

Dental Implant Displaced into the Right Maxillary Sinus-radiographic Finding: Case Report

Nielsen S Pereira*

Private Practice in Oral and Maxillofacial Radiology, Rio de Janeiro, Brazil

***Corresponding Author:** Nielsen S Pereira, Private Practice in Oral and Maxillofacial Radiology, Rio de Janeiro, Brazil.

Received: November 18, 2022; **Published:** November 29, 2022

Abstract

Dental implants play a very important role in dentistry. A very careful diagnosis and treatment planning must be followed to grant a successful outcome. It must be taken into consideration the challenges of oral cavity and its anatomical structures and in the maxilla, the maxillary sinus is the most important in this situation.

Keywords: dental implant; maxillary sinus

Introduction

The loss of a tooth has some negative consequences to the patient occlusion, so the loss of every tooth has severe consequences to the occlusion and esthetic of the patient. Dental implants are been used for the treatment of one missing tooth or a full dental rehabilitation [1]. Elderly toothless patients need a much close attention to the dental implants planning and surgery due to the level of resorption of the alveolar ridges and the proximity to maxillary sinus floor cortex [2-4]. It is very important that a good surgery planning and evaluation with the use of CBCT - Cone Beam Computed Tomography are implemented [2, 4-6]. The displacement of a dental implant inside the maxillary sinus is rare, but it happens, mainly in patients with severe pneumatization of it and severe resorption of the alveolar ridges [6].

Case Report

Male patient, 85 years old at the time of the finding; he was referred on January of 2020 by his dental implantologist to the dental imaging service for a complete maxillary CBCT - Cone Beam Computed Tomography examination for implant planning.

A CBCT was performed by CS 9300C (Care stream Health Dental) equipment with a Small FOV (Field of View) 5.0x8.0cm and 200µm (nanometer) and the use of the Stitching Features of the CS3D Software, where 3 separated studies (1 right, 1 left and 1 middle) are stitched together to form a larger one from the maxilla.

During the evaluation of the CBCT study, it was observed a toothless mouth with severely resorbed alveolar ridge, a dental implant inside the right maxillary sinus- posterior region, as shown in FIGURE 01; moderate maxillary sinus mucosal thickening and secondary rupture of the palatal cortex (Yellow arrow in Coronal View), as shown in FIGURE 02. The patient informed that he had NO knowledge of the actual dental implant situation and the surgery, for the placement of this dental implant, had more than 10 years and had failed (sic).

After the examination, the patient was released and returned to his dental implantologist for evaluation and treatment. The dental implantologist informed, that the patient was referred to an Oral and Maxillofacial Surgeon for evaluation of the dental implant situation and treatment.

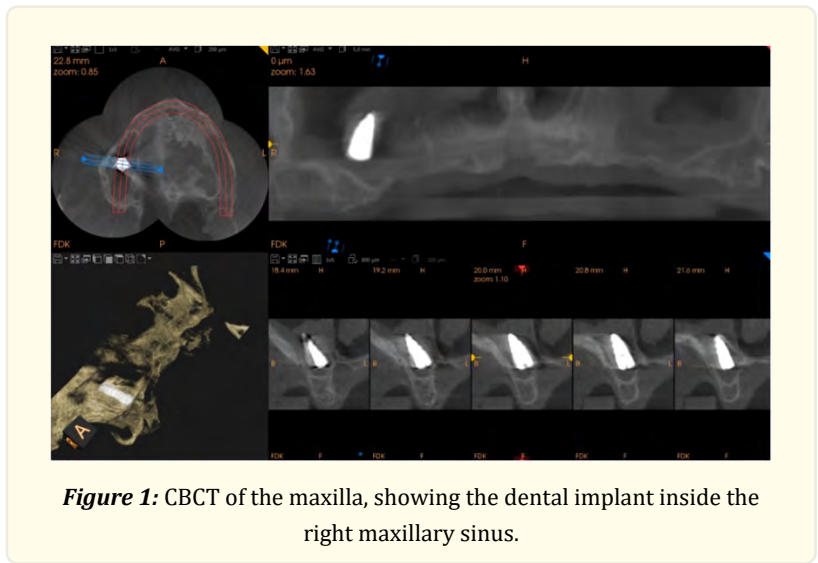


Figure 1: CBCT of the maxilla, showing the dental implant inside the right maxillary sinus.

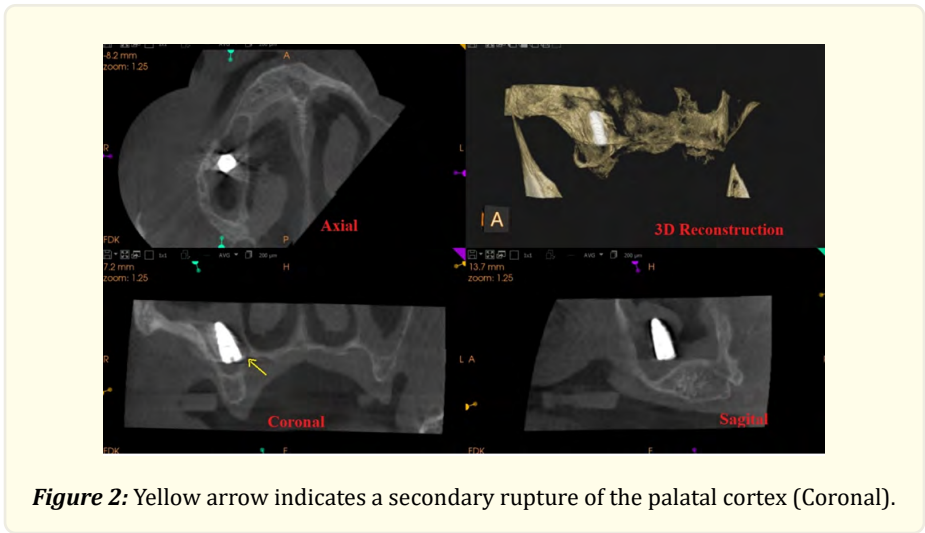


Figure 2: Yellow arrow indicates a secondary rupture of the palatal cortex (Coronal).

Discussion

The importance of dental implants in dentistry is undeniable [1], but careful attention must be dedicated when the patient has lost every tooth in the mouth and the alveolar ridges are severely compromised, mainly, in the maxillary when the proximity to the maxillary sinus floor cortex is very short or none [2]. When the alveolar ridges is mild or moderate and the surgery planning includes a sinus lifting or sinus augmentation, the dental implantologist must rely in a very good CBCT examination and surgery technique [2-4, 7].

Conclusion

Despite the major importance that dental implants have in actual dentistry treatment options, a careful oral evaluation, a reliable dental records file and a good CBCT examination are indispensable for a successful outcome.

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Volume 2 Issue 3 December 2022

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