

## Non-syndromic multiple supernumerary teeth: A case report

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### Abstract

Hyperdontia is more common in the permanent dentition than primary teeth. The rampancy of hyperdontia in the permanent dentition is reported to vary between 0.1 and 3.8 % and its rampancy in the primary dentition is found to be 0.3-0.8 %.

A 20-year-old woman contacted the Faculty Practice Clinic at the Tehran University with concern regarding tooth caries. The panoramic radiography showed seven retained supernumerary teeth. Several clinical exams were then performed to rule out the presence of systemic pathology, and they all showed normal results.

It is reported that the premolar region in the lower arch is the most common place for supernumerary teeth. Worldwide; many studies have reported the prevalence of supernumerary canines, which has been estimated from 0 to 1.5%. In our case occlusion was normal and no discrepancies observed.

**Keywords:** Multiple hyperdontia, multiple supernumerary teeth, non-syndromic hyperdontia

**H**yperdontia is defined as an increase in the number of teeth which is more than 20 deciduous, and/or 32 teeth in permanent dentition. <sup>1</sup> It can be delineated as “true” if recognized by an increased number of teeth, otherwise it is “false” if caused by a delay in shedding of deciduous teeth on the transition period. <sup>2-4</sup> Hyperdontia is more common in the permanent dentition than primary teeth. <sup>5</sup>

The rampancy of hyperdontia in the permanent dentition is reported to vary between 0.1 and 3.8 % and its rampancy in the primary dentition is found to be 0.3-0.8 %.<sup>6</sup>

Several syndromes and developmental disorders have associated with single and multiple supernumerary teeth developing such as Gardner’s syndrome, cleidocranial dysplasia, Down syndrome, Apert syndrome and cleft lip and palate <sup>6-7</sup> Hyperdontia is reported quite frequently (male to female ratio equals 2:1) <sup>8</sup>, and it seems to occur more often in patients with hereditary factors concerning this anomaly <sup>9</sup> Supernumerary teeth are frequently found in the upper jaw bone and mainly in the premaxilla (90-98%) <sup>10</sup> the most frequent complication of supernumerary teeth is the dental malposition of teeth which in turn

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leads to clinical consequences of orthodontic and/or surgical procedure .<sup>2-4</sup>

### Case report

A 20-year-old woman was referred to the faculty practice clinic at the Tehran University with concern regarding tooth caries. The extra oral physical exam revealed the normal face. The intra oral physical exam revealed the normal occlusion and teeth morphology and number. (Figure 1-6) The panoramic radiography showed three retained supernumerary teeth in the maxilla located distally to the right and left canine and premolar areas, also there were four retained supernumerary tooth in the mandible next to the left and right canines. CB-CT radiography showed normal form of the teeth and located the position of the teeth (buccal or lingual position). (Figure 7-8) Several clinical exams were then performed to rule out the presence of systemic pathology, and they all showed normal results.



**Figure 1: Frontal view**



**Figure 2: Maxillary arc view**



**Figure 3: Mandibular arc right side**



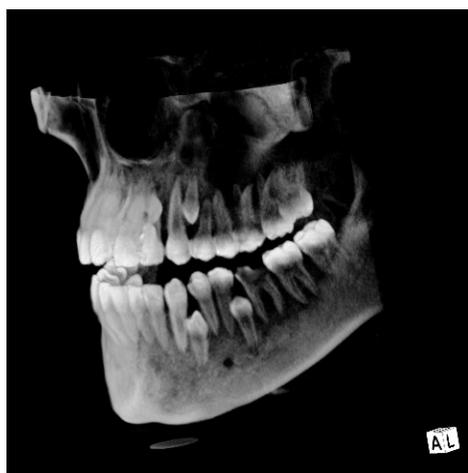
**Figure 4: Mandibular arc left side**



**Figure 5: Occlusion of right side in the mirror**



**Figure 6: Occlusion of left side in the mirror**



**Figure 7: CB-CT lateral view right and left side**

## Discussion

The etiology of supernumerary teeth remains unclear, but several theories have been offered for their occurrence. The localized and independent hyperactivity of the dental lamina is the most accepted cause for the development of supernumerary teeth.<sup>11-13</sup> Multiple supernumerary teeth not associated with syndromes are a rare condition. Yusof reported that the premolar region in the lower arch is the most common place for supernumerary teeth.<sup>14</sup> Worldwide; many studies have reported the prevalence of supernumerary canines, which has been estimated from 0 to 1.5%.<sup>15-16</sup> This case, had a higher prevalence of supernumerary teeth in the canine and premolar area of both arches. Supernumerary teeth are classified based on their morphology and location in the dental arch. All the 7 supernumerary teeth in our case belonged to the supplemental variety, 4 of them resembling the premolar and 3 resembling the canine. Supernumerary teeth are positively correlated with macrodontia<sup>17</sup> and in our case a germination seen in the impacted right mandibular teeth. The most common complications associated with the supernumerary teeth in the premolar area are cyst formation (9%) and damage to neighboring teeth (13%).<sup>18</sup> In Some studies reported displacements, rotations, ectopic eruption, and malocclusion in their cases<sup>19</sup> but in our case, occlusion was normal and no discrepancies observed. In cases with multiple impacted teeth or severe overlapping of impacted teeth, determining the relationships of teeth and the surrounding structures in 3D space is very difficult. CB-CT is the best diagnostic imaging method currently available; it provides higher resolution for hard tissues and determines the accurate location of retained teeth and their relationship to adjacent tissues.<sup>20</sup>

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