

## Distraction osteogenesis in dental implants

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**D**istraction osteogenesis (DO) is one of the latest additions to the variety of alveolar ridge augmentation procedures used to increase the volume of bone prior to dental implant placement. The aim of this presentation is to introduce the distraction osteogenesis prior to placement of implant in deficient areas and document their success rate. Three distraction osteogenesis were performed in 3 patients using 1 intraosseous device and 2 extraosseous devices. Inserting dental implants in distracted alveolar bone showed no difference from placing implants in non-distracted alveolar bone when the distraction protocol is followed.

**Introduction:** Some patients present with insufficient bone for conventional implant-supported restoration. Traditional treatment approaches have included augmentation of the alveolar ridge. Alveolar distraction osteogenesis is a surgical technique that encourages creation of new bone and soft tissue through incremental lengthening of osseous segments. The technique is relatively uncomplicated and avoids the need for bone grafting. Maxillofacial distraction techniques have led to successful lengthening of the mandible and maxilla. The procedures have been particularly helpful in patients with craniofacial syndromes, cleft maxilla or tumour defects of the maxillofacial region. A variety of intraosseous and extraosseous devices are available for alveolar distraction osteogenesis. After creation of adequate height and volume of bone, endosseous implant are placed which are later loaded with restoration.

### Learning objectives:

1. Introducing the alveolar bone distraction osteogenesis
2. Advantages and disadvantages of alveolar bone distraction osteogenesis
3. Distraction protocol
4. Why do we use distraction osteogenesis technique before implant placement
5. Surgical procedure of alveolar bone distraction osteogenesis
6. Dental implant placement in distracted bone
7. Follow up and prognosis of implants placed in distracted bone