sea, and is well known for its free spirit, gastronomic, culture (museums, music halls, theatre, opera etc.) and endless night life.

It's international airport is easily accessed with flights from all the major cities in Europe.

EPOS fellowship pediatric spine deformity medico surgical center Les Massues in Lyon/France

The medico surgical center Les Massues in Lyon is highly specialized in the diagnosis and treatment of spinal disabling pathologies. It is renowned since the 60's with Pierre Stagnara and later with Pierre Roussouly.

The surgical team consists of 6 orthopedic surgeons dedicated to spine surgery and 2 orthopedic surgeons specialized in tumor management. All senior surgeons are board-certified orthopedic surgeons.

Kariman Abelin-Genevois, MD, PhD, is an orthopedic surgeon trained mainly in pediatrics and is an active member of EPOS and SRS. She deals with spine deformities – EOS, AIS, NMS – but also with neuromuscular orthopedic treatment – multilevel surgery, hip, knee, foot deformities. For NM and CP cases, a close partnership is organized with the pediatric rehabilitation department. Patients can be followed every 15 days meeting both the surgeon and the rehabilitation senior physician. Preoperative decision making is multidisciplinary usually after a complete evaluation by the pediatrician, the rehabilitation team and gait lab analysis when possible.

Pierre Roussouly, MD, is internationally renowned for the appraisal of the sagittal alignment of the normal and the pathological spine. He is now working parttime as senior surgeon, deals mainly with complex adult spine deformities. He performs surgeries on Wednesday and has one or two half day clinics a week. He is in contrary highly active in the clinical research and may support fellows in their research.

Clement Silvestre, MD, is the administrative chief of the department and deals mostly with complex adult spine cases. He is a skilled and active surgeon with 3 to 4 operating days a week and 2 half days of clinics.

Davide Sassi, MD, and Alice Darnis, MD, MSc, are also dedicating their practice to adult spinal deformity with a special focus in the cervical spine for Dr Darnis.

Radwan Hilmi, MD, is working part time in les Massues, as he is also chief of the orthopedic department in the north of Lyon in Villefranche Hospital. He is managing both spinal degenerative cases and hip and knee arthroplasties.

Gualter Gaz, MD, is the reference surgeon for musculoskeletal tumors management in Lyon. He both practices in Les Massues and in the Cancer Institute – Centre Leon Berard. He will be rejoined in September by Pr Gouin, MD, PhD in order to develop this field. Decision making depends on the multidisciplinary discussions organized in the Cancer Institute that the fellows may join if they request for it – Monday evening.

The department trains each year two spine French fellows, two to three spine orthopedic or neurosurgical residents. The department is accustomed to receive all year long visiting or clinical fellows – mainly through SRS partnership - as well as research fellows. Any foreign fellow is proposed to conduct a clinical research in either pediatric or adult spinal deformity management when he starts.

Collaborative research might also be conducted with associated biomechanical research departments in case that the fellow has a special focus.

Patients are referred from all over France, many cases being second advice but also adult revision surgeries. We closely collaborate with the Rehabilitation Departments of our Center who are managing the conservative treatment and multidisciplinary care of any kind of spinal deformity. Patients are offered an educational multimodal program and training for those who are referred for back pain. Close collaboration between our departments offers a complete set of evaluation and a clear decision making for those cases, in order to limit the risk for complications but also to accompany our patients in the process of healing and return to daily life and work.

The department owns 35 beds and four bright new and equipped operating rooms, three are dedicated to spine surgery and the fourth one to lower limbs and tumor surgery. OR is busy every day from Monday till Friday from 8 am to 3 pm. Fellows will be able to scrub and assist the surgeries every day. They will be also very welcome to attend the clinics. Each surgeon has at least 2 to 3 half days clinic. Multidisciplinary discussions are also part of the outpatient management when decision making requires expertise.

Fellows will be also very welcome to observe the conservative management. Spine casts are scheduled every week in the pediatric department. The orthotists work every morning in our Center and have their own brace department within the hospital. They are also very much likely to show their own office and especially to explain their practice, using 3D printing and 3D simulation.

A preoperative staff meeting takes place every Tuesday afternoon from 4 pm to 6 pm.

Research is coordinated by Kariman Abelin Genevois and Pierre Roussouly and research meetings are organized weekly to guide the research process in order to achieve at least the writing of one paper for each of the fellows. A close collaboration with the Catholic University of Lille ensures that all statistical analysis are performed by Stephane Verdun, biostatistician.

Lyon is the third largest city in France but the second largest metropolitan area of France (2.3 millions of inhabitants). It is ideally located between the Alps, the South East – only 3 hours from Marseille – and easily accessed from Paris and the Northern city thanks to the speed train (TGV) – 2 hours for Paris, 3 hours for Lille, 3h30 for Brussels.

Its center bears witness to 2,000 years of history, with its Roman amphitheater of the Three Gauls, the medieval and Renaissance architecture of Old Lyon and the modernity of the Confluence district on the peninsula – very modern and arty area. The Traboules, covered passages between buildings, connect the Old Lyon to the hill of La Croix-Rousse. History made it beautiful but its citizen made it both charming and lively place to live in. In summer time, many festivals are held in Lyon and its surroundings, the most famous being the Fourviere Festival in the Roman amphitheater with amazing artists from all over the world.

Climate is moderately cold in the winter thanks to our location between two rivers, Rhone and Saone – alps are very close for those who like to ski - , great in spring and autumn with some rainy days but sun shines also often. Summer time is great, very shiny and hot in august – the department systematically closes 2 to 3 weeks at the beginning of august since we do not manage emergency cases. We hope to welcome you very soon in Lyon!

EPOS fellowship pediatric spine deformity Timone Children's hospital, Marseille, FRANCE

Pediatric spine surgeons

Jean Luc JOUVE
Sébastien PESENTI
Elie CHOUFANI
Emilie PELTIER

The Pediatric Orthopedic Department is an autonomous unit within the Timone hospital. The department is composed of 8 pediatric orthopedic surgeons, each one with a subspecialty (Spine, Tumor, Limb deformity, Neuro-orthopedics, Sports/Knee, Hand surgery). Among the team members, 4 surgeons are dedicated to spine surgery. In addition, 6 local orthopedic residents are included into the surgical team (6-month rotations). Finally, a clinical engineer is attached to the department and participates in research projects, including gait lab research projects focused on pediatric spine deformities.

In total 10000 outpatient visits, 3500 spine clinics visits (incl. Brace and MAGEC clinic, interdisciplinary clinic for complex cases)

In total 700 elective pediatric orthopaedic inpatients, 250 spine operations/year whereof around 100 multilevel instrumented fusions for adolescent scoliosis.

Spine surgeries are performed at least 3 days a week during winter and up to 4 days a week during summer.

Potential focus areas for a fellowship

Multilevel fusions for adolescent idiopathic scoliosis, including posteromedial translation reduction technique using sublaminar bands

Neuromuscular deformities, including ilio-sacral fixation technique (TANIT)

Early onset deformities

Multimodal spinal cord monitoring under neurophysiologic guidance

Marseille is a city with 860,000 inhabitants in the south of France (Provence), on the shore Mediterranean Sea. Since it was nominated as the European Capital of Culture in 2013, the city hosts the famous Mediterranean Civilizations Museum (MuCEM) and numerous cultural activities.

Moreover, the city being located on the Mediterranean coast, many water activities are possible almost all yearlong (yachting and sailing, surfing, ...).

Paris is reachable within only 3 train hours (TGV) the French Alps mountain resorts 2 train hours.

Marseille International airports allows for reaching most of the main cities of Europe in 2 to 4 hours flights.

EPOS fellowship pediatric spine deformity UMC Utrecht

Pediatric spine surgeons

René M Castelein
Moyo C Kruyt

The spine unit at the UMC Utrecht is the largest academic spine center in the Netherlands that harbors all aspects of spinal surgery. The full team consists of five orthopedic spine surgeons, three neurosurgeons and several spine fellows. All paediatric spine is performed by two paediatric spine surgeons. It is internationally recognized and is one of the AO spine and IGASS fellowship centers.

Pediatric spine surgery involves mostly complex academic cases. From everywhere in the country patients are referred for specific treatments like Mehta casts for the infants, growing spine solutions for juveniles, minimal invasive bipolar fixation for the adolescent neuromuscular patients and halogravity traction for severe deformities and or fragile patients. The children's hospital harbors the national center for many types of neuromuscular patients and all oncological pediatric patients in the Netherlands are referred to Utrecht

Clinical:

For the paediatric spine, every week there are about three outpatient clinics including multidisciplinary consultancies. Two days per week we are on the (extended, 08.00-18.00 hours) OR.

Research:

In addition to the clinical work several strong research lines are ongoing: Etiological research to determine the relation between the unique biomechanics of the human spine and onset of scoliosis; Practical research to investigate the possibility to use ultrasound as an alternative to X rays; Experimental research to develop new innovative implants that actively reduce scoliosis. Several trials and prospective cohort clinical studies are ongoing

Fellowship:

The EPOS pediatric spine fellow can join us for one or two weeks or decide to focus on one subject. In that occasion we will prepare a specific program and try to schedule specific surgeries.