

(equivalent to the Eurospine Diploma)

## **Module 3: Spinal Deformities**

29 April 2023

Athens Medical Group Amphitheater Kifisia, Athens



The Panhellenic Medical Association will grant credit points of Continuing Medical Education (CME-CPD)

Course Manager Ioannis Magras Professor of Neurosurgery

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**Course Manager** 

**Ioannis Magras** 

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## LEARNING OUTCOMES: SESSION 1 PRINCIPLES OF SPINAL DEFORMITY

## Scoliosis: Aetiology & Prognostic Factors

- Describe the aetiology and prognostic factors associated with
- o idiopathic scoliosis
- o infantile idiopathic scoliosis
- o secondary scoliosis

### **Kyphosis**

- Differentiate between the aetiology and prognostic factors associated with regular and angular kyphosis
- · Evaluate management options for
- o kyphosis
- o kyphus

#### **Clinical Assessment**

- Differentiate between functional and structural deformities
- · Take a structured approach to clinical evaluation
- · Asses skeletal maturity
- · Identify prognostic factors of progression
- Identify rotational deformity
- Perform a neurological assessment
- Explain treatment strategy to patients and their families

#### **Imaging of Deformities**

- Define the role of standard coronal and sagittal x-ray to evaluate deformity
- Define the role of bending and traction x-rays
- · Differentiate between imaging in children and adults
- · Minimise radiation dose to patients
- Recognise red flags, including tumours, neural tube abnormalities, connective tissue and muscular disease and their association with spinal deformity

## LEARNING OUTCOMES: SESSION 2 CONSERVATIVE TREATMENT

### Casting, Bracing & Role of Rehabilitation

- · Justify the role of casting today
- Explain the pros and cons of different types of brace treatment
- Formulate principles of rehabilitation for patients with spine deformity
- Define the role of halo traction as definitive or interim treatment

## LEARNING OUTCOMES: SESSION 3 PRINCIPLES OF SURGICAL TREATMENT

## Pre-Operative Assessment: how to prepare for a complex case

- · Formulate a surgical plan
- · Record a comprehensive preoperative assessment
- Consider special issues including pulmonary, cardiac, hematological, nutritional and metabolic

### **Positioning the Patient**

- · Position patients safely
- Explain the rationale to other team members
- Compare the purpose of prone, lateral and supine positions

### **Blood Saving**

- Anticipate the factors affecting blood loss
- Recognize trigger points for transfusion
- Minimise the risks of homologous transfusion
- Outline the role of erythropoietin
- Compare the pros and cons of autologous transfusion, haemodilution, hypotensive anaesthesia, anti-fibrinolytic agents, intraoperative blood salvage

#### **Intra-Op Monitoring**

- Select appropriate types of monitoring
- · Differentiate between SEP and MEP
- Perform a safe and reliable wake up test
- Recognise when a wake up test is required
- Respond appropriately when monitoring indicates intervention required
- Triggered EMG pedicle screw stimulation.
   Pedicle Screw Guidance in Deformity
- Assess appropriate placement
- Minimise the risk of misplacement
- · Balance the pros and cons of spinal navigation
- Assess the advantages and disadvantages of freehand probing

#### **Bone Fusion**

- · Identify factors influencing spinal fusions
- Define the roles of osteoconduction and osteoinduction factors
- · Explain the physiology of bone grafting
- Outline the risk factors associated with non-union
- · Categorise bone fusion and diagnose non union



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## LEARNING OUTCOMES: SESSION 4 PRINCIPLES OF SURGICAL TREATMENT Congenital Spinal Cord Anomalies

- Differentiate between types of congenital spine deformity
- Link prognostic factors with appropriate type and timing of (Lenke) intervention
   Define
- Evaluate non operative, early and late operative treatment options

### **Congenital Spinal Deformities**

- Relate the stages of development to deformities of the spinal cord
- Select appropriate investigations
- · Evaluate treatment options

#### **Neuromuscular Scoliosis**

- Describe the aetiology and prognostic factors associated with neuromuscular scoliosis
- Identify factors indicating progression or risk to neurological structures
- · Evaluate management options
- · Assess associated pulmonary and cardiac problems

## **Idiopathic Adult Deformities**

- Identify common problems associated with adult deformity
- · Outline the progress of scoliosis through life
- Relate appropriate monitoring strategies
- Evaluate operative and non operative options for different age groups
- Relate changes to sagittal /coronal imbalance

### **Degenerative Deformities**

- Use spino-pelvic parameters to assess degenerative deformities
- Differentiate between idiopathic and degenerative (de novo) deformity
- · Perform clinical evaluation of sagittal balance and stenosis
- · Select appropriate investigations
- Evaluate operative and non operative options
- · Consider comorbidities associated with age
- · Assess patient expectation

## LEARNING OUTCOMES: SESSION 5 TECHNIQUES & STRATEGY

## **End Limits of Fusion in Idiopathic Scoliosis**

- Use classification to determine the end limits of fusion (Lenke)
- Define the lower and upper limit of instrumentation Coronal & Sagittal Balance
- Plan preoperative spine assessment of coronal and sagittal balance
- Explain primary factors and compensatory mechanisms
- · Evaluate surgical options
- Formulate an appropriate preoperative and surgical plan

### Technique & Strategy: posterior approach

- Formulate principles of surgical correction
- · Evaluate strategic surgical options
- · Recognise indications for a posterior or combined approach

### Technique & Strategy: anterior approach

- Differentiate between anterior release, anterior fusion and anterior instrumentation
- Select appropriate approach for procedure
- Recognise indications for o anterior approach
- o anterior instrumentation

## LEARNING OUTCOMES: SESSION 6 OSTEOTOMIES

#### **Role & Technique of Spinal Osteotomies**

- Justify the aim of osteotomy
- Differentiate between the different types of osteotomy
- Relate to appropriate degree of correction
- Select appropriate level



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## SCIENTIFIC PROGRAMME

Module 3: Spinal Deformities

## Saturday, 29 April 2023

08:30 - 09:00	Course Registration & Welcome Coffee
09:00 - 10:30	Session 1: Principles of spinal deformity
09:00 - 09:15	Scoliosis: Aetiology & prognostic factors I. Palavos
09:15 - 09:30	<b>Kyphosis</b> N. Paidakakos
09:30 - 09:45	Clinical Assessment A. Kapinas
09:45 - 10:00	Imaging of Deformities A. Karantanas
10:00 - 10:30	Session 2: Conservative treatment
10:00 - 10:15	The role of casting and bracing N. Sekouris
10:15 - 10:30	The role of rehabilitation N. Karavidas
10:30 - 11:00	Coffee Break
11:10 - 13:00	Session 3: Principles of Surgical treatment
11:00 - 11:15	Coronal & Sagittal Balance. What's new? Is it really "The French Conspiracy"?  JC LeHuec
11:15 - 11:30	The role of Intra-Op Monitoring K. Papadopoulos
11:30 - 11:45	The role of navigation and robotics in Spinal Deformityty I. Karnezis
11:45 - 12:00	The Challenge of Bone Fusion in Spinal Deformity A. Brodis
12:00 - 12:15	Decision making in deformity treatment. How to prepare for the complex case.  E. Samoladas
12:15 - 12:30	Case Discussion E. Samoladas



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12:30 - 13:30	Lunch Break
13:00 - 15:00	Session 4: Principles of Surgical treatment
13:00 - 13:45	Congenital Spinal Cord Anomalies P. Tsitsopoulos
13:45 - 14:00	Congenital Spinal Deformities S. Hadgaonkar
14:00 - 14:15	Neuromuscular Scoliosis P. Korovessis
14:15 - 14:30	Idiopathic Adult Deformities P. Zoumpoulis
14:30 - 14:45	<b>Degenerative Deformities</b> K. Paterakis
14:45 - 15:00	Case Discussion
15:00 - 15:30	Coffee Break
15:30 - 16:15	Session 5: Technique and strategy
15:30 - 15:45	End Limits of Fusion in Idiopathic Scoliosis S. Stavridis
15:45 - 16:00	Techniques & Strategies: Posterior Approach A. Kapinas
16:00 - 16:15	Techniques & Strategies: Anterior Approach S. Stavridis
16:15 - 17:00	Session 6: Osteotomies
16:15 - 16:30	Role & Technique of Spinal Osteotomies in Deformity Treatment JC LeHuec
16:30 - 17:00	Case Discussion: JC LeHuec
17:00 - 17:05	Closing remarks P. Korovessis JC LeHuec
17:05	End of course



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## **GENERAL INFORMATION**

## Module

Module 3: Spinal Deformities

## **Registration Fee**

Module 3: 350 euros

Module 2 and 3: 600 euros

## **Course Date**

Saturday, 29 April 2023

## **Course Language**

English

## Accreditation

The Panhellenic Medical Association grants 12 credit points of Continuing Medical Education (CME-CPD)

## Course venue

Athens Medical Group Amphitheater Kefalari Square, Athens, Greece

## Organization

Hellenic Spine Society

## **Course Secretariat**

## **Premium Congress & Social Events Solutions**

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