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## Case Report

### SUPERNUMERARY FOURTH MOLARS: A CASE REPORT

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#### ABSTRACT

The purpose of this article is to report the case of the Supernumerary fourth molar, which located on the left ramus. A 36-year-old male presented with pain and swelling on the left side of his face for three weeks. Then he was referred to our oral surgery department at Hama University. In our patient's history, he had no syndrome and no familial history. Whit radiological examination, panoramic radiograph showed that the lower left fourth molar located on the left ramus. Pain and swelling were controlled. Antibiotic and physiotherapy were started before surgery. The Supernumerary fourth molar was retrieved under general anesthesia. Intraoral surgical approach was made to extract the fourth molar. The follow up period was 6 months after surgery.

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#### INTRODUCTION

The teeth in excess of the normal number are referred to as "supernumerary teeth." Their etiology is still not clearly understood. The majority of supernumerary teeth are considered to develop as a result of horizontal proliferation or a hyperactivity of the permanent or deciduous dental lamina. (Kokten G et al, 2003).

Supernumerary teeth may occur in both dentitions, but they are more frequently seen in the permanent dentition. The prevalence of supernumerary teeth is 0.3-0.8% in deciduous dentition and 1.5-3.5% in permanent dentition. These teeth are more prevalent among men than women in a proportion of 2:1 (Mahabob MN et al, 2012).

Classifications of supernumerary teeth are based on their location in the dental arches, or on their morphology. Supernumeraries may be categorized into three types according to their locations:

**Mesiodens:** a typical conical supernumerary tooth located between the upper central incisors. It may be single or multiple;

unilateral or bilateral; erupted or impacted, vertical, horizontal or inverted.

**Paramolar:** a supernumerary molar, usually small and rudimentary situated buccally or lingually to one of the maxillary molars or in the interproximal space buccal to the second and third molar.

**Distomolar:** located distal to the third molar, usually small and rudimentary, rarely delays or impedes eruption of the normal tooth (Rajab L. D. et al, 2002).

Complications associated with supernumerary teeth include impaction, delayed eruption, ectopic eruption, overcrowding, spacing anomalies and the formation of follicular cysts (De Oliveira Gomes C et al, 2008).

The aim of this article is to report the case of Supernumerary fourth molar located on the left ramus.

#### CASE REPORT

A 36-year-old man visited the oral surgery department at Hama University in April 2017. He had been complaining of pain and swelling over the left side of his face for three weeks.

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Following clinical examinations and panoramic were taken. Radiologic examination revealed his lower left fourth molar, which located on the left ascending ramus (Figure 1).



Fig.1 Panoramic view

Under endotracheal general anesthesia, intraoral access was obtained via an incision on the anterior edge of the ramus along the oblique externa line (Figure 2). The ramus was exposed and an oscillating saw was used to make cuts in the cortical bone at the estimated site of supernumerary fourth molar; Then a 2mm carpid round bur with a straight surgical hand piece was used to make a bony window to expose the tooth. The molar was then elevated (Figure 3), enucleated surrounding soft tissues were sent to pathology (Figure 4), and the wound was closed in a routine fashion. At the one-week follow-up the patient complained of slight paresthesia at labial mucosa region on the left side, however this complication healed after two weeks. The follow up period was 6 months after surgical removing and a panoramic view was taken (Figure 5).

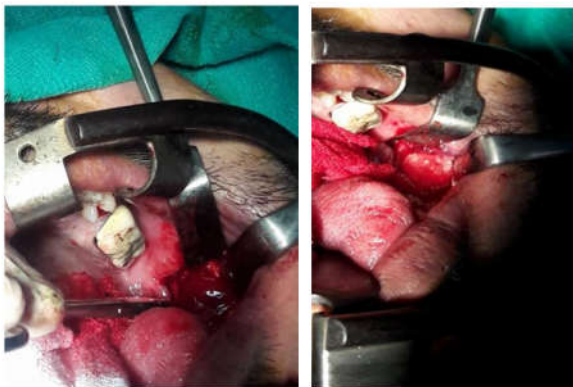


Fig 2 Surgical incision



Fig.3 Surgical extraction



Fig.4 supernumerary 4<sup>th</sup> molar after extraction



Fig.5 Panoramama view after 6 months

## DISCUSSION

The etiology of supernumerary teeth remains unclear, but several theories have been suggested for their occurrence. The phylogenetic process of atavism (evolutionary throwback) has been suggested to explain the development of supernumerary teeth by Smith in 1969 (Smith JD *et al*, 1969).

In 1981, Primosch rejected this theory because of the predominantly solitary occurrence and ectopic development of the supernumerary tooth (Primosch R *et al*, 1981).

Currently, environmental factors are considered and dichotomy of the tooth bud is suggested as a possible etiological factor in the development of supernumerary teeth (Stellzig A *et al*, 1997).

The localized and independent hyperactivity of the dental lamina is the most accepted cause for the development of supernumerary teeth: it is suggested that supernumerary teeth are formed as a result of local, independent, conditioned hyperactivity of the dental lamina (Rajab L. D. *et al*, 2002).

Marya and Kumar were believed to be an important etiological factor in the occurrence of supernumerary teeth. Many published cases of supernumerary teeth mentioned recurrence within the same family (Marya CM *et al*, 1998).

Bruning et al, suggested the possibility of sex-linked inheritance to explain the existence of a sex predominance of males over females (Bruning LJ *et al*, 1957).

Human tooth eruption is known to be a dynamic interaction between genetics and the environment, each one is affecting and being effected by the others. Therefore, the available data, which confirms that the supernumerary traits have a strong hereditary component without following a simple Mendelian pattern. This, has led some authors to consider environmental factors and to conclude that hyperdontia is a disorder with a pattern of multifactorial inheritance originating from hyperactivity of the dental lamina (Hattab FN *et al*, 1994).

It has been reported in the literature that the fourth, fifth, sixth, and seventh molars were seen; however, the fourth molars are seen much more frequently (Nordendram A *et al*, 1968). Kokten *et al*, described in their paper found two fourth molars in one case and one fourth and one fifth molar in the second case. Supernumerary molars are found more frequently in the maxilla than in the mandible (Kokten G *et al*, 2003).

Some hyperdontia may be familial inherited and some may be syndrome associated (Gardner's syndrome, Cleidocranial dysplasia). Our patient had no syndrome.

Maintaining a supernumerary tooth could result in the appearance of different abnormalities. Hegde and Munshi and Mason *et al* reported the displacement, rotation, ectopic eruption, and malocclusion of adjacent teeth due to supernumerary teeth in their studies. (Hegde SV *et al*, 1996) (Mason C *et al*, 1996).

Gurler *et al*, Concluded that the impacted supernumerary teeth are usually in close proximity to cortical bone. Although this may facilitate surgical access, there is a risk of damaging surrounding anatomical structures (Gurler G *et al*, 2017).

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