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## Case Report

## Report of a case with 19 supernumerary teeth in a non-syndromic patient

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## ABSTRACT

Supernumerary teeth occur frequently in human dentition, but presence of multiple supernumerary teeth in patients without any associated syndrome or systemic disorder is a rare phenomenon. Presence of supernumerary teeth in itself is not a problem and may not require removal in all cases but in certain conditions, they may be associated with several clinical complications and require removal. Here, we present a 14-year-old female who complained of non-emergence of permanent teeth. Orthopantomogram (OPG) initially showed presence of fifteen impacted supernumerary teeth distributed in all quadrants, but later, cone-beam computed tomography (CBCT) further revealed four additional teeth, totaling to nineteen supernumerary teeth. Consultation with concerned specialists ruled out any syndromes or systemic disorders which led us to the diagnosis of “non-syndromic multiple supernumerary teeth” and this probably is the highest number of supernumerary teeth reported in a single non-syndromic patient till date.

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### 1. Introduction

A supernumerary tooth is the one that is additional to the normal series and can be found in almost any region of the dental arch.<sup>1</sup> Their reported prevalence ranges between 0.3 and 0.8% in the primary dentition and 0.1–3.8% in the permanent dentition.<sup>2–4</sup> Supernumerary teeth can present as one or many, unilaterally or bilaterally and in either of the jaws.<sup>1</sup> Cases involving one or two supernumerary teeth most commonly affect the anterior maxilla. In contrast, cases

involving multiple supernumerary teeth tend to involve the mandibular premolar region.<sup>5</sup> In study of non-syndromic multiple supernumerary teeth, Yusof<sup>3</sup> found 60.9% of the total sample to occur in the mandible and 44.8% in the mandibular premolar region. The etiology of supernumerary teeth is not completely understood but both genetic and environmental factors have been implicated in the phenomenon.<sup>6</sup> Several theories have been suggested to explain their occurrence such as Atavism,<sup>7</sup> Dichotomy theory, Dental lamina hyperactivity theory.<sup>2</sup> Supernumerary teeth can be

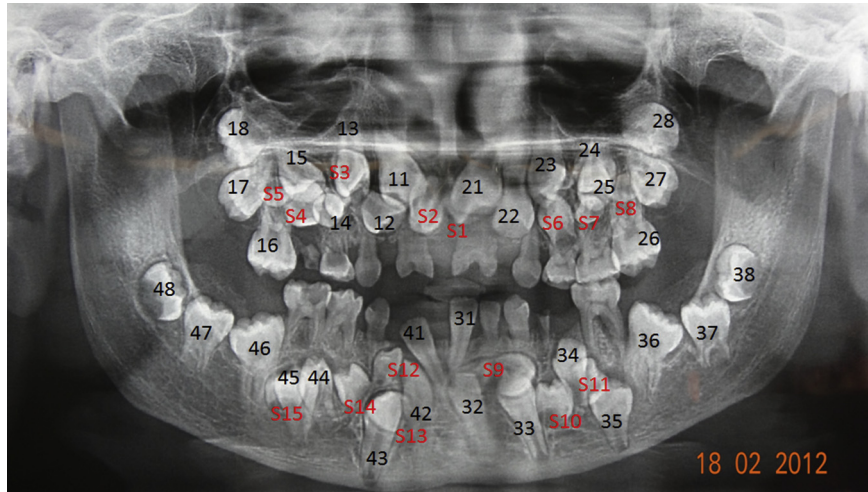
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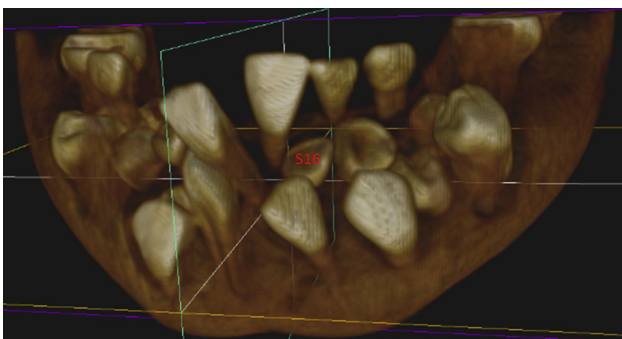
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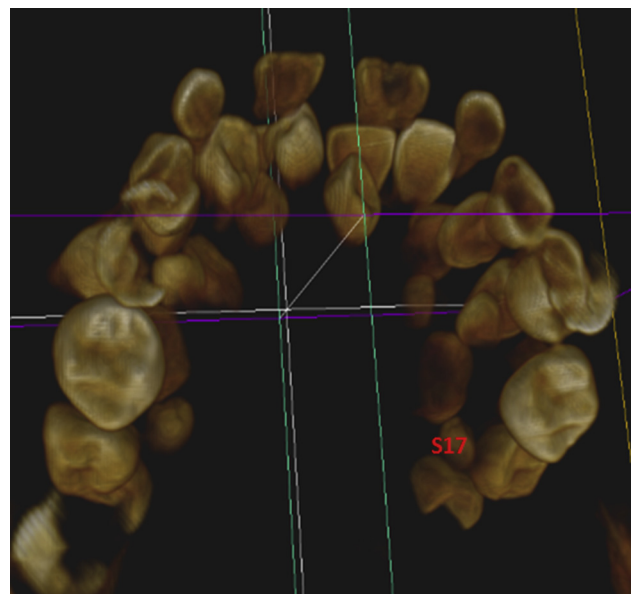
**Fig. 1 – Preoperative orthopantomogram of the patient with markings of supernumerary teeth (in red) and permanent teeth of normal series (in black).**

classified based upon morphology (conical, tuberculate, supplemental, odontomes) or location (mesiodens, paramolar, distomolar, parapremolar).<sup>8</sup> Supernumerary teeth may have several fates like normal eruption, remain impacted, appear inverted or erupt in an abnormal path.<sup>9</sup> Literature shows that only (13–34)% of all permanent supernumerary teeth are erupted, compared with 73% of primary supernumerary teeth.<sup>2</sup> A supernumerary tooth does not always necessarily produce complications and can be accidentally diagnosed in routine radiographic examinations. But if symptomatic, can present with various clinical manifestations such as displacement, rotation or obstruction to eruption of associated tooth, crowding, root resorption of adjacent teeth, incomplete space closure during orthodontic treatment and pathologies associated with the supernumerary tooth itself.<sup>8</sup> Several developmental disorders frequently show association with multiple supernumerary teeth. These include Cleft lip and palate, Cleidocranial dysostosis, Gardner's syndrome and less frequently Fabry Anderson's syndrome, Ehlers–Danlos syndrome, Incontinentia pigmenti and Tricho–Rhino–Phalangeal syndrome.<sup>2,3,10</sup> Alarming signs that should alert a clinician to the possible presence of

supernumerary teeth include unilateral persistence of a deciduous tooth, failure of eruption or ectopic eruption of a permanent tooth, a wide midline diastema or interdental spacing, or rotation of erupted permanent tooth.<sup>11</sup> The most useful radiographic investigation in diagnosis of supernumerary teeth is the orthopantomogram (OPG), with additional views of the anterior maxilla and mandible in the form of occlusal or periapical radiographs. Presently, cone-beam computed tomography (CBCT) is being effectively used to evaluate supernumerary teeth.<sup>12</sup> This technique yields detailed three dimensional images of local structures and may prove useful in pre-treatment evaluation of supernumerary teeth and surrounding structures. Decision on how to manage supernumeraries depends on the type and position of the



**Fig. 2 – Cone-beam computed tomography (CBCT) revealing additional supernumerary tooth in left mandibular quadrant.**



**Fig. 3 – Cone-beam computed tomography (CBCT) revealing additional supernumerary tooth in left maxillary quadrant.**

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