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SPPCV
SOCIEDADE
PORTUGUESA
DE PATOLOGIA
DA COLUNA
VERTEBRAL

Spanish & Portuguese Spine Societies

COURSE DIPLOMA

2024

Module 4

TRAUMA

Module 4:

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Trauma

When:

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2-3 // July // 2024

Where :

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Lisbon - Portugal

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Scientific Content

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Prof. Dr. Ricardo Rodrigues-Pinto

Quick Facts

When	2-3 // July // 2024
Where	Lisbon/Portugal Course Venue: Hotel 3 K Europa Av. da República, 93 • 1050-190 Lisboa Cad Lab Workshops Venue: Nova Medical School Lisbon Nova University Campo dos Mártires da Pátria, 130 1169-056 Lisbon
Maximum Attendees	30 delegates
Registration Fee	SPPCV/ GEER Members : 800€ Non Members: 1.000€
CME Credits	10.5 European CME credits (ECMEC®s) by the European Accreditation Council for Continuing Medical Education (EACCME®)
Language	English
Dress	Casual
E-Learning	A computer (Mac/PC) or tablet (Android/Mac) and stable internet connection are required to access the e-learning content. In preparation for the live session, the mandatory self-paced e-learning component will be available from 17 June 2024 on the SPPCV Moodle page. This component must be completed before the live session.
Module Completion	A module is only deemed as complete when participants have met ALL of the following conditions: <ul style="list-style-type: none"> • Passed the e-learning component with at least 70% AND • Attended the live session AND • Submitted the course evaluations for the e-learning and the live session component.

Important Note

- Completion of eLearning component is mandatory
- Attendance of the live session is mandatory

Target Audience

Senior trainees and trained surgeons, who are planning a career in spine surgery.

Learning Outcomes:

Module 4

Trauma

- 1. Select and interpret appropriate x-ray, computed tomography scan (CT) and magnetic resonance imaging (MRI) in spinal trauma**
- 2. Classify fractures of cervical vertebrae (C0-C2), subaxial cervical spine (C-spine), thoracolumbar spine (TL-spine) and sacrum**
- 3. Compare surgical and conservative treatment methods at different levels, including C0-C2, subaxial C-spine, TL-spine, and sacrum**
- 4. Define special features of conditions including ankylosing spondylitis (AS), osteoporosis and trauma of the immature spine**
- 5. Plan how to prevent complications in spinal trauma**
- 6. Describe characteristics of spinal shock and spinal cord injury syndromes**

Learning Outcomes:

Trauma Of C-Spine, TL-Spine & Sacrum

- 1. Imaging of Cervical Trauma**
- 2. Trauma of C0-C2: Classification & Management**
- 3. Imaging of Thoracic/Thoracolumbar Trauma**
- 4. Classification and Management of TL Trauma**
- 5. Sacral Fractures: Classification & Management**

1. Imaging of Cervical Trauma

- Select appropriate imaging for suspected cervical spinal injury
- Evaluate options for x-ray views
- Select CT and/or MRI as appropriate
- Differentiate between requirements following major and minor cervical spine trauma

2. Trauma of C0-C2: Classification & Management

- Define the role of ligaments in cervical spine stability
- Classify and relate to treatment
- Occipital condyle fractures
- Occipito-cervical dislocation
- Occipito-atlantal dislocation
- Axial atlanto-axial instability
- Atlas (C1) fracture
- Axis (C2) fracture
- Traumatic spondylolisthesis C2

3. Imaging of Thoracic/Thoracolumbar Trauma

- Use the AO classification
- Select appropriate imaging for major and minor trauma
- Assess x-ray images
- Define the indications of CT and MRI as appropriate
- Identify specific conditions with compromised spinal function

4. Classification and Management of TL Trauma

- Recognise the signs and symptoms of TL spine trauma
- Differentiate Denis, AO and Thoraco-Lumbar Injury Classification and Severity Score (TLICS) classifications
- Explain the role of Posterior Ligamentous Complex (PLC) injuries for burst fractures
- Evaluate surgical techniques in:
 - Anterior surgery including MIS techniques
 - Posterior surgery including MIS techniques

5. Sacral Fractures: Classification & Management

- Describe the relevant anatomy
- Differentiate sacral fracture types
- Use the AO classification
- Recognize signs and symptoms of sacral fractures
- Compare surgical vs conservative treatment
- Evaluate surgical options

Learning Outcomes:

Post-Traumatic Kyphosis, Metabolic Spine Diseases, Paediatric Trauma & Spinal Cord Injury

- 1. Trauma of Spine with Ankylosing Spondylitis (AS): Features & Management**
- 2. Osteoporotic Fractures: Diagnosis & Management**
- 3. Paediatric Spinal Trauma: Features & Management**
- 4. Prevention and Management of Post-traumatic Kyphosis**
- 5. Spinal Shock and Incomplete SCI Syndromes**

1. Trauma of Spine with Ankylosing Spondylitis (AS): Features & Management

- Explain the aetiology of AS
- Define the role of the spine surgeon in AS
- Formulate a surgical management plan for AS fractures
- Anticipate difficulties in this patient population
- Explain what kind of imaging is mandatory and why

2. Osteoporotic Fractures: Diagnosis & Management

- Define osteoporosis
- Describe medical management of osteoporosis
- Summarize the diagnosis of osteoporotic fractures
- Use the AOSpine osteoporotic fracture classification
- Evaluate surgical options
- Outline the indications for vertebral augmentation procedures
- Outline indications for spinal instrumentation±Vertebral Body Replacement (VBR)

3. Paediatric Spinal Trauma: Features & Management

- Outline features of the immature cervical and thoracolumbar spine
- Define Spinal cord injury without radiographic abnormality (SCIWORA)/ Cervicothoracic Spinal Cord Injury Without Radiographic Evidence of Trauma (SCIWORET)
- Explain mechanism of:
 - C-spine injury
 - Lumbar apophyseal injuries
- Plan appropriate investigations and management of injuries

4. Prevention and Management of Post-traumatic Kyphosis

- Discuss the reasons of post traumatic kyphosis
- Formulate therapeutic goals
- Explain how to restore sagittal balance
- Evaluate surgical options
- Justify a multidisciplinary team approach

5. Spinal Shock and Incomplete SCI Syndromes

- Explain spinal shock and its pathomechanism
- Define the different types of incomplete spinal cord injury
- Classify SCI by using the ASIA impairment scale and explain its clinical and surgical relevance
- Describe the clinical symptoms and pathomechanism of Central Cord Syndrome
- Discuss the importance of timing of surgery
- Explain why there is no role for methylprednisolone in SCI (NASCIS I-III)

Learning Outcomes:

Cadaver LAB

Thoracolumbar lateral corpectomy + lateral percutaneous instrumentation (single position surgery)

- **Correct patient positioning and radiological landmarks**
- **Rib resection and retropleural approach to the thoracolumbar spine**
- **Corpectomy and cage implantation**
- **Percutaneous instrumentation of the thoracolumbar spine in the lateral position using the C-arm**

Thoracic corpectomy (posterior approach) with instrumentation

- **Correct patient positioning and radiological landmarks**
- **Open spine exposure and free-hand instrumentation**
- **Costotransversectomy and lateral corpectomy**
- **Cage implantation**

Course Chairman:

Ricardo Rodrigues-Pinto PORTUGAL

Andrés Barriga Martín SPAIN

Course Faculty:

Andrés Barriga Martín SPAIN

Bruno Santiago PORTUGAL

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Rui Duarte PORTUGAL

Tavares Matos PORTUGAL

Vítor Castro PORTUGAL

Scientific Programme

Module 4 - Trauma

Time	Topic	Faculty
-	-	-
E-LEARNING PROGRAMME		
-	-	-
	Trauma of C-spine, TL-spine & Sacrum	
00:20	Imaging of cervical trauma Felix	Tomé Bermejo
00:30	Trauma of CO-C2: Classification and management	Bruno Santiago
00:10	Lower cervical spine injuries	Joan S. Escala Arnau
00:20	Imaging of thoracic/thoracolumbar trauma	Nicolas Plais
00:15	Classification and management of TL trauma	Pedro Varanda
00:15	Sacral fractures: classification and management	Jorge Alves
00:20	Knowledge check questions	
-	-	-
	Post-Traumatic Kyphosis, Metabolic Spine Diseases, Paediatric Trauma & Spinal Cord Injury	
00:30	Trauma of spine with ankylosing spondylitis: features & management	Juan F. Blanco Blanco
00:15	Osteoporotic fractures: diagnosis and management	João Pedro Maia Gonçalves
00:15	Paediatric spinal fractures	Rosa M ^a Egea Gámez
00:15	Prevention and management of post- traumatic kyphosis	Manuel Tavares de Matos
00:15	Spinal shock and incomplete spinal cord injury syndromes	Carla Reizinho
00:15	Traumatic incomplete tetraplegia without instability	Ricardo Rodrigues-Pinto
00:20	Knowledge check questions	
-	-	-

Course Attendance is Mandatory

Scientific Programme

Module 4 - Trauma

Day 1 - Tuesday, 2 July 2024

Time	Topic	Faculty
-	-	-
PRESENENTIAL		
-	-	-
CADAVER LAB WORKSHOPS		
14:00 - 14:30	Preparation for CadLab workshop	
14:30 - 16.30	Group 1: Thoracolumbar lateral corpectomy + lateral percutaneous instrumentation (single position surgery) Group 2: Thoracic corpectomy (posterior approach) with instrumentation	All Faculty All Faculty
-	-	-
Coffee Break 30 mins.		
-	-	-
17:00 - 19:00	Group 1: Thoracic corpectomy (posterior approach) with instrumentation Group 2: Thoracolumbar lateral corpectomy + lateral percutaneous instrumentation (single position surgery)	All Faculty All Faculty
End of Day 1		

Day 2 - Wednesday, 3 July 2024

Time	Topic	Faculty
-	-	-
PRESENENTIAL		
-	-	-
08:00 - 08:30	Course Registration and Welcome Coffee	
-	-	-
Case Based Discussion		
08:30 - 08:40	Introduction	Ricardo Rodrigues-Pinto
08:40 - 09:00	Subaxial C-Spine Fracture - Case 1	Vitor Castro
09:00 - 09:20	Subaxial C-Spine Fracture - Case 2	Félix Tomé Bermejo
09:20 - 09:40	Upper C-Spine injury - Case 1	Ricardo Rodrigues-Pinto
09:40 - 10:00	Upper C-Spine injury - Case 2	Félix Tomé Bermejo
10:00 - 10:20	Sacral fracture with Spino-pelvic dissociation - Case	Rui Duarte
-	-	-
Coffee Break 30 mins.		
-	-	-
10:50 - 11:10	Fratures in the spondylitic spine	Andrés Barriga Martín
11:10 - 11:30	Osteoporotic Vertebral Compression Fracture (OVCF)	Tavares de Matos
11:30 - 11:50	Post-traumatic kyphosis	Andrés Barriga Martín
11:50 - 12:10	Traumatic incomplete tetraplegia without instability	Ricardo Rodrigues-Pinto
-	-	-
End of Module 4		Course Attendance is Mandatory

Recommended Reading

Part II Basic Module 2:

- **Surgical Treatment of Degenerative Cervical, Thoracic and Lumbar Spinal Pathologies.**
B. Meyer and M. Rauschmann (Eds.)
- **Spine Surgery A Case-Based Approach.**
Switzerland: Springer.

- M. Scholz and F. Kandziora. (2019).
Epidemiology & Classification. B. Meyer and M. Rauschmann (Eds.), *Spine Surgery A Case-Based Approach* (pp. 223-232). Switzerland: Springer.
- P. Schleichler and F. Kandziora. (2019).
Pre-Hospital Management, Physical Examination & Polytrauma Management. B. Meyer and M. Rauschmann (Eds.), *Spine Surgery A Case-Based Approach* (pp. 233-242). Switzerland: Springer.
- S. Krieg. (2019).
Spinal Cord Injury. B. Meyer and M. Rauschmann (Eds.), *Spine Surgery A Case-Based Approach* (pp. 243-253). Switzerland: Springer.
- Y. Ryang. (2019).
Upper Cervical Spine Trauma. B. Meyer and M. Rauschmann (Eds.), *Spine Surgery A Case-Based Approach* (pp. 253-268). Switzerland: Springer.
- R. Maduri and J. Duff. (2019).
Subaxial Cervical Trauma. B. Meyer and M. Rauschmann (Eds.), *Spine Surgery A Case-Based Approach* (pp. 269-274). Switzerland: Springer.

Recommended Reading (cont.)

- **E. Kiter and N. Ok. (2019).**
Management Criteria for Thoracic, Thoracolumbar and Lumbar Fractures. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 275-280). Switzerland: Springer.
- **Y-P. Charles. (2019).**
Posterior Surgical Management of Thoracic and Lumbar Fractures. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 281-288). Switzerland: Springer.
- **J. Castein and F. Kandziora. (2019).**
Anterior Surgical Management of Thoracic and Lumbar Fractures. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 289-298). Switzerland: Springer.
- **U. Yildiz and F. Kandziora. (2019).**
Sacral Fractures. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 299-308). Switzerland: Springer.
- **M. Wostrack and B. Meyer (2019).**
Spine Injuries in the Elderly. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 309-318). Switzerland: Springer.
- **D. Rothenfluh and D. Kieser. (2019).**
Spinal Trauma in Patients with Ankylosing Spinal Conditions. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 319-325). Switzerland: Springer.

Contacts

Course Organisation

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Scientific Content

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Prof. Dr. Ricardo Rodrigues-Pinto

Thank you for your participation.

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