OSCE

Volume I

Conceptual Orthopedics

The Learning Never Ends

AUTHORS AND THEIR DEDICATIONS

Prof. Dr. SM Tuli

Dedicated to my parents Shanti Tuli and Ram Lal Tuli, my Parents; my teachersProf. K.S Grewal, Prof P. K Duraiswamiand Prof. Balu Sankaran my teachers; and large number of my stimulating students, and my ungrudging patients, who provided me the opportunities to study and enjoy the science and art of Medicine.

Prof. Dr. Sudhir Kumar

Dedicated to my students and patients.

Prof. Dr. Anil Dhal

Dedicated to 'The art of clinical examination from the masters of yesterday to the torchbearers of tomorrow.' The lines on coverpage "Established, Current & Emerging Concepts of Spine" are thoughtfully written by Prof. Dr. Anil Dhal.

Prof. Dr. Shantharam Shetty

I dedicated this work to thousands of my patients, my teachers and my students who have made it possible for me to be what I am today.

Prof. Dr. VB Bhasin

This book is dedicated to all who want to master Orthopedics.

Prof. Dr. Gopa Kumar

I dedicate my work in conceptul orthopedics to my wife and children

Dr. Ravinder Dimri

I dedicate this book to all those young minds who keep asking me "Why?" and "How?" which encourages me to read and learn new things.

Dr. Shekhar agarwal

I dedicate my work in conceptul orthopedics to my family and patients.

Padma Shree Prof. Dr. Mayil Natarajan

I humbly dedicate this book to my parents Prof. Natrajan and Dr. Janaki.

Dr. Ajith Kumar

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Dr. Mohammed Faheem Kotekar
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Dr. Maninder Singh Shah
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Dr. Sunil Gurpur Kinni
I dedicate this book to my family, teachers and patients.

Dr. Mrinal Sharma
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Dr. Anuj Jain
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Dr. Suvrat Arya.

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Dr. Abhinav Jogani

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Dr. Naufal Nahas

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Dr. Piyush Godegone

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Dr. Rohit Prasad

Dedicated to my parents for their persistent motivation, to my wife for laying the foundation of good things in my life and to the readers who constantly inspire us to perform better.

Dr. Shekhar Srivastav

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Dr. Raju Easwaran

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Dr. Amite Pankaj Agarwal

I dedicate my work to my patients.

Dr. Ankit Khurana

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Dr. Nishant Gupta

I dedicate the book to my teachers, my parents, wife and my daughter Avnisha Gupta.

Dr. Laxmi Narayan Jajoriya

I dedicate my work to Parents, Teachers and Patients

Dr. Aditya Verma

In gratitude for their unwavering support and endless encouragement, this book is dedicated to my parents, grandparents and brother, whose love has illuminated every page of my life.

Dr. Apurv Mehra

I dedicate this book to my daughter, Vrinda Mehra, my patients, & my students who have helped me evolve as a surgeon & a teacher.

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Section 1
Introduction

CHAPTER **1.1**

Introduction

The OSCE is crucial in determining the outcomes of the DNB examination.

The OSCE session includes: -

- A total of 20 OSCE stations.
- A total duration of 90 minutes.
- 4 minutes per station.
- A total score of 100 marks, with 5 marks awarded per station.

Key Points:

- OSCE is a dynamic, fast-moving challenge where each participant encounters a series of 20 OSCEs within a strict time limit of 4 minutes per scenario.
- The clock is constantly moving as questions are carefully reviewed to assess your comprehensive understanding within the given timeframe. It tests your ability to concentrate, knowledge, and quick thinking.

Varied Scenarios:

- Get ready for a variety of situations as each OSCE station presents a mix of related questions, and some stations may even have more than one slide.
- This detailed approach evaluates your skill in adapting and responding effectively to complex clinical situations.
- The examination's depth lies in its ability to reflect the real-world nature of OSCE practice.

Interval for Reflection:

- There is barely any time in between the stations. The answer sheet for that particular station is collected at the end of time for that station and one gets no chance to edit / add any points to the questions.
- Recognizing the intensity of the session, a 4-minute break is provided after every 7 OSCE stations. This short break acts as a mental reset, allowing participants to approach the next set of scenarios with a fresh perspective.

Answer Sheet – Data Management:

- After each OSCE, participants' answer sheets are converted into digital data and directly uploaded into the National Board Examinations (NBE) database.
- This immediate upload not only simplifies the evaluation process but also provides an instant snapshot of participants' performances.

Section 2
Mock OSCE

CHAPTER 2.1

OSCE Paper -1

STATION 1

A 46-year-old gentleman with history of sudden pop, give way in ankle and difficulty in walking while playing golf.

1. What is the most likely diagnosis?
2. What is the common zone of injury?
3. Name any 2 tests described to confirm the diagnosis?
4. What is the most common risk after a non-operative treatment?

STATION 2

1. Identify the gait with explanation?
2. How to measure the exact length of crutch?
3. Complication of mismatch length?
4. Mention prototypes of crutch gait.

STATION 3

A 35-year-old man is brought to the emergency with H/O RTA 1 hour ago. He is able to inform about his personal details but feels his breathing is laborious. He is unable to recollect events post-accident. He has obvious injuries on both lower limbs and a bleeding wound over left thigh. After continuing the evaluation, it was observed that the patient has BP of 90/60mmHg.

1. What is the first thing to be done?
2. What would be the grade of shock?
3. How would one take care of the shock?
4. Name any 4 adjuncts to the primary survey.

STATION 4

A 1-month-old female infant is brought in with asymmetry in the gluteal and thigh folds. The mother reports that the baby was born breech. You have a high suspicion for developmental dysplasia of the hip (DDH).

1. What specific physical examination maneuvers would you perform to assess for DDH in this infant?
2. Describe the expected findings if the infant has DDH.
3. What imaging modality would be most appropriate for confirming the diagnosis in this age group?
4. If DDH is confirmed, what would be the initial treatment of choice for this infant?

STATION 5

1. Name the surgical procedure shown in the figure below.
2. Name 4 indications of the procedure.
3. Name the 4 biomechanical principles on which the procedure works.

STATION 6

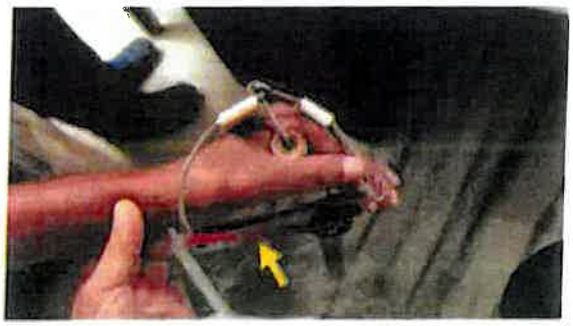
A 36-year-old gentleman came with a history of twisting of ankle 2 days back. Patient is able to walk, has minimal swelling and pain in outer aspect of foot.

What is the most likely diagnosis?

1. How would you confirm the diagnosis?
2. What is etiology?
3. What is the treatment of the condition?

STATION 7

A 55-years-old man presented with inability to grip for 6 months following a major elbow sugery.



1. Identify the orthosis.
2. Mention the disease for which it is commonly used.
3. Enumerate the primary and secondary functional deficit.
4. Mention the function or utility of the yellow rubber band attached.

STATION 8

1. Name the test shown
2. Describe how the test is performed?
3. In which condition the test is positive?

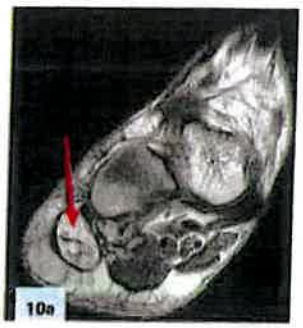
STATION 9

34-year male underwent following surgery

1. Identify the surgery done?
2. Briefly mention the procedure with explanation.
3. Find out any complication?

STATION 10

A 45-year-old lady with pain in heel and occasional paresthesia in the feet. On examination, she has tenderness medial to calcaneal tuberosity.



OSCE

1. What is the MRI finding?
2. What is the most probable diagnosis?
3. What is the most common differential diagnosis?
4. What's the treatment option for the condition?

STATION 11

This is a 35-year male with history of low back ache with intermittent radiculopathy. Patient is daily wages labour and has to perform heavy labour. SLR performed was 60 degree on the left side. Patient was advised an MRI by a treating physician elsewhere and this is the image.

1. What does this IMAGE show? List the findings in this image?
2. What are the risk factors associated with such a condition?
3. What advice you would give him, and would you like to follow him up?

STATION 12

A 46-year-old patient presented after H/O RTA that he sustained 5 days ago. He feels a little uncomfortable moving his Right shoulder. The radiograph on presentation is as shown.

1. Diagnosis ?
2. Name one clinical sign that you would elicit in this patient.
3. Name further radiological investigations that would be required in this patient.
4. Name any 2 complications that you would anticipate.

STATION 13

A 16-year-old male presents with bilateral shoulder pain. He also complains of repeated episodes of feeling of joint popping in and out during volleyball practice. He denies any traumatic injuries. During physical exam in the seated position there is a 2cm sulcus present with inferior traction on each arm. Her MRI images from her right shoulder are seen in figures A and B.

A 

B 

1. Diagnosis?
2. 4examination findings which will be seen in this patient
3. MRI findings seen in the above images

STATION 14

1. What is this procedure?
2. Name 2 indications of this procedure
3. Name the 2 portals being used?
4. What is the most common nerve injury associated with the portal marked with arrow?

STATION 15

12-year boy presented with painful restriction of hip movements for one year.

1. Image shows what radiological stage and why?
2. How to detect proximal trochanteric advancement?
3. Criteria for prognosis?
4. Ideal treatment in above case?

STATION 16

A 65-year-old lady had fallen off bicycle 3 months ago. Had taken treatment from alternative medicine. Currently complains of pain with restriction of elbow range of movements.

1. Diagnosis ?
2. Common sites of occurrence in elbow?
3. What are the zones identified in this and describe them.
4. How would you treat this patient?

STATION 17

22-year male presented with palpable swelling and back pain in the last 2 months.

1. What is the diagnosis?
2. Name the palpable swelling associated with the condition?
3. What is spine at risk sign?

STATION 18

A 50-year-old man presented after H/O fall on outstretched hand. He C/O pain in the wrist and hand. The radiograph on presentation is as shown.

1. Diagnosis ?
2. Name the structures that are injured in this
3. Name the most common complication associated with this
4. How would you treat this?

STATION 19

1. Describe the test
2. Significance
3. Mention other test for same pathology

STATION 20

You are an orthopedic surgeon evaluating a 4-year-old child in your clinic. The child's parents are concerned because they noticed that the child has been limping for the past few weeks and seems to have difficulty keeping up with their peers during playtime. The child has no significant medical history and has reached all developmental milestones on time.

1. What specific physical examination findings would you look for to assess for DDH in this child?
2. What imaging studies would you order to confirm the diagnosis and assess the severity of the condition?
3. What treatment options would you consider for this child, given their age and presentation?
4. What are the potential complications of untreated DDH in this age group?

CHAPTER **2.2**

OSCE Paper -2

STATION 1

A 13-year-old child with pain in medial aspect of foot on prolonged standing and walking. The following are weight bearing AP and lateral x-rays

1. What is the diagnosis?
2. Name 2 radiological findings on the X-ray which suggest the diagnosis
3. Which is the most common ligament that is affected in this condition?
4. What will be the most appropriate surgical condition in this case?

STATION 2

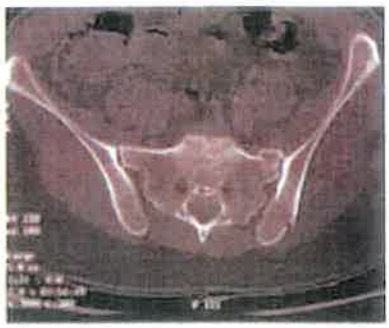
A 35-year-old man had a motorcycle accident 5 years ago. He has paralysis of his deltoid and rotator cuff as the result the injury. His neurologic injury has not improved in the 5 years since the injury, but he does have some use of his hand and wrist.

1. What is the most appropriate treatment?
2. What are the prerequisites of the treatment?
3. What are the 3 other indications for the same procedure?

STATION 3

A 25-year-old man is brought with H/O RTA. His pelvic CT shows the following injury.

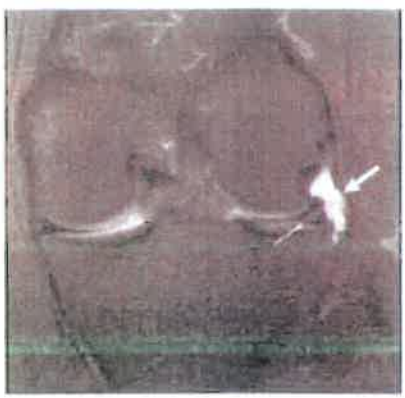
1. What is this injury known as?
2. What is the cause of this injury?
3. What other structures are usually injured along with this?
4. How would you treat this injury?



STATION 4

Given below is MRI image

1. Identify the marked lesion.
2. What is Pisani sign?
3. Various theories associated?
4. Management?



STATION 5

1. Identify the sign
2. Four clinical condition associated with it?
3. Clinical interpretation of this sign?
4. What are the different upper motor neuron signs that you know?

STATION 6

1. Identify the prosthesis.
2. Mention its parts.
3. Working principle.

STATION 7

A 50-year-old male with sudden onset of severe pain in left shoulder and inability to lift the left arm. After 6 weeks pain decreases but mobility of left shoulder restricted.

1. What is the most probable diagnosis?
2. Two-points in favor of diagnosis
3. How to confirm the diagnosis
4. Management?

STATION 8

A 32-year-old patient with foot injury due to fall from bicycle and has pain in midfoot.

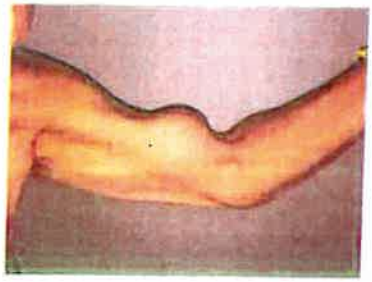
1. What is the most likely diagnosis?
2. What is the sign called?
3. How would you classify this injury
4. What is the most appropriate treatment in this?

STATION 9

1. List the findings of the X-ray.
2. Name the condition.
3. List the causes leading to this condition.

STATION 10

A 25-year-old gym goer male, complaints of sudden pop sound heard in the arm while lifting weight.



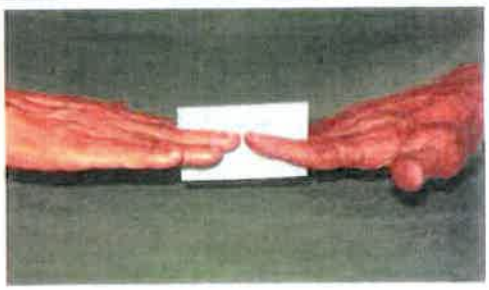
OSCE

1. What is this sign in the image?
2. What is the etiology for the same?
3. Origin and insertion of biceps?
4. Management.
5. What are the functions of biceps?

STATION 11

1. Identify the pathology.
2. Grade and classification.
3. Management options.

STATION 12



1. Identify the test.
2. Name the nerve being tested.
3. Name the muscle tested.
4. Any 2 other test for the nerve.

STATION 13

A 55-year-old man is brought with H/O RTA. His pelvic radiograph shows the following injury.

1. What is this injury?
2. What will be the attitude of the limb at presentation?
3. What other structure can be injured in this?
4. How would you treat this injury?

STATION 14

1. Name the line marked?
2. What is Canadian cervical spine rule for cervical spine injury?
3. Name 2 approaches for cervical spine fixation.

STATION 15

1. Name the test shown in image.
2. How is the test done?
3. Condition in which it is performed.
4. Mention other tests performed in this condition.

STATION 16

A 62-year-old female presents with chronic shoulder pain. She denies any recent or remote history of trauma or infection. A radiograph is provided in figure below.

1. Anatomical Diagnosis.
2. Most probable cause of the above condition.
3. Enumerate 2 other etiological causes of above condition.
4. Treatment options.

STATION 17

16-year-old boy with untreated deformity of foot.

1. Identify the deformities with their location of origin.
2. Suggest the etiology of the disease with explanation.
3. Mention 2 important point for counselling before treatment.
4. Two surgical treatment options.

STATION 18

A 67-year-old lady with a history of rheumatoid arthritis and deformity in all the toes.

1. How would you quantify the deformity in the big toe?
2. Name 2 structures which are tight on lateral side?
3. What is the most appropriate treatment for the big toe?
4. Name 2 common complications after surgical correction of these deformities.

STATION 19

A 67-year-old lady presented with C/O bilateral hip pain which is increased on exertion. There is no H/O trauma.

1. What is the likely diagnosis?
2. Name any 2 tests that would help in ascertaining the diagnosis.
3. .What are the parameters on which the treatment decisions are based?

STATION 20

39-year-old male presented with this x-ray of 4 weeks duration

1. Identify the fracture
2. Mention the differential diagnosis with explanation
3. Which nerve has maximum probability of injury
4. Surgical option for optimum functional recovery

CHAPTER **2.3**

OSCE Paper -3

STATION 1

1. Identify the procedure done in shown x-ray.
2. Indication of the procedure.
3. Describe principle of the procedure.
4. Mention disadvantages of the procedure.
5. Name alternate procedure for the condition.

STATION 2

46-year-old with injury due to fall from stairs.

1. What is the diagnosis?
2. How would you classify fracture with the white arrow marked?
3. What is the most appropriate immediate treatment?
4. Name the incision used to approach these fractures?

STATION 3

65-Year-old female had alleged history of fall from stairs. Complains of severe back pain. Patient was assessed and posted for the surgery as shown:

1. Identify the procedure done likely underlying pathology associated.
2. Name 2 complication
3. Contraindication of the procedure?

STATION 4

A 19-year-old male presented with traumatic paraplegia of 3 weeks duration:

1. Identify the clinical sign?
2. Mention the steps for elicitation of this test
3. Interpret the result of the test shown with its clinical significance

STATION 5

1. Name this deformity shown in given x-ray.
2. Name 2 conditions apart from OI, where this deformity can be seen?
3. What are the hallmark features of OI?
4. What is the fundamental pathology of OI, biochemically?
5. What is the preferred initial investigation in a patient with suspected OI
6. What are the general skeletal features seen?

STATION 6

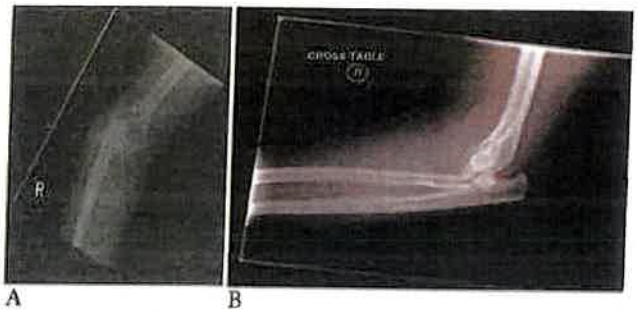
A 37-year-old man tripped down a staircase. He is complaining of significant pain in his midfoot and finding difficulty in standing. A radiograph which was done shows the following-

1. What is the most probable diagnosis?
2. What further investigations would be required to confirm the same?
3. What would be the treatment for this?

STATION 7

A 35-year-old female falls from stairs and sustains a closed injury to her right elbow without any evidence of neurovascular compromise. Plain radiographs are shown in Figures A and B

1. Diagnosis
2. Components of the injury
3. Next step
4. Ultimate treatment



A B

STATION 8

This is a 2 months post-surgery follow up radiograph of a 38-year-old man.

1. What was the most likely indication for surgery?
2. Name one sign seen in this radiograph. What does it signify? (1 + 1)
3 .Name any 2 complications associated with this injury