CBCT utilization for assessment of the potential risk following implant placement in fresh extraction sites of the posterior mandible

**Background:** Immediate implant placement (IIP) is a reliable procedure with 93.9% to 100% survival rate.

**Aim & Purpose:** The aim of the study was to assess the risks of performing IIP in the posterior mandible.

**Materials & Methods:** One hundred (100) pre-extraction cone beam computed tomography (CBCT) scans were analyzed. The main outcome parameters were the distance from tooth apices to the mandibular canal and lingual plate.

**Results:** Forty eight percent (48%) of second premolar, 32% of first molar and 64% of second molar had <6 mm of bone available for IIP and were thus considered a high risk for Inferior Alveolar Nerve (IAN) injury. The mean root to alveolar canal (RAC) of first mandibular molar was the highest (7.56±2.71 mm), second molar (5.44±2.95 mm) was the lowest. The difference of the mean RAC distance in each tooth type was statistically significant (p<0.005). In females, nonsmokers and patients under 40 years lower mean RAC and higher risk was noted for IIP for all teeth included in the present study.

**Conclusions:** Placing an immediate implant may present a high risk for IAN injury and lingual plate perforation with no regard to the specific root or the different side of the mouth. Among the examined teeth, the second molar poses the highest risk.

**Biography**
Bahaa Haj Yahya has completed his BMedSc – graduated in Faculty of Medicine from the University of Tel Aviv, Tel Aviv, Israel, in 2005. In 2008, he has received License to practice Dental Medicine. He has graduated his DMD in Faculty of Dental Medicine form the same university in 2010. In 2011, he has joined as a Lecturer at HED - College of Continuing Education in Dentistry Surgery and Prosthodontics. He is a licensed Exam Instructor of Dentistry. In 2012-2018, he completed his Residency in Oral and Maxillofacial Surgery from the Department of Oral and Maxillofacial Surgery, Rabin Medical Center, Beilinson Hospital, Israel. He is an OMFS Surgeon in Rabin Medical Center.

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