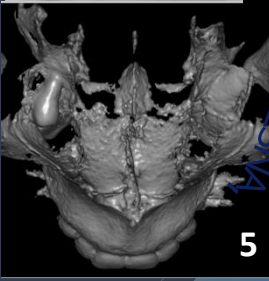
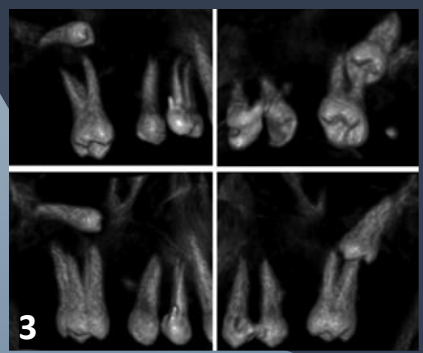
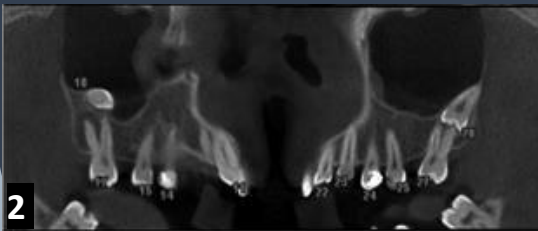


CBCT IN EVERYDAY ORAL AND MAXILLOFACIAL SURGERY

- 1. Faculty of medical sciences, University Goce Delchev, Stip, North Macedonia
- 2. Faculty of dentistry, University Ss. Cyril and Methodius, Skopje, North Macedonia
- 3. University Dental Clinical Centre St. Pantelejmon, Skopje, North Macedonia

Introduction:

An impacted tooth is one which fails to erupt within the expected time and away from its anatomic position. Treatment decision depends on several factors: location of the impaction, prognosis of the intervention on the impacted tooth and adjacent teeth, surgical accessibility, impact of treatment on the final functional occlusion, and possible surgical morbidity. This decision has traditionally been based on planar 2-dimensional (2D) radiography. New imaging techniques like cone-beam computed tomography (CBCT), which has a lower-dose and lower-cost alternative to conventional CT can direct us in a proper planning and make it easier.



Case presentation:

A 42 years old woman was referred to the clinic with a complaint of facial pain and headache for almost a year.

There were no signs of temporomandibular joint disorders such as disc displacement with or without reduction and osteoarthritis.

CBCT scans were performed to evaluate the position and direction of the impacted teeth in the maxillary sinus and related tooth. On a panoramic radiograph, both third molars were impacted with a connection to the root of the second lar and maxillary sinus (Fig. 1).

The root of the left second molar without sign of resorption was placed in the middle of the occlusal surface of the impacted tooth (Fig. 2,3). There were no dilacerations of the roots of impacted teeth. On the frontal view of a 3D volumetric image, while the right path without bone coverage was in the axillary sinus, the crown of the left impacted tooth was fully covered with bone (Fig. 4,5). Under sedation, the Caldwell-Luc procedure was performed for the removal of the right upper wisdom tooth, while a standard d molar surgery was made for the other. No complaints were noted at 2 year follow-up (Fig. 6).

Discussion:

CBCT is a valuable imaging technique in oral and maxillofacial surgery (OMS) that can help direct a surgeon's approach to a variety of conditions. A 3-dimensional analysis of head and neck anatomy allows practitioners to plan appropriately, operate with confidence, and assess result post-operatively. It offers 3-dimensional and multi-planar views for a more accurate diagnosis and treatment without the financial burden and radiation exposure of conventional computed tomography (CT) scans. Furthermore, CBCT overcomes certain limitations of 2-dimensional imaging, such as distortion, magnification and superimposition.

Conclusion:

This case describes the spatial relationship between the impacted third molar to the surrounding anatomic structures u using CBCT. The surgeon, knowing the precise location of the tooth and the shape of the roots in all projections would reduce the invasiveness of surgery.

