Spine Surgery Specialization Course Program

Program Description:

Characteristics: This is a post graduate course intended for certified specialists in Orthopedics and Trauma. This program is offered at Clínica Las Condes and Hospital Robert de Río.

Duration: 1 year

Schedule: Monday through Friday, 8:00 a.m. to 8:00 p.m. Weekly rotations in the Emergency Room of Clínica las Condes

General Objectives

To develop diagnostic and clinical skills in the treatment and therapies of diseases of the spine: including study of degenerative pathologies, infectious diseases, tumors and trauma to the spine.

The student resident will participate in the treatment of patients in a multidisciplinary environment where clinical decisions are subject to analysis and evaluation by a multidisciplinary team. The purpose of this approach is to train the student resident with the technical skills to correctly treat the patient in an ethical, responsible, and comprehensive manner.

Specific Objectives

To gain the technical skills and knowledge to formulate correct diagnosis of patients with afflictions to the spine, including:

- Conduct a thorough physical examination of the adult or pediatric spinal column
- Develop the diagnostic skills to elicit a comprehensive medical history of a patient including their genetic, biological, physical and psychological profile of their condition and pain profiles.
- Develop the technical skills to establish a spinal patient pain profile.
- Conduct a thorough physical examination to establish the neurology of the spine.
- Develop the technical skills to interpret x-rays and radiology report and to incorporate these into the diagnosis and presentation of a patient case.

Exposure to surgical techniques to address spinal diseases in the cervical, dorsal, lumbar, pelvic regions of the spine, including techniques of decompression, halo and mechanical stabilization, correction of deformities and other less invasive methods.
Contents

a) Degenerative Diseases
   • Physiology of degeneration of the spine
   • Syndromes of cervical and spinal cord pain
   • Syndromes of lumbar and sciatic pain
   • Degenerative Espondilolistesis
   • Degenerative Scoliosis
   • Skills in the interpretation of conventional radiology, MRI, TAC and imaging and their clinical applications
   • Patient pain management for post surgical, fail surgery and chronic pain patients
   • Pain and the psychological and social implications
   • Medical treatment and physical therapy of spine patients
   • The use of injections for diagnostic and therapeutic treatments of spine disease
   • Surgical techniques and their indications in cervical and lumbar dissection, and cervical and lumbar osteoarthritis
   • Surgical complications from degenerative spinal diseases

b) Trauma to the spinal column
   • Classification and treatments of cervical spine fractures
   • Classifications and treatments of thoracic, lumbar, and sacral spinal fractures
   • Spinal Cord Trauma: evaluation and treatment
   • Skills in the interpretation of conventional radiology, MRI, TAC and imaging and their clinical applications for treating trauma of the spine
   • Surgical techniques for the stabilizations of fractures to the spine
   • Fundamentals of rehabilitation

c) Deformities of the Spinal Column
   • Classifications of deformities of the spinal column
   • Evaluation of patients with deformities of the spine
   • Classification deformities and methods of study
   • Espondilolistesis
   • Non-invasive treatment methods
   • Surgical procedures for the treatment of deformities to the spine
d) Metabolic and Systemic Pathology
   - Complications from osteoporosis of the spine
   - Osteoporosis fractures: medical and surgical treatments
   - Infection of the vertebrae
   - Rheumatoid arthritis in the cervical spine
   - Primary and secondary tumors in the vertebrae

Methodology

- Attend to patients by participating in medical rounds with attending physician at Clinica las Condes on a weekly basis
- Attend to patients at the spine center of the Roberto del Rio Hospital, on a weekly basis
- Prepare surgical cases including: Gather medical history, study diagnosis, test results and imagining interpretations, and review the surgical techniques for all patients scheduled for surgery each week
- Assist with surgical procedures on assigned days
- Visit patients and make supervised medical rounds of hospitalized patients
- Attend the Friday medical meetings of the Clinica Las Condes from 8:15 to 11:00 a.m.
- Prepare and present a weekly seminar topic at the medical meeting or to a medical supervisor
- Review and study basic clinical literature and medical bibliography provided by the Spine Center

Attendance

- Mandatory participation and attendance of all assigned duties. (minimum 95% attendance)

Evaluation

- First evaluation will be at 3 months into the program. Continuation in the program will be based on passing the first evaluation.
- Final evaluation by a committee will be conducted at the conclusion of the program.

Evaluation Criteria

- Patient care (“Bedside manner”)
- Level of theoretical preparation
- Academic interest
- Completed assignments
- Quality of seminar presentations
University of Chile – Medical School
Department of Orthopedics and Trauma
Clínica las Condes Campus

Scoring
- Scoring scale will be 1 to 7, with a value assigned to each criteria, and a total average points calculated
- A minimum score of 5 must be achieved to pass. Students receiving less than a 5 will be required to take a second oral exam on a clinical case within 10 days.
- A second failure will result in a presentation to the Academic Committee of the Department of Orthopedics and Trauma of the University of Chile.

Teaching Staff of Clínica las Condes

Supervisor of the Program: Dr. Samuel Pantoja

Surgeons of the Spine Center: Dr. Gonzalo Arriagada
Dr. Lyonel Beaulieu
Dr. Andres Chahín
Dr. Enrique Concha
Dr. Roberto Larrondo
Dr. Samuel Pantoja
Dr. Ricardo Pérez
Dr. Roberto Postigo
Dr. Aliro San Martín

Radiology: Dr. Marcelo Galvez
Dra. Sara Muñoz

Neurology: Dr. Luis Pedraza
Dr. Francisco Soto

Anesthesiology: Dr. Marcos Guerrero
Dr. Diego Villegas

Psychology: Sra. Margarita Gonzáles

Kineosology: Kga. Nora Córdova
Kgo. Rodrigo Jordán
Kgo. José Peña
Kgo. José Rubio
## General Schedule of Activities

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<tr>
<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
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<tbody>
<tr>
<td>8:00 a.m.</td>
<td>Clinical Activities</td>
<td>Surgery HRR</td>
<td>8:00-9:00 a.m. Medical Meeting with the Trauma department</td>
<td>8:00 a.m. – 2 p.m. Clinical Rounds HRR</td>
<td>8:15 – 11:00 a.m. Medical Meeting Spine Center, CLC + Seminar</td>
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<td>Surgery CLC</td>
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<tr>
<td>8:00 p.m.</td>
<td>Emergency Room Rotation</td>
<td>Programmed Activity</td>
<td>Surgery CLC</td>
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<td>CLC 1:00 – 11:00 p.m.</td>
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Adjunct Professor Dr. Samuel Pantoja C.  
Program Supervisor  
Department of Orthopedics and Trauma  
Clínica las Condes

March 2012