

# **Orthodontic Mini Implant Course**

**Assist Prof Dr Saeed AlSamak**

## **Course Overview:**

**Duration: Day one (Four hours)**

- Introduction to mini-implants in orthodontics
- Understanding the indications and contraindications
- Hands-on training on placement techniques
- Case discussions and treatment planning sessions

## **Course outline**

### **1: Introduction to Mini Implants**

- History and evolution of mini implants in orthodontics
- Advantages and disadvantages compared to traditional anchorage methods
- Types of mini implants and their applications (inter radicular and extra alveolar orthodontic mini-implants)

### **2: Indications and Contraindications**

- Patient selection criteria
- Assessment of bone quality and quantity
- Understanding anatomical limitations
- Contraindications for mini-implant placement

### **3: Surgical Principles**

- Preoperative evaluation and planning
- Sterilization protocols
- Anaesthesia techniques
- Surgical protocols for mini-implant placement
- Complication management

### **4: Mini Implant Placement Techniques**

- Hands-on training on insertion techniques
- Biomechanics of mini-implants in orthodontics
- Immediate loading vs. delayed loading
- Mini-implant stability and primary stability assessment

### **5: Treatment Planning and Mechanics**

- Integration of mini implants into orthodontic treatment plans
- Mechanics for various orthodontic movements
- Mini-implant supported appliances and techniques
- Troubleshooting common challenges

## **6: Clinical Applications**

- Anchorage reinforcement in various orthodontic scenarios
- Intrusion, extrusion, and distalization techniques
- Case presentations and discussions
- Long-term maintenance and follow-up protocols

### **Maxillary Skeletal Expander (MSE)**

**Course Objectives:**

**Duration: Day Two (Three hours)**

- Understand the indications and contraindications for MSE.
- Learn the biomechanics and principles behind maxillary skeletal expansion.
- Develop skills in the clinical application and management of MSE.
- Gain knowledge on troubleshooting and managing complications.

#### **Introduction to Maxillary Deficiencies**

- Transverse maxillary deficiency: Diagnosis and impact
- Conventional expansion methods vs. skeletal expansion

#### **Evolution of Maxillary Expansion Techniques**

- Historical overview
- The advent of MSE and its significance

#### **Principles of Skeletal Anchorage**

- Differences between dental and skeletal anchorage
- Advantages of skeletal expansion

#### **Force Distribution and Skeletal Changes**

- How MSE works: Force application and craniofacial adaptations
- Predictable outcomes: Symmetry and stability

#### □ **Ideal Candidates for MSE**

- Age considerations and skeletal maturity
- Specific cases: Crossbites, crowding, and obstructive sleep apnea

#### □ **Contraindications and Risk Factors**

- Conditions that may impede successful expansion
- Understanding patient-specific limitations

#### □ **Preoperative Assessment**

- Imaging and diagnostic tools (CBCT, cephalometric)

#### □ **Step-by-Step Placement Procedure**

- Anaesthesia considerations
- Insertion techniques: Surgical and non-surgical methods
- Post-insertion protocols

#### □ **Monitoring Progress**

- Timeline for expansion: Active and retention phases
- Assessing outcomes: Clinical and radiographic evaluations

#### □ **Managing Complications**

- Common issues: Pain, loosening, asymmetric expansion
- Long-term considerations: Retention and stability

## **Dr Shwan Elias**

Clinical case presentation treated by Mini implant assisted rapid palatal expander

**Duration: One hour**