

**Project No: 3880/2008**

**EVOLVING SURGICAL PROSTHETIC REHABILITATION PROTOCOL FOR SUCCESS OF DENTAL IMPLANT PLACED IN DISTRACTED ALVEOLAR RIDGE**

---

**Principal Worker**

Col S K Rath

**UNIT**

AFMC

**Background**

Various ridge augmentation procedures have been documented as predictable means of establishing new vital bone for implant placement. The latest addition, distraction osteogenesis, is a predictable way to grow unlimited vertical bone height with lesser complications.

**Objective**

To evolve a surgico-prosthetic rehabilitation protocol in grossly atrophic alveolar ridge by distraction osteogenesis and subsequent implant placement

**Method**

The study was conducted in 30 subjects with varying degree of grossly atrophic alveolar ridges requiring prosthetic rehabilitation selected randomly from Dental OPD attendees. Alveolar distraction osteogenesis was carried out with placement of Endosseous dental implants after suitable consolidation period. Implants were loaded with a single crown or fixed partial prosthesis as per requirement after allowing a suitable time for osseointegration. Further evaluation was carried out for a period of 1 yr to assess the long term stability and success of procedure so as to form a surgical protocol. A total of 40 prosthesis were placed in the subjects with 28(70%) single crowns and 12(30%) fixed implant retained partial dentures.

**Results**

The net success rate of distraction procedure was found to be 93.33%. For implant procedure and prosthesis insertion success rate was 100%. However, at 1 yr recall, success rate of 92.5% with a failure of 3 out of 40 prostheses was observed. The net success rate of protocol was determined to be 83.33%.

**Recommendations**

Patient selection is of paramount importance with inadequate alveolar ridge aiming at augmentation followed by implant placement and prosthetic rehabilitation. Adequate preoperative evaluation and preparation is essential at every stage. Regular post operative recall and consultation is the key to success of protocol.