Primary stability (mechanical stability) of the dental implants is a key factor with high correlation to implant survival rate. Micro movements that exceed 200µm may result in implant failure. Insertion and loading of an implant placed in a fresh socket requires adequate primary stability. Due to its aggressive threaded design, the Cortical implant enables bi-cortical anchorage thus increasing the primary stability which is required for immediate loading.

The following case presents an implant placement in a post extraction site after enucleation of a specimen which was later diagnosed as a radicular cyst. The chronic inflammatory process caused severe bone loss.

61 years old female patient – nonsmoker. Declares to be of good health.

Chief complaints:
- Unstable denture in the lower jaw.
- Impaired aesthetic.
- Teeth mobility.
- Bad breath odor.

Clinical examination:
- Lower jaw: Moderate alveolar bone loss and root remnants.
- Upper jaw: Chronic generalized severe periodontitis, severe bilateral alveolar bone loss of posterior maxilla and secondary caries. Additionally, extensive periapical lesions were detected (fig 1).

Treatment plan:
- Extraction of roots remnants,
- Cyst enucleation in the location of teeth 13 and 14 (the cyst was histologically diagnosed as "Radicular Cyst"). The cyst caused an extensive bone resorption with a wide destruction of the buccal plate (fig 2 and 3). It was decided to place a Cortical implant at the location of the enucleated cyst (fig 4 and 5).
- The implant is to be placed at a 30° angle, parallel to the mesial wall of the maxillary sinus. The angulation will be later corrected by a 3D Multi-Unit abutment (fig 6).
- The implants would be immediately loaded and rehabilitated by a screws retained acrylic bridge, reinforced by a 3 mm induction welded titanium (grade 5) bar.

Immediate loading protocol of a cortical implant placed in a post extraction socket with an extensive bone loss.

With the courtesy of Dr. Balan Igal D.M.D.