



Hellenic
Spine
Society

Diploma of the Hellenic Spine Society

(equivalent to the Eurospine Diploma)

MODULE 3: SPINAL DEFORMITIES

8 November 2019



Centre for Dissemination of Research Results
of Aristotle University of Thessaloniki (KE.D.E.A.)
A.U.TH., Thessaloniki, Greece

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

Course Manager

Ioannis Magras

Associate Professor of Neurosurgery

SCIENTIFIC PROGRAMME

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Nikolaos Valanos
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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
- Assess 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 intervention
- 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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Friday, 8 November 2019

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 N. Valanos
09:15 - 09:30	Kyphosis I. Gelalis
09:30 - 09:45	Clinical Assessment A. Kapinas
09:45 - 10:00	Imaging of Deformities K. Kouskouras
10:00 - 10:30	Case Discussion D. Bouramas
10:30 - 11:00	Coffee Break
11:00 - 11:15	Session 2: Conservative treatment
11:00 - 11:15	Casting, Bracing & Role of Rehabilitation N. Valanos
11:15 - 13:15	Session 3: Principles of Surgical treatment
11:15 - 11:30	Pre-Operative Assessment: how to prepare for a complex case A. Brotis
11:30 - 11:45	Positioning the Patient S. Papadopoulos
11:45 - 12:00	Blood Saving S. Polyzoidis
12:00 - 12:15	Intra-Op Monitoring A. Karagiannidis
12:15 - 12:30	Pedicle Screw Guidance in Deformity V. Lykomitros
12:30 - 12:45	Bone Fusion S. Polyzoidis

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12:45 - 13:15	Case Discussion
13:15 - 13:45	Lunch Break
13:45 - 15:30	Session 4: Principles of Surgical treatment
13:45 - 14:00	Congenital Spinal Cord Anomalies S. Hadgaonkar
14:00 - 14:15	Congenital Spinal Deformities N. Laliotis
14:15 - 14:30	Neuromuscular Scoliosis N. Laliotis
14:30 - 14:45	Idiopathic Adult Deformities V. Lykomitros
14:45 - 15:00	Degenerative Deformities K. Paterakis
15:00 - 15:30	Case Discussion S. Hadgaonkar
15:30 - 16:00	Coffee Break
16:00 - 17:30	Session 5: Technique and strategy
16:00 - 16:15	End Limits of Fusion in Idiopathic Scoliosis S. Stavridis
16:15 - 16:30	Coronal & Sagittal Balance S. Hadgaonkar
16:30 - 16:45	Techniques & Strategies: Posterior Approach A. Kapinas
16:45 - 17:00	Techniques & Strategies: Anterior Approach S. Stavridis
17:00 - 17:30	Discussion: Posterior/ Anterior
17:30 - 18:15	Session 6: Osteotomies
17:30 - 17:45	Role & Technique of Spinal Osteotomies Th. Apostolou
17:45 - 18:15	Case Discussion: Adult & Degenerative Th. Apostolou

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GENERAL INFORMATION

Module

Module 3: Spinal Deformities

Registration Fee

Module 3: 300 euros

Module 2 and 3: 500 euros

Course Date

8 November 2019

Course Language

English

Accreditation

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

Course venue

Centre for Dissemination of Research Results
of Aristotle University of Thessaloniki (KE.D.E.A) A.U.TH.
Thessaloniki, Greece

Organization

Hellenic Spine Society

Course Secretariat

Premium Congress & Social Events Solutions

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