DISTRACTION OSTEOGENESIS IN THE MAXILLOFACIAL SKELETON - A CLINICAL STUDY

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Distraction osteogenesis is a gradual traction on living tissues to create stress that can stimulate bone formation and maintain the regeneration of newly formed bone.

The principle involved in distraction osteogenesis is law of tension and stress, and metabolically active stimulation of proliferative and biosynthetic cellular function.

Distraction osteogenesis is becoming a popular alternative technique for treating craniofacial skeletal dysplasia and has revolutionized the correction of major skeletal deficiencies. It offers a chance of going beyond the limits of correction, as would have been with conventional orthognathic procedures, even with the use of bone grafts. Today the mandible, maxilla, entire midface, and orbits, as well as the cranial bones can be distracted.

Conventional osteotomies to correct severe craniofacial anomalies requires long hospital stay, risk of infection due to placement of non vascularised bone grafts, and relapse due to resorption of bone grafts or due to soft tissue tension.

The original work in distraction osteogenesis was done by Codvilla in 1905. He lengthened the femur to correct the limb length discrepancy. The lengthening of tibia was tried by Abott in 1927. There was a latency period till 1951, when a Russian physician