DOCTOR, THERE’S A LUMP IN MY MOUTH! : IMAGING ASPECTS OF TORUS PALATINUS; A CASE REPORT

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SUMMARY

This is a case report of a 36-year-old lady who presented with a swelling on the hard palate of her mouth. She had undergone computed tomography (CT) scan of the oropharynx and paranasal sinuses and the diagnosis of torus palatinus, a normal anatomical variant of the hard palate was made. The authors discuss about the appearance of torus palatinus in various imaging modalities, specifically dental radiograph, CT scan and magnetic resonance imaging (MRI).

Keywords: Torus Palatinus, Imaging aspects
1.0 Introduction

Torus palatinus is a benign bony outgrowth arising from the hard palate which occurs in the midline. Different morphology of torus palatinus have been described namely flat shape, lobulated, (1,2) as well as unilocular or multilocular bony exostosis (3). It was more frequently seen in females than in males and in subjects aged 40 years and above (4). Patients normally present with incidental finding of bony outgrowth seen on the hard palate, prior to denture prosthesis assessment (2).

2.0 Case Report

A healthy 36-year-old lady, presented with an intraoral swelling at the hard palate which had been present since birth but had recently increased in size. She denied having any problem with deglutition or any history of trauma to the hard palate. She did not have any constitutional symptoms.

Examination of the intraoral cavity [Figure 1] revealed a solitary, hard, non-mobile mass arising from the hard palate. It was round in shape, slightly lobulated, with well-defined margins. It had a smooth mucosal surface that appeared similar to surrounding mucosa. It was non-tender to touch. Blood parameters for inflammatory markers were also not raised. As it seemed to be enlarging, it caused concern to the patient and she was keen for further evaluation.

![Figure 1: A solitary, midline, swelling arising from the hard palate (arrows). The surrounding intra-oral mucosa appears to be intact. No discoloration or evidence of erosion seen.](image)

She was therefore referred to our imaging centre for Computed Tomography (CT) scan of the oral and paranasal sinuses showed a well defined localized bony projection which arose from the palatine bone extending to the palatine process of the maxillary bone, measuring 2.4cm x
2.0cm x 1.1cm. Its density was similar to the maxillary bone and it did not have any soft tissue component within. There was no sclerotic or lytic component, bony erosion or destruction of adjacent structures seen [Figure 2 and 3].

**Figure 2:** CT scan images of the paranasal sinuses in coronal, axial and sagittal sections, showed a benign-looking, well-defined bony projection (arising from the hard palate (arrows).

**Figure 3:**

There was no active intervention done for the patient as the findings were benign. Reassurance was given to her. The patient went for her follow up with the Otorhinolaryngology (ORL) surgeon and was reassured that her condition was not dangerous and was told that she will only need to return to the clinic on a pro re nata basis.
3.0 Discussion

Torus palatinus is a benign outgrowth of a bony structure which usually presents as an incidental finding. The prevalence of torus palatinus is 12% in Malaysia (4). Studies have shown that variations in the prevalence occurs between different ethnic groups (2,4). For example, a study conducted among 1532 dental patients at the Faculty of Dentistry outpatient clinic, AIMST University Malaysia found that among three races in Malaysia, namely Malays, Chinese, and Indians; Chinese had significantly higher prevalence of torus palatinus which is 17.9% (4).

CT scan is the best modality for bone assessment and it has been utilized frequently for making the correct diagnosis (3). Cross sectional imaging with multiplanar reconstruction (MPR), 3-D reconstruction and surface rendering techniques provide the best anatomical details of the lesion compared to other studies. Other imaging modalities which could help in the diagnosis of torus palatines are plain radiographs and MRI. Panoramic and dental radiographs will normally demonstrate a well-defined, radiopaque lesion at the apical region of the teeth (3). On MRI, the bony exostosis appears isointense to compact bone, and returns hypointense signal on T1-weighted, T2-weighted and turboinversion recovery magnitude (TIRM) sequences. The lesion does not enhance on post contrast studies (5).

Differential diagnoses include torus mandibularis and osteomas found in patient with Gardner syndrome (3,5). Squamous cell carcinoma, osteosarcoma and chondrosarcoma are amongst the differentials, which can easily be distinguishable from CT. While squamous cell carcinoma may demonstrate skin ulcerations, osteosarcoma and chondrosarcoma may demonstrate osteoblastic activity. All these malignant lesions exhibit bony destruction (5). These signs are absent in torus palatinus.

Almost, torus palatinus is managed conservatively. The surgeon will only decide on surgical removal based on several factors such as prosthetic reasons; (2) speech or deglutition impairment, and mucosal trauma. It is also a potential source for biomaterial in periodontology and implantology (2). Removal is also done in cases when there is fear of progression to cancer especially when the lesion naturally tend to slowly increase in size. Surgical removal is not always obligatory, unless the reasons aforementioned. In a nutshell, a precise description of the lesion in imaging is important for diagnosis and management of torus palatinus.

4.0 Conclusion

Torus palatinus is a benign, bony outgrowth of the hard palate; which is an anatomical variant and present in a minority of individuals. CT scan remains the best modality of choice for the assessment of this variant. Plain radiograph and MRI, although rarely needed, may serve as an adjunct to CT for accurate diagnosis.
References


