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## Unilateral double maxillary paramolars in a non-syndromic child – a rare case report

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### ABSTRACT

**Introduction and aim.** Extra teeth are the teeth which are more than the normal number of teeth in jaws. They can be present on a single side or both sides, singular or many, maxillary or mandibular. Paramolars are uncommon supernumerary molars which can be present on buccal or palatal side of molars. Very few reports of supernumerary teeth in maxilla or mandible being paramolars has been stated. No literature on unilateral twin paramolars in maxilla has been reported in literature yet. This is a first case report of unilateral twin paramolars in maxilla in a child.

**Description of the case.** This case report describes the presence of unilateral double maxillary paramolars and their handling in a thirteen-year-old boy, whose primary concern was that of severe pain in maxilla on both sides. After an identification of double maxillary paramolars was put forward and established by cone beam computer tomography, both the paramolars were extracted.

**Conclusion.** Supernumerary teeth have to be removed as soon as detected otherwise they can lead to malocclusion and pain due to caries after pulp involvement.

**Keywords.** children, double, maxillary, nonsyndromic, paramolar

### Introduction

The most usual tooth defect in primary and secondary dentition is the variation in the number of teeth in excess of twenty in deciduous dentition and in excess of thirty two in permanent dentition.<sup>1</sup> Extra teeth or

hyperdontia is the extra number of teeth present in either primary or permanent dentition. The extra teeth might be present on both sides or even in variables but usually occur on a single side.<sup>2</sup> Isolated supernumerary teeth occur in seventy six-eighty six percent of cases, dual supernumerary teeth in twelve-twenty three percent instances, and many superfluous teeth in less than one percent instances.<sup>3</sup> Multiple supernumerary teeth is rare in individuals without any disease or syndromic condition. The presence of multiple supernumerary teeth may be associated with various developmental disorders.<sup>4</sup> The universality of supernumeraries in secondary dentition ranges from 0.04 to 2.26% while in primary teeth it goes from 0.3 to 0.6%. In secondary teeth, the occurrence of extra teeth is two times as prevalent in men as in women.<sup>5</sup> Supernumerary teeth arise in the maxillary region rather than mandibular region. Most of the superfluous teeth are present in the pre maxilla area i.e. in the mid incisal area especially between the incisors (Table 1).<sup>6</sup> In rare cases, they can be located in the upper disto-molar zone, lower pre-molar, upper pre-molar, lower disto-molar, upper cuspid zone, and lower incisal region.<sup>7,8</sup>

**Table 1.** Frequency and prevalence of different types of supernumerary teeth <sup>9</sup>

	<b>Mesiodens</b>	<b>Premolars</b>	<b>Distomolars</b>	<b>Paramolars</b>	<b>Laterals</b>	<b>Canines</b>
<b>Frequency (%)</b>	47–67	8–9	26–27	15–16	2.05	0.40
<b>Prevalence (%)</b>	0.15–1.9	0.09–0.9	0.13–0.6	0.08–0.5	0.01–0.08	0.002–0.2

The likeliness of non-syndromic numerous superfluous teeth has been a rare entity. There have been reports of multiple supernumerary teeth which varies between 1 to 11% but mostly studies suggest that multiple supernumerary are less in percentage.<sup>10</sup> Additionally, the type of teeth, location, size, tooth series are very much variable. These are mostly seen in teenagers. Mostly multiple supernumerary teeth are present in both jaws. In these individuals, these are more often seen in incisor canine region but rarely in pre-molar molar region. The maximum of multiple extra teeth are present bilaterally. It is a rarity to find many extra teeth without any disease or syndromic condition though handful of cases have been cited.<sup>11,12</sup>

### **Aim**

Here we discuss a case of unilateral twin paramolars in maxilla in a child of 13 years. This case report is the first to report such finding.

### **Description of the case**

A thirteen years-old South-Asian male patient reported at the outpatient department of Pedodontics with a chief concern of severe pain in the top posterior teeth area on right side for one week. The child's medico-

dental report was non involving with no concern of any systemic involvement or syndromic condition. The intra-oral clinical scrutiny disclosed a class one dental occlusion with thoroughly aligned teeth except the upper right second molar which was slightly palatably shifted. Apart from the full set of permanent teeth except third molars, there were two buccally placed extra teeth between the upper right first and second molar (Fig.1).



**Fig. 1.** Pre-operative picture showing double paramolars

These were diagnosed as paramolars because of the location of these supernumerary teeth. The mesial paramolar had deep dentinal caries. The mesial paramolar had two cusps but one cusp was destroyed due to caries. The distal paramolar was conical in morphology. The guardians were told about the existence of supernumerary teeth and was told to get complete X-ray check-up. The cone beam computed tomography (CBCT) radiograph further confirmed the presence and location of supernumerary (Fig 2).



**Fig. 2.** CBCT showing two extra teeth adjacent to molar

The CBCT was done to rule out fusion of the second molar to the distal supernumerary and for better understanding of the tooth morphology. The parents were informed about the extra teeth and removal of paramolars. The possible occurrence of meals getting between teeth, pain, cavities in first and second molars and worsening of the adjacent periodontal well-being. The parents agreed for extraction of both the paramolars. The required blood tests were performed before extraction and both the paramolars were extracted (Fig.3 and 4).



**Fig. 3.** Extracted paramolars



**Fig. 4.** Post extraction view

Before the procedure, a local anesthetic solution (2% Lignocaine with 1:100000 adrenalin) was given. A small incision was made to access the paramolars, then with the help of elevator (Coupland elevators) and extraction forceps these were removed. In some cases, the tooth may need to be sectioned and removed in pieces to make the procedure easier. Medications (analgesics) were provided for control of post-operative pain. Informed and written consent was taken by parent of the child for the procedure being carried out as

well as for publishing the case report as and where required. The patient is being followed up. The healing was uneventful and the second molars were being followed up to be in place.

## Discussion

The paramolars are relatively uncommon in occurrence. The correct cause of this dental anomaly is not yet known with certainty. Multiple ideas been put forward for their existence.<sup>13</sup>

A thorough literature review disclosed a few of cases cited of para-molars (Table 2). Para-molars are very less seen in maxillary arch, less often bilaterally, almost rare in deciduous dentition and till date only one case in primary dentition has come to light. They are often rudimental, most commonly situated in buccal region through the 2<sup>nd</sup> and 3<sup>rd</sup> molars, although a rarity of cases have been reported of paramolars being present between 1<sup>st</sup> and 2<sup>nd</sup> molars.<sup>14-16</sup> Joining of the para-molar with the respective normal tooth is a highly rarity.<sup>17</sup>

**Table 2.** Reported cases of paramolars<sup>9</sup>

Arch/side	Researcher	Year	Study group	Location
<b>Maxilla</b>				
Unilateral	Puri et al.	2013	Indian	Buccal placed between second and third molars
Unilateral	Nayak et al.	2012	Indian	Palatal placed between left first and second molars
Unilateral	Nagaveni et al	2010	Indian	Buccal placed between right first and second molars
Unilateral	Ghogre and Gurav	2014	Indian	Fused with the second molar
Unilateral	Venugopal et al	2013	Indian	Fused with the right second molar
Unilateral	Salem et al.	2010	Iran	Fused with the left second molar
Mandible	Rosa et al.	2010	Brazil	Fused with the right first molar

Mandible	Ballal et al.	2007	Indian	Fused with the second molar
Mandible	Ghoddusi et al.	2006	Iran	Fused with the left second molar
Mandible	Dubuk et al.	1996	Japanese	Mesial to the right second molar
Mandible	Kumasaka et al.	1988	Japanese	Two impacted paramolar on the right side

Supernumerary teeth might show normal eruption, can show impaction, inversion, or may be having an abnormality in the outgoing path. Extra teeth showing a normal way of erupting will show easy eruption. But, usually thirteen-thirty four percent of all secondary extra teeth erupt normal in comparison with seventy three percent of deciduous extra teeth.<sup>18</sup>

The various complications might be impediment or late eruption of related secondary teeth; deranged erupting nearby teeth; migration, or turning of nearby teeth; crowding because of space problems; mal-occlusion because of a decrease of area; spaces between molars; trauma to cheek mucosal membrane when buccal para-molars cause tears; interference when undergoing orthodontic treatment; abnormality in root growth of erupting secondary tooth; cystic creation; excess new growth; tri-geminal neural pain due to the para-molar compresses ion of the trigeminal neural tissue, pulpal degeneration, and root absorption of nearby teeth because of force exertion; tooth decay because of bacterial retention in non-cleansing regions; and gingivitis and local periodontal inflammation in the tissues.<sup>19,20</sup> As reported here in our report, the existence of para-molars lead to dental caries due to food/bacteria deposition and showed inflamed adjacent periodontium. The second molar is palatably placed because of these paramolars in our case.

The care of individuals with para-molar generally is associated with the area involved and on the effect on surrounding teeth and cardinal relevant structure entities. Management variations for para-molar just like any other extra teeth may be either to observe or extract. Observation means no treatment but regular monitoring of the individual with clinical and radiographical features. This should be done if the para-molar is asymptomatic. Although if complications occur, it is deemed necessary to remove the para-molar.<sup>21,22</sup> In this report, removal of the decayed para-molar as well as the normal paramolar was done to relieve pain and provide great per-oral cleanliness maintenance.

The case report here is the only case of double paramolars reported in maxilla that too on same side. Paramolars have been reported in maxilla bilaterally as well as unilateral double paramolars in the mandible but no case report has been published on double paramolars on same side in maxilla.<sup>23</sup> There is no case

reported as such in children yet. The paramolars were extracted in this case to prevent further complications. The treatment protocol described to surgically remove the supernumerary teeth after advising a CBCT. The CBCT clearly identified the supernumerary as being two different entities and also clearly delineated the teeth to be not fused to the permanent molar.

## **Conclusion**

The clinician should have a good knowledge on supernumerary teeth and the consequences the patient might face due to these teeth. Adequate investigations have to be made to diagnose these cases. Once a diagnosis is made the most appropriate treatment has to be rendered to the patient.

## **Declarations**

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### ***Author contributions***

Conceptualization, S.A. and B.S.; Methodology, S.A.; Software, A.S.; Resources, B.S.G.; Data Curation, X.X.; Writing – Original Draft Preparation, S.A., B.S., A.S. and B.S.G.; Writing – Review & Editing, S.A., B.S., A.S. and B.S.G.

### ***Conflicts of interest***

The authors declare that there are no conflicts of interest regarding the publication of this article.

### ***Data availability***

The datasets used and/or analyzed during the current study are open from the corresponding author on reasonable request.

### ***Ethics approval***

All subjects gave their informed consent for inclusion before they participated in the study.

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