Journal of Neonatal Surgery
ISSN(Online): 2226-0439
Vol. 14, Issue 22s (2025)
https://www.jneonatalsurg.com

OPEN ACCESS

Prevalence, Etiology, Diagnosis, Treatment and Complications of Supernumerary Teeth in The Pediatric Clinic

Nezar Watted[1], Ali Watted[2], Peter Proff[3], Peter Borbély[4], Rand Ghoul[5], Hanali Abu Shilbayih[6], Nikolaos Kolomvos[7], Muhamad Abu-Hussein*[7]

[1]Department of Orthodontics, Faculty of Dentistry, Arab America University, Jenin 919000, Palestine

[2]Department of Cranio-Maxillo-Facial Surgery, University of Hannover, 30625 Hanover, Germany. ali.watted@gmx.de

[3]Department of Orthodontics, University Hospital of Regensburg, Regensburg, Germany

[4]Department of Orthodontics, Faculty of Dentistry, University of Szeged, Hungary

[5]Department of Orthodontics, Faculty of Dentistry, Arab America University, Ramallah, Palestine

[6]Department of Pediatric Dentistry, Al-Quds University, Jerusalem, Palestine

[7]School of Dentistry, National and Kapodistrian University of Athens, Greece.

***Corresponding Author:**

Dr. Abu-Hussein Muhamad

Limited To Pediatric Dentistry, Athens-Greece

Orcid ID: 0000-0002-4961-5044

Email ID: Abuhusseinmuhamad@Gmail.Com

Cite this paper as: Nezar Watted, Ali Watted, Peter Proff, Peter Borbély, Rand Ghoul, Hanali Abu Shilbayih, Nikolaos Kolomvos, Muhamad Abu-Hussein, (2025). Prevalence, Etiology, Diagnosis, Treatment and Complications of Supernumerary Teeth in The Pediatric Clinic. *Journal of Neonatal Surgery*, 14 (22s), 210-226.

ABSTRACT

Introduction: Hyperdontia is the condition of having supernumerary teeth, or teeth which appear inaddition to the regular number of teeth. The prevalence rates of supernumerary teeth in the permanent dentition amounts 0.1 -6.9%, and in deciduous dentition 0.4-0.8%. The presence of supernumerary teeth can be found in everyday dental practice. This study aimed to review current literature and present the aetiology, prevalence, diagnosis, treatment options and complications of supernumerary teeth.

State of knowledge; Supernumerary teeth can be divided according to different criteria: by structure, tooth shape, location and number of additional teeth. The most common supernumerary tooth is mesiodens, which is an additional tooth located between the central incisors of the jaw. The aetiology of formation of supernumerary teeth is not yet fully known. At present, the most probable hypothesis for the development of hyperdontia is the hyperactivity of dental lamina. Supernumerary teeth may cause aesthetic and functional problems like delayed eruption, alterations in the eruptive pattern, shift in the midline, dental crowding, pathology in adjacent teeth, problems with correct occlusion. These problems are the most common reason for patients to report to their dentist. When an supernumerary tooth does not cause any troubles or aesthetic disorders, its detection is usually accidental during the X-rays examination. Treatment depends on the specific clinical situation. Making a diagnosis and developing an appropriate treatment plan often requires cooperation of many specialists.

Conclusion; Supernumerary teeth may cause aesthetic deformities and functional impediments, therefore early diagnosis and interdisciplinary intervention are important to minimize consequences to the developing dentition. The clinicians should be mindful of such signs as delayed eruption, alterations in the eruptive pattern, shift in the midline, or dental crowding..

Keyword: *hyperdontia, supernumerary teeth, treatment, permanent teeth, complications*

1. INTRODUCTION

The development of the tooth is thus a highly complex phenomena controlled by various intricate and delicate mechanisms which are dependent on the hereditary and environmental factors. Any alteration in these mechanisms leads to developmental disturbances or the dental anomalies.**[1]** Dental anomalies generally reflect either a change in tooth size, shape, number, structure or in eruption. **[2]** . Tooth development is a continuous phenomenon in which various physiological processes

like initiation, proliferation; histodifferentiation, morphodifferentiation, apposition and calcification take place. Interference

in the stage of initiation which represents the beginning of the formation of the dental lamina and the tooth bud, may result in either single or multiple missing teeth or supernumerary teeth (hyperdontia). **[3]**

Supernumerary teeth denote teeth formed in excess of that found in normal series. They may be varied in form, occurring in either primary or permanent dentition.

These may be single, multiple, unilateral, bilateral, and malformed morphologicallyor be of normal shape and size. **[1]** They may erupt or remain impacted. **[4]** They may occur in maxilla, mandible or in both the jaws, occurring more frequently in males, with Male: Female (M: F) ratio of 2:1. Although the cause is unknown there appears to be a hereditary tendency determined by multifactorial inheritance. **[1-5]**

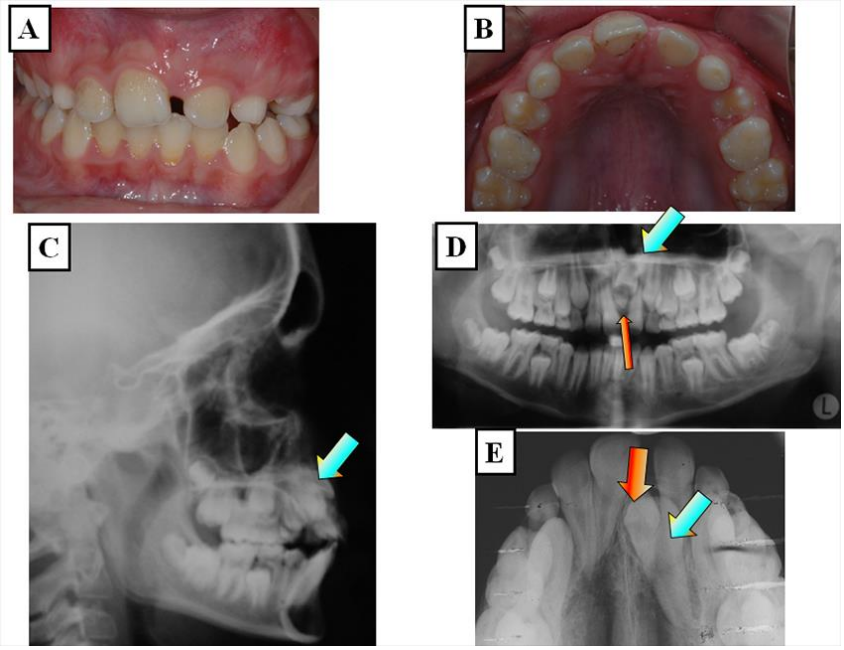

Figure 1 A–E:Presentation of a patient with a supernumerary tooth (mesiodens) and a displaced and impacted tooth 21.A, B: Clinical photographs illustrate the reduced space available in the dental arch for the impacted tooth 21.C, D: Radiographic images show the supernumerary tooth (red arrow) and the displacement of the permanent tooth 21 (blue arrow).

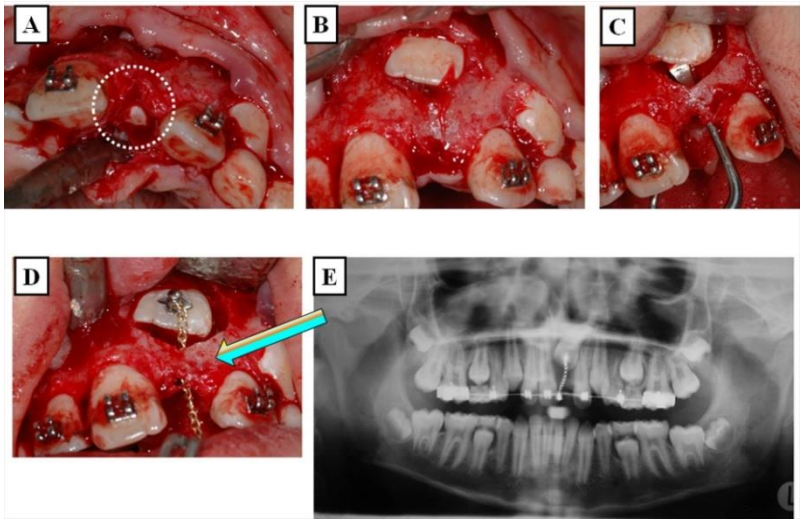

Figure 2 A–E:A: Surgical exposure of the supernumerary tooth (white circle).B–D: Extraction of the supernumerary tooth and exposure of tooth 21 with the creation of a tunnel for attachment placement.E: Radiographic image taken immediately after the surgical exposure.

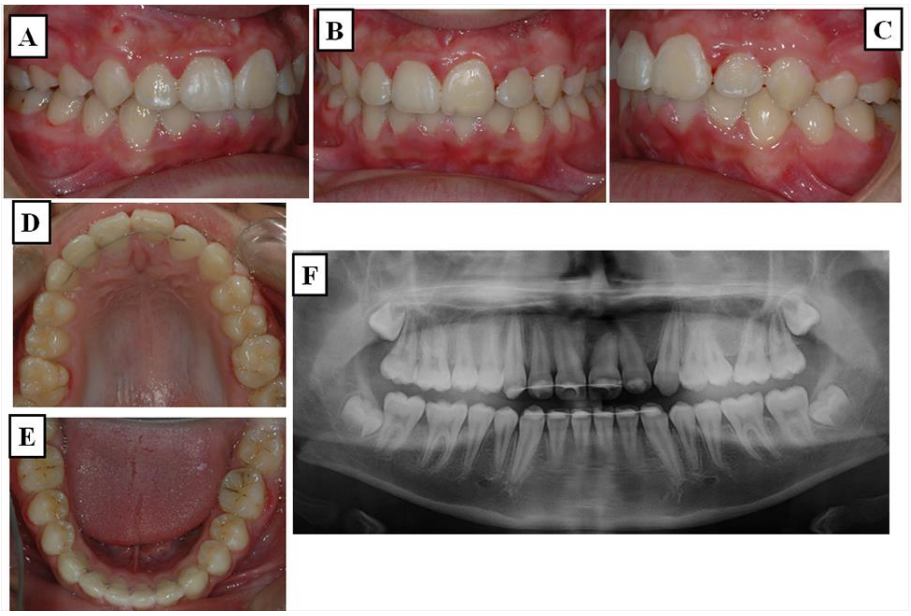

Figure 3 A–F:Presentation of the clinical situation after completion of treatment.

The development of such teeth may precipitate a variety of complications such as impaction and delay of eruption of permanent teeth **(FIG. 1 A-E, FIG. 2 A-E, FIG 3 A-F)**, deviation of teeth from their normal position **(FIG. 4 A-C)**, the growth of the affected jaws, longitudinal development and direction of eruption of the antagonist teeth, leading to significant impediments in the occlusion and mastication. Crowding, rotations, diastemas, are also seen **(FIG. 5)**. Tooth bud displacement also impedes oral hygiene through the formation of sites with a predilection for carious defects and marginal periodontitis. Resorption of the roots of adjacent teeth can lead to additional irreparable damage, including tooth loss **(FIG. 6 A, B)**. Cyst formation with later malignant degeneration is also possible. Therefore early diagnosis, proper evaluation and appropriate treatment are essential. **[1-6]**

Supernumerary teeth may be associated with many of the genetic syndromes like Cleidocranial dysostosis **(FIG. 7 A, B)**, Gardner's syndrome etc. Detection of the multiple supernumerary teeth could hint towards the possibility of these syndromes. **[4,5]** These teeth result from the mutated genes; therefore, there is a greater frequency of maxillofacial anomalies in the patients of supernumerary teeth. [**1-6** The identification of the supernumerary teeth thus necessitates the need, to look for and rule out any other dental anomalies. These teeth are also of forensic importance in identification of the jaws of dead persons. **[6-9]**

This study aimed to review current literature and present the aetiology, prevalence, diagnosis, treatment options and complications of supernumerary teeth.

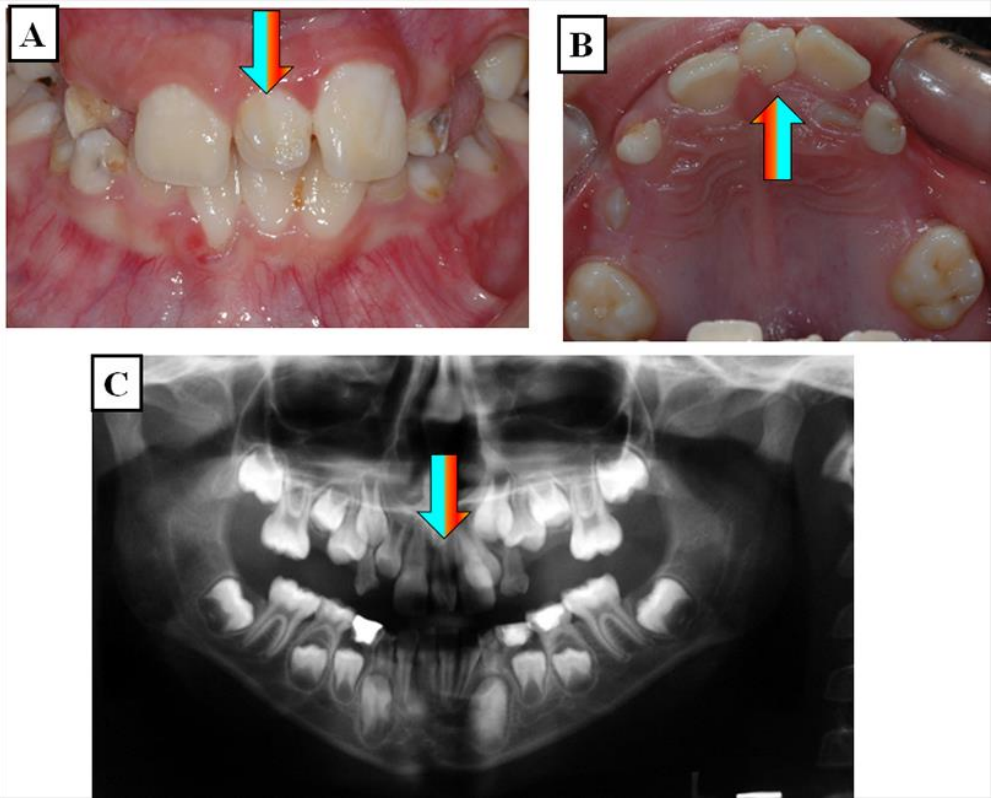

Figure 4 A–C:The supernumerary tooth caused a positional change of the central incisors and a lack of space for tooth 22.

Figure 5:The supernumerary tooth caused a positional change and rotation of tooth 21, as well as a lack of space for tooth 22.

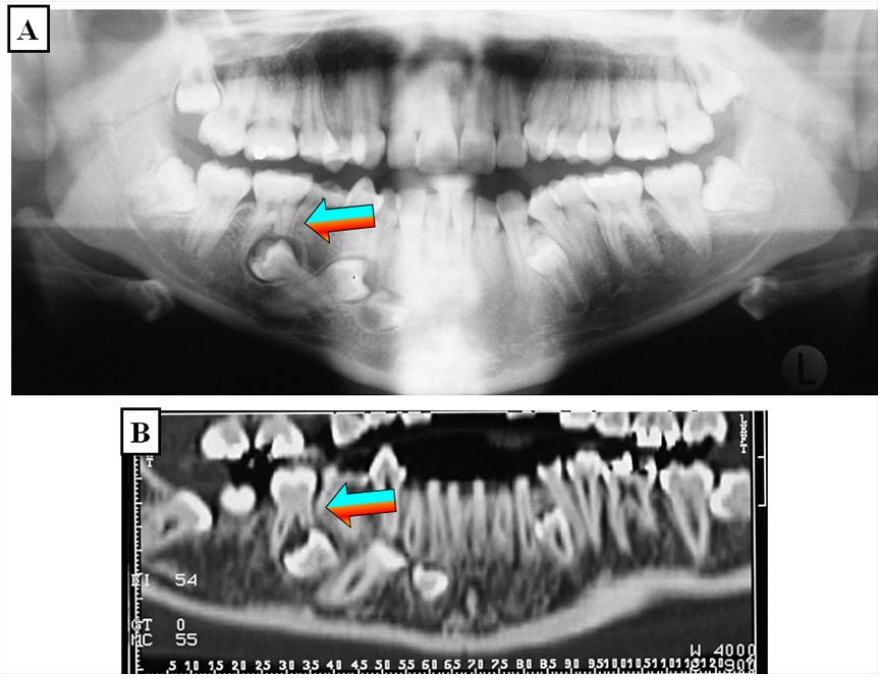

Figure 6 A, B:Multiple supernumerary teeth in the mandible. A supernumerary premolar on the right side (arrow) caused root resorption of tooth 46.

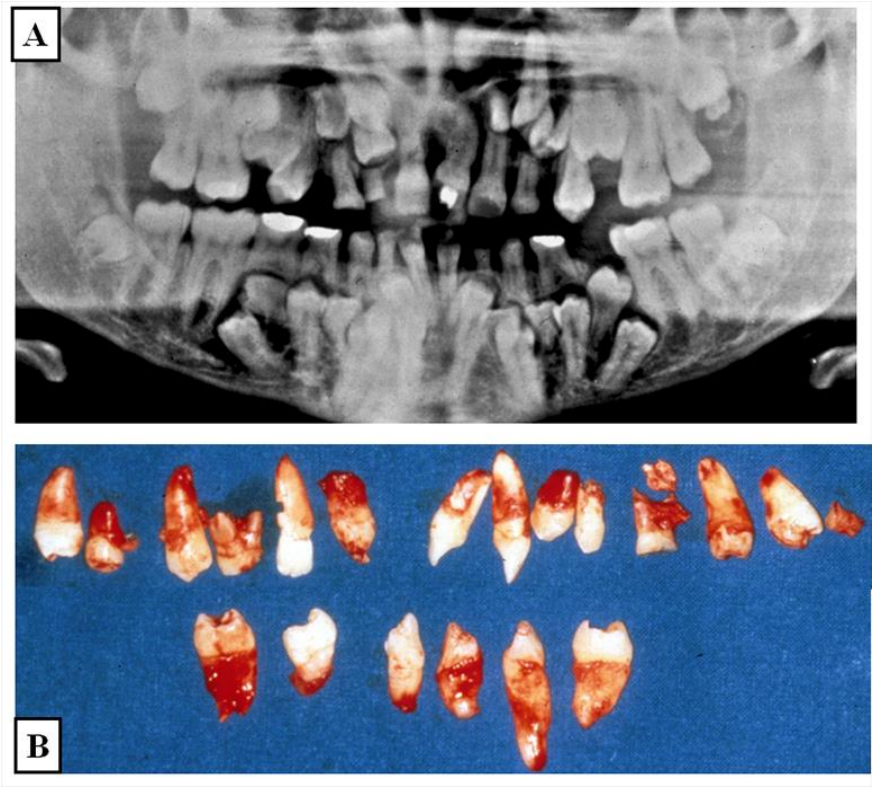

Figure 7 A, B:Multiple supernumerary teeth in both the maxilla and mandible in a patient with a genetic syndrome — cleidocranial dysostosis.

Prevalence

The prevalence of the supernumerary teeth in the permanent dentition is 0.1-3.6% and that in the primary dentition is 0.2-1.9%. Males are more commonly affected than the females, the ratio being 2:1.

The prevalence of mesiodens in Hispanic population revealed, that out of the 3,523 children examined children with the help of maxillary occlusal and bitewing films, 74 cases (44 males, 32 females) had mesiodens. 67 of them had single mesiodens, out of which 14 of them had erupted 53 were unerupted, [**4-11**] multiple unerupted cases were recorded. It was concluded that the prevalence of supernumerary was twice higher in Hispanic race than that in the Caucasians.

An epidemiological study of supernumerary teeth in 8122 children of Japan found the prevalence to be 0.05% in the deciduous dentition. **[12-14]**

Examination of the 5221 children between 3-14 years in India found 34 children with the supernumerary teeth (0.65%). Out of the 34 cases, 4 of them had bilateral supernumeraries. 32 of these cases were present in the maxillary incisor region. Males were more commonly affected (0.52%) than the females (0.13%).**[11-16]**

Supernumeraries have been classified into 2 types according to their shape:

1. Supplemental/eumorphic – supernumeraries of normal size and shape.
2. Rudimentary/dysmorphic – abnormal shape and smaller size, they can be conical, tuberculated or molariform types.

The supplemental type refers to duplication of teeth in the normal series and is found at the end of a tooth series. The most common being the maxillary lateral incisors. The majority of supernumeraries found in the primary dentition are of supplemental type. Supernumeraries in the primary dentition are usually normal or conical in shape. In the permanent dentition they are of varied shapes as;

1. Conical: Small peg shaped (coniform) teeth with a normal root.
2. Tuberculated (multicusped): Short, barrel shaped teeth with normal appearing crown, or invaginated but rudimentary root.
3. Supplemental: Teeth resembling the adjacent non-affected teeth.
4. Odontomas: having no regular shape **(FIG. 8 A-C, FIG. 9 A-F)**.

The rudimentary types of supernumerary teeth have the following features:

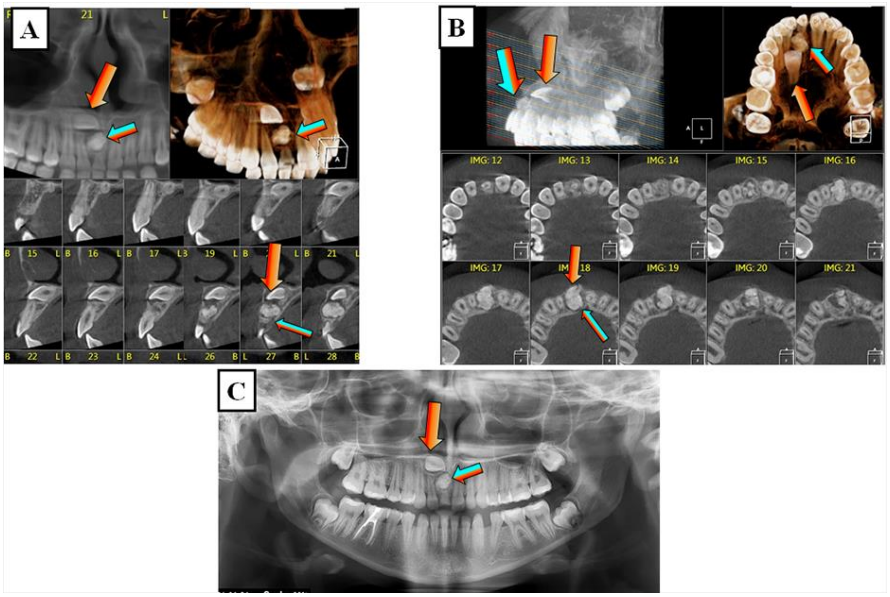

Figure 8 A–C: CBCT images (A, B) and a panoramic radiograph (C) of a patient with supernumerary teeth in the form of an odontoma (blue arrows), which caused the displacement and retention of tooth 11 (red arrows).

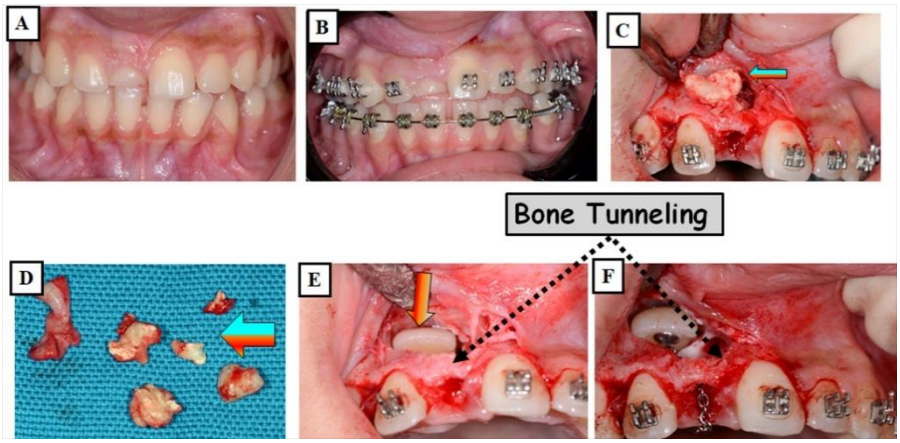

Figure 9A–F: Intraoral photographs of the same patient as shown in Figure 8. After space was created for the impacted and displaced tooth 11 (A, B), the odontoma was surgically exposed (C) and subsequently removed in multiple fragments (D). The displaced and impacted tooth 11 was then exposed and visualized (E, red arrow). Following the extraction of the odontoma and exposure of tooth 11, a *bone tunnel* was prepared through which the titanium attachment, bonded to tooth 11 according to the Watted technique, was guided (F).

Conical shaped supernumeraries:

1. They usually are located between permanent maxillary incisors, but rarely erupt labially.
2. They erupt during childhood.
3. They have complete root formation, ahead of or as early as that of the adjacent teeth.
4. They rarely delay the eruption of adjacent central incisors but may cause displacement of the incisors.

The Tuberculated form:

1. It develops later than the conical tooth, with incomplete (stunted) or totally

absent root formation.

2. It appears on the palatal aspect.

3. It rarely erupts in childhood.

4. It may be unilateral or bilateral, and is commonly associated with supernumeraries of other types.

5. It delays the eruption of permanent teeth.

6. It is usually larger than the conical type.

Etiology of supernumerary teeth

The etiology of supernumerary teeth is not well understood, but ethnic and racial background may play a role in the occurrence of supernumerary teeth. A previous epidemiological study done in Hispanic race has showed a higher prevalence rates in this group of population.

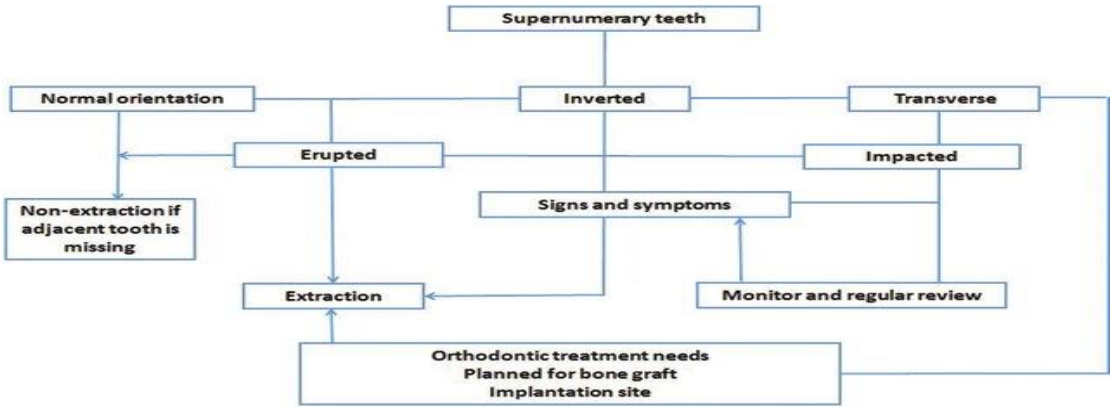

Table.1; Management of supernumerary teeth in children

Several theories have been advanced by investigators to explain its etiology:

1. Theory of the Prague school.

2. The godo theory.

3. Theory of histochemical disruption.

4. The progress zone theory – suggests that these teeth result from the progress Zone of the dental lamina in the end of every tooth series or class.

5. Unified etiological explanation – It is based on a multifactorial model that has a continuous scale, with thresholds related to tooth number and size. The anomaly's position on this scale is determined by a combination of the genetic and environmental factors.

6. Supernumerary teeth result from the mutant genes. This is supported by the observation of greater frequency of supernumerary teeth in patients with maxillofacial anomalies and syndromes

7. Theory of epithelial remnants - Remnants of dental lamina can persist, as "rests of Serres", which on induction lead to a supernumerary tooth.

8. Theory of supernumerary tooth germ - Supernumerary tooth may also arise separately (as an offshoot) from the continued activity of the dental lamina after the formation of the normal number of tooth buds.

9. Theory of duplication -Complete division (schizodontia, dichotomy) of an early developing bud was suggested by Taylor.

10. Atavism (phylogentic reversion or evolution thrown back) may cause the occurrence of distomolar.

It has been postulated by researchers that these supernumerary teeth form due to continuation of growth in the progress zones of a specific proliferating tooth class, attributed to the morphogenetic field theory, or occur due to decrease in the size of the enamel organ below a certain threshold limit which signals the dental lamina to generate additional enamel organs. **[8]**

Three possible mechanisms that can give rise to supernumerary teeth in the premolar region are put forward.

1. An abnormal proliferation from dental lamina can give to predeciduous premolars.

2. The lingual extension of the dental lamina can give rise to an additional follicle before the development of the permanent teeth

3. An extra tooth can develop from the extension of the dental lamina after the deciduous and permanent follicles have formed.

Heredity is believed to be an important etiological factor in the occurrence of supernumerary teeth by a number of researchers. These teeth could be inherited either as autosomal trait with the lack of penetrance in some generations or as sex-linked inheritance that explain the existence of a sex predominance of males over females. A combination of genetic and environmental factors is also proposed to explain the occurrence of supernumerary teeth by some investigators.

Few authors regard genetics to contribute to the development of mesiodens, as these teeth are often seen in twins, siblings and sequential generations of a single family. **[7-18]**

According to one theory, mutant genes give rise to supernumerary teeth and this is supported by the finding of increased supernumeraries in patients with facial & dental anomalies such as cleft lip & palate. The development of bilateral supernumeraries also suggests that they may be controlled by a mutant gene. The importance of heredity is emphasized by the increased number of supernumerary teeth found in relatives of those affected. While an autosomal dominant inheritance with incomplete penetrance has been suggested, the increased incidence in males suggests possibility of sex linked heredity as stated by Bruning et al. As in our cases, this trait was seen in three generations of males which indicates some role of sex linked heredity.[**3,8-17**] Table.1

Despite advances in the knowledge of tooth morphogenesis and differentiation, relatively little is known about the etiology and molecular mechanisms underlying supernumerary tooth formation. Genetic studies mapped Cleidocranial dysplasia to chromosomal 6p21, and heterozygous mutations (haplo insufficiency) in RUNX2 (CBFA1) gene have been identified to be responsible for the development of CCD. According to one theory, mutant genes give rise to supernumerary teeth and this is supported by the finding of increased supernumeraries in patients with facial & dental anomalies such as cleft lip & palate. **[10,11] Figure 3 A–F** The development of bilateral supernumeraries also suggests that they may be controlled by a mutant gene. The importance of heredity is emphasized by the increased number of supernumerary teeth found in relatives of those affected.[11-15] **Figure 9A–F**

Despite advances in the knowledge of tooth morphogenesis and differentiation, relatively little is known about the etiology and molecular mechanisms underlying supernumerary tooth formation. [14,16]Genetic studies mapped Cleidocranial

dysplasia to chromosomal 6p21, and heterozygous mutations (haplo insufficiency) in RUNX2 (CBFA1) gene have been identified to be responsible for the development of CCD. Gardner syndrome is caused by germ line mutations in the APC gene. [14,15]APC is located on chromosome 5q21-q22 and it can be alternatively spliced in multiple coding and noncoding regions. It has also been suggested that inactivation of APC or forced activation of Wnt/ù(catenin signaling results in multiple supernumerary tooth formation in both humans and in mice, but the key genes in these pathways are not very clear. [10,11,15,16]Notably, adult oral tissues, especially young adult tissues, are still responsive to loss of APC or activation of Wnt/ù(catenin signaling, and are able to form new teeth. Better understanding of the role of Wnt/ù-catenion, APC, and RUNX2 in the formation of supernumerary teeth, together with detailed analysis of successional tooth formation in various model systems will allow us to identify the exact genes responsible for supernumerary tooth formation.[14-16] **Figure 8 A–C**

Consanguinity is a known factor in the etiology of many diseases.[10,13,16] Arab countries have some of the highest rates of consanguineous marriages in the world, and specifically, first cousin marriages, which mayreach (25-30%) of all marriages.[13-16] A large Lebanese consanguineous family has been reported to have four individuals who exhibited five incisors in the anterior mandible.[11,14] The prevalence of hyperdontia varies significantly among ethnic groups and different ages.[10,15,16]

Arab countries have some of the highest rates ofconsanguineous marriages in the world, and specifically first cousin marriages, which may reach (25-30%) of all marriages.[10,13,15] Moreover, according to Tadmouri, et al.,[17] the Arab populations have a long tradition of consanguinity due to socio-cultural factors. Regarding Saudi Arabia, El-Hazmi, et al.,[18] found that the overall rate of consanguinity reached (57.7%). These results place Saudi Arabia among the countries of the world with a high rate of the consanguinity.

From the genetic point of view, there is evidence from animal studies that genetic factors do play a role in ST formation.[19] However, the interplay of these factors and the targets of their pathways remain largely unknown. These types of studies guide the selection of candidate genes for evaluation in human as the prevailing mechanisms hypothesized to cause ST include hyperactivity of the dental lamina, resulting in the formation of additional, or dichotomy of the dental tooth germs that result in more than one tooth.[11,16,20,22]

An unerupted supernumerary tooth may be found by chance during radiographic examination, with no effect on adjacent teeth. Unilateral persistence of a deciduous incisor, failure of eruption or ectopic eruption of a permanent incisor, a wide diastema, or rotation of erupted permanent incisors should alert the clinician to the possible presence of supernumerary teeth and indicate appropriate radiographic investigation. [10-15,23,24] **Figure 9A–F**

Classification of supernumerary teeth:

-Extra teeth can be categorized based on factors such, as the timing of their growth, where they are located in the mouth, their shape, and how they are positioned.

1- Based on location:

I- Mesiodens Located at palatal midline between maxillary central incisors, account for nearly 80% of all hyperdontia . Based on the shape, they can be classified into: conical, supplemental, and tuberculate type. [2]

A. Mesiodens either erupt normally or are impacted, found in an inverted or a horizontal position. Unerupted symptom-free mesiodens may be identified during a routine radiological examination of the pre-maxillary region , [2,4]

B. Most often these mesiodentes comprise 75% of cases and are cone-shaped and appear when the roots of central incisors. A supplemental mesiodens mirror tooth of the normal series seldom remains unerupted and is more frequent in primary dentition, A variety of clinical complications related to mesiodens:

1-delayed or ectopic eruption of adjacent teeth,

2-crowding,

3- diastema,

4-axial rotation,

5-radicular resorption,

6-dentigerous cyst, and others . [8.24]

C. Tuberculate / multicusped mesiodens" is more familiar in permanent dentition and frequently stands unerupted. In comparison with that of the adjacent teeth, their root formation is postponed. Impacted incisors are usually related to tuberculate mesioden.

II- Paramolars: are fairly infrequent anomalies that arise in the molars series they report (0.09–0.29%) prevalence . [1-4] A tiny and rudimentary paramolar is almost located between the 2nd and 3rd molars on the buccal aspect/ lingual aspect and it is infrequently observed between 1st & 2nd molars . [1-4]

III- Distomolar: known as "fourth molars," is a supernumerary tooth with prevalence varies from 0.03% to 2.1% with a male predilection that is positioned distal to third molars following the line of dental arch or with a slight palatal or lingual torsion. The fourth molars are considered as the second or third more common group of supernumerary teeth. It may have a regular morphology or may vary from its standard morphology. Distomolars can be found completely erupted in the dental arch, or in many instances could be partially or entirely. It has been noted that the maxilla has a higher incidence of supernumerary teeth than the mandible . [14]

2 Based on shape**:** They can be conical, tuberculate, and supplemental (normal) or odontome.

3 Based on orientation**:** They can position either vertically or transversely.

Diagnosis of supernumerary teeth:

Clinical features

-Supernumerary teeth are easy to find if they erupt in the oral cavity; all the teeth in the mouth must be counted and identified, males showed double the prevalence than females.

-Sometimes supernumerary teeth don't show any symptoms. The anterior maxilla is where single supernumerary teeth mostly occur as mesiodens as well as the maxillary molar region. Several supernumeraries are most commonly observed in premolar areas, usually located on the lingual side of the mandibular alveolar. [14,15-22] **Figure 8 A–C**

-Clinically can be detected by their abnormal shape, or in the presence of dental asymmetry, mesiodens must be imagined. [16,23] **Figure 8 A–C**

Radiographs for determining supernumerary teeth in children;

Supernumerary teeth are common scientific and radiographic findings that are normally an element of the syndrome. [19,24,25] They trigger particular medical issues such as crowding, displacement of a permanent tooth, failure to appear, or dentigerous cyst development. [26,27] They may exhibit ectopic eruption, may be impacted or appears spontaneously. There are different opinions about the treatment options of ST. Some authors recommended that if ST do not cause any discernable negative result on adjacent teeth and if no future orthodontic treatment anticipated, it is reasonable to suggest that immediate surgical intervention is not important. Other suggested that ST tend to resorb and vanish if left neglected. [28,29] **Figure 8 A–C**

Sometimes, supernumerary teeth are asymptomatic and might be spotted as a chance finding during radiographic assessment. Comprehensive history, scientific assessment, thorough investigation, early diagnosis and appropriate treatment of supernumerary teeth are compulsory. Unerupted supernumerary may be found by chance throughout radiographic evaluation. Often, clinicians might presume the presence of supernumerary teeth, if there is failure of eruption or ectopic eruption of permanent tooth, determination of milk tooth, broad diastema and apparent existence of extra teeth. [19,30] An anterior occlusal or periapical radiograph using paralleling technique and panaromic view(OrthoPantomoGraph) are the most beneficial radiographic investigations to imagine supernumerary teeth. Recently, computed tomography has also been utilized to spot the existence of supernumerary teeth . [31] A total radiographic survey of the whole oral cavity is essential to determine the presence of all affected supernumerary teeth due to the fact that the ratio of affected to appeared supernumerary teeth varies from 3 to 1. Radiographs alone are not sufficient for the conclusive medical diagnosis. Their interpretation needs to constantly be conducted in conjunction with clinical findings. Treatment depends on the type and place of the supernumerary teeth and on its prospective impact on surrounding difficult and soft tissue structures , [19,32]] **Figure 9A–F**

Management of supernumerary teeth:

Occasionally, Supernumerary teeth may lead to problems such as deep caries in the adjacent teeth, which might require restoration or endodontic therapy of the surrounding teeth. Supernumerary teeth can be handled either by removal/endodontic treatment or by preserving them in the arch and frequent observation. [33] 2 treatment alternatives for delayed eruption of surrounding teeth due to the existence of supernumerary teeth include removal of just nd on its prospective impact on surrounding difficult and soft tissue structures. [31] The supernumerary tooth if sufficient space is offered for the tooth to emerge or the removal of supernumerary tooth followed by a surgical-orthodontic treatment to re-establish area for the delayed tooth. [33] The timing of surgical elimination of supernumerary teeth is controversial and 2 alternatives exist. First, to get rid of the supernumerary tooth as soon as it has actually been detected and second, to leave the supernumerary tooth as such till the root advancement of surrounding teeth is total in order to prevent damage to their root apices. Nevertheless, no proof of root resorption, loss of vitality or any disruption to root advancement has been reported by Hogstrom and

Andersson . [34] Table.1

Extraction should be carried out carefully to prevent damage to surrounding long-term teeth, which may cause ankylosis and maleruption of these teeth. The clinician must take care to prevent problems such as harmful nerve and capillary during manipulation of the tooth, perforation of maxillary sinus, pterygomaxillary space, orbit and fracture of maxillary tuberosity. Clinicians should likewise look out as sometimes supernumerary teeth are fused with the adjacent tooth structure at crown or root level, which might make the extraction difficult .[35,36] Supernumerary teeth can also be kept under observation without extraction when satisfactory eruption of related teeth has accompanied no associated pathology and not triggering any functional and esthetic disturbance. [37] **Figure 1A–E**

However, treatment of supernumerary teeth depends upon the type and position of the tooth. **Figure 2 A–E**Immediate elimination of mesiodens is normally suggested in the following circumstances; inhibition or delay of eruption, displacement of the adjacent tooth, interference with orthodontic devices, existence of pathologic condition, or spontaneous eruption of the supernumerary tooth. Munns et al [38] mentioned that the earlier the mesiodens is removed, the much better the prognosis. There are 2 methods for extraction of mesiodens; early extraction prior to root development of the permanent incisors and late extraction after root development of the irreversible incisors . [38]] **Figure 9A–F**

Some authors advise extraction of mesiodens in the early mixed dentition in order to help with spontaneous eruption and positioning of the incisors . [39,40,41] There is controversy in the literature regarding the time of elimination of any unerupted mesiodens. The instant removal versus delay in surgical intervention following root development of the central incisor and the lateral incisor about the age of eight to 10 years has been pointed ou. [42] In order to promote eruption and correct positioning of adjacent teeth, it is advised to extract mesiodens in the early mixed dentition, which might lower the need for orthodontic treatment. It might take six months to three years for an unerupted tooth to appear after removal of the mesiodens. [38] **Figure 3 A–F** When the peak of the central incisor nearly forms, Henry and Post et al [43] recommended postponed extraction of the mesiodens about the age of 10. If treatment is delayed after this age, more intricate surgical and orthodontic treatment may be required. The type and position of the unerupted tooth, the space offered in the dental arch, in addition to the stage of root advancement may affect the length of time it considers an affected tooth to appear after surgical elimination of the mesiodens.[38] Garvey suggested monitoring of mesiodens in the following scenarios; satisfying eruption of the being successful teeth, absence of any associated pathologic sores and risk of damage to the vitality of the related teeth. It has actually also been suggested to keep unerupted symptomless mesiodens, which do not affect the dentition. **Figure 9A–F** These teeth, which are typically found by chance, are better left in place under observation . [44] Clinician should consider patient condition in the decision, however a current study of Yagüe-García et al [45] highlighted that the early removal of the supernumerary teeth in order to prevent complications is the treatment of choice. Table.1

Complications

Various complications may occur as the result of the presence of ST including crowding, delayed eruption, spacing, impaction of permanent incisors, abnormal root formation, alteration in the path of eruption of permanent incisors, mediandiastema,cysticlesions,intraoralinfection,rotation, root resorption of the adjacent teeth, or even eruption of incisors in the nasal cavity and retained deciduous teeth [1,4,36]. Table.1

Midline Diastema; Presence of erupted and unerupted mesiodens may cause midline diastema. A retrospective analysis showed 10% of cases with SNT cases exhibited midlinediastema[**35**].

Delayed or Failure of Eruption; Supernumerary tooth is the common reason for the delayed or failure of eruption in premaxillary region [**2,38**]. Prevention or delayed eruption of associated permanent teeth [**10, 36**] and tuberculate ST are the possible reasons for failure of eruption of maxillary permanent incisors [**35**]. Supernumerary teeth in other locations may also cause,failure of eruption of adjacent teeth.[**4**

Displacement; Displacement of the crowns of the adjacent teeth is a common feature in cases that associated with ST [**65**]. The amount of displacement varies from a mild rotation to complete displacement [**9**].Supernumerary teeth cause severely rotated incisors and sometimes remain unerupted.Self-correction and correct alignment may result in early removal of the causative ST[37].

Crowding ;Any form of ST can cause this complication; erupted or unerupted supplemental ST most often leads to crowding[**1,4,38**].

Root Resorption ; Root resorption of adjacent teeth some times leads to loss of tooth vitality[63]. .Alveolar Bone Grafting. Secondary alveolar bone grafting may be compromised due to ST in patients with cleft lip and palate.Unerupted ST in the cleft site is normally removedat the time of bone grafting. [**1,4,7**]

Implant Site Preparation; The presence of an unerupted ST in a potential implant site may compromise implant placement.

Ectopic Position; Ectopic eruption of ST has been reported, among the sefrequently reported in the nasal cavity. Clinically, a white mass may be seen in the nasal area, radiographically appearing as a tooth-like radiopacity [**38,39,40,41**].

Late Forming SupernumeraryTeeth; Patients with a history of anterior conical or tuberculate supernumerary teeth atan early age havea24%possibility of developing singleor multiple supernumerary premolar satlate age[**2,43**].

Root Abnormalities. Dilaceration is a developmental anomaly in the tooth shape and its structure, which may happen as sharp bending of the tooth ineither the crownor the root portion. Loss of tooth vitality has been reported in rare conditions.[**1,4]**

Cyst Formation;It has been reported that cyst formation due to ST was observed in11% of the cases where dentigerous cystis common type**[42,43**].

Supernumerary teeth can be asymptomatic and only diagnosed casually in the course of radiographic examination . However, the majority are associated with complications that include dental impaction, delayed eruption [particularly those of tuberculate morphology, located palatally to the upper central incisors] or ectopic eruption of an adjacent tooth, overcrowding [mainly caused by supplementary supernumerary teeth in the anterior

region of the upper maxilla], spacing anomalies [for example, a diastema may develop when the supernumerary tooth is situated in the midline of the upper maxilla], ectopic eruption [for example, in the floor of the nasal cavity], dilaceration or abnormal development of the root, or the formation of follicular cysts (4,5,8).

Delayed eruption of permanent teeth is the most common complication, while overcrowding, diastema, or root dilaceration are less frequent (27). However, a study (28) that examined 4,133 children by radiography found that the most frequent complication was midline diastema [28.6%]. Table.1

Seddon *et al*. ([46] observed that in 26-52% of cases supernumerary teeth caused delayed eruption of the permanent teeth, while displacement and rotation of adjacent teeth were observed in 28-63% of cases. Another study [47] found that 88.5% of supernumerary teeth involved complications, the most frequent being dental displacement [55.7%], followed by delayed eruption [50.8%], diastemas [21%], tooth rotations [18.7%], retention of

deciduous teeth [7.9%] and root resorption [0.3%]. One of the main clinical implications provoked by these teeth is their tendency to interfere with normal occlusal development,

as corroborated in several studies [50] in which retention was produced in 81.1%, 78.8% and 53.8% of cases, respectively.

2. DISCUSSION

The etiology of these excess teeth is still not understood. Numerous factors can interfere with their formation. Few authors have reported that tooth anomalies can result from a complex interplay of genetic factors and developmental processes.1 One interesting theory, suggests that the local and independent hyperactivity of dental lamina results in an excessive proliferation of cells, which results in the formation of extra tooth buds. [61] The most important step in the management of supernumerary tooth is to identify the complications associated with supernumeraries. These of varied methods. A periapical radiograph utilizing the paralleling technique gives the best localization compared to other radiographic views. If teeth are causing no complications and are not likely to interfere with tooth movement they can be monitored with only radiographic review. The supernumerary teeth can cause many complications such as prevention and delay in eruption of associated permanent teeth, displacement or rotation of permanent teeth, crowding, incomplete space closure during orthodontic treatment, dilaceration, delayed root development of adjacent teeth, formation of cysts etc.[62,63] In our cases also the first and third case reported had come to clinic with complaint of non-eruption of anterior teeth as reported in other cases too,18 similarly second case came to us with complain of non-closure of mouth properly. The patient should be warned of complications of varied nature like cystic changes and migration of roots. [65] If the patient does not want such complications, it is advisable to remove supernumerary teeth. If supernumerary teeth are associated with complications, it is usual to extract such teeth, which usually involves a minor oral surgical procedure . [63] Early extraction of supernumerary teeth, causing incisor impaction, may have the benefit of minimizing loss of eruptive potential, space loss and center line displacement. [64] Even in those cases where the un-erupted incisors are severely rotated, it is seen that removal of the causative supernumerary tooth can result in self-correction and correct alignment. [66] **Figure 2 A–E** The greatest concern with early removal is the risk of affecting the formation of adjacent roots. In addition, a young child may not be able to tolerate such a procedure and may develop a dental phobia. In the presented cases, there was a low risk of iatrogenic damage to adjacent permanent incisors root according to the clinical and radiographic findings since root development of the central incisors was complete. Furthermore, the surgical procedure was simple; patients were cooperative and are more receptive to surgical management under local anesthesia and thus easier to manage. Table.1 However, delayed eruption of maxillary central incisors can result in mesial movement of the lateral incisors, space loss and diminished development of dentoalveolar height. Furthermore, in situations where a supernumerary tooth is preventing the eruption of an incisor, the eruptive potential of the incisor may be lost if intervention is delayed. Following the removal of supernumerary teeth the un-erupted teeth usually erupts faster. The surgical removal of supernumerary teeth should be performed very carefully to avoid damage to the underlying permanent teeth, which might lead to ankylosis, displacement, rotation, and ectopic position. [67] It also has been stated that the clinician should be

cautious to prevent possible complications to blood vessels and the damaging of nerves during the manipulation of the tooth, fracture of the maxillary tuberosity, perforation of the maxillary sinus, the pterygomaxillary space, and the orbit. **Figure 3 A–F** Clinicians should also pay more attention to the possibility of supernumerary teeth being fused with the adjacent tooth structure at the crown or root level, which may make the extraction difficult. Supernumerary teeth can also be kept under observation without extraction when satisfactory eruption of related teeth has occurred with no associated pathology, but most of the researchers10have opined that the extraction of erupted supernumerary teeth in almost all cases except in those patients who had missing teeth. **Figure 1 A–E** [66,67] Up to 91% of impacted permanent incisors erupt within 18 months following removal. [68] The patient's age and the availability of space in the dental arch are the two critical factors in determining whether spontaneous eruption occurs following the removal of a supernumerary tooth. In other case too spontaneous eruption occurred in one case as the patient was young but in other case we had to take help of orthodontic traction which is also similar to cases reported in literature. In all our cases, we performed extractions to alleviate the problems associated with these supernumerary teeth.[64] The treatment depends on respective cases. These extra teeth may remain clinically symptomless and may be a chance finding or may cause complications. Unless a supernumerary tooth causes complications, it is best to follow a wait and watch procedure rather than trying to extract these teeth.[65] **Figure 7 A, B** Two methods are followed for extraction of mesiodens; either early extraction before root formation of the permanent incisors or late extraction after root formation of the permanent incisors. [66] Some authors recommend extraction of mesiodens in the early mixed dentition in order to facilitate spontaneous eruption and alignment of the incisors . [65,66,67] In our cases also we saw that delay in the extraction of supernumerary teeth caused complications of non-eruption of permanent teeth. If indicated for extraction various anatomical structures in the vicinity of the supernumerary teeth have to be considered before extraction so that no complications arise later. Some authors have mentioned a decision support system for the extraction of these teeth.28 In each of the cases discussed here, the authors have utilized sufficient caution while removing the supernumerary teeth so as to make the removal without post-operative complications.[70]

Clinical significance: Treatment of hyperdontia depends on the respective case. In all the cases of our patients, supernumerary tooth extraction was performed. In the permanent dentition with regard to the possible complications, it is advisable to remove supernumerary teeth, including those not erupted. In cases of normal eruption and settings of supernumerary teeth, when they do not cause disturbances of the arch regularity it is possible to ignore from this rule.[71]

3. CONCLUSIONS

Supernumerary teeth are existing as well as reasonably common a range of problems. The clinician ought to have comprehensive knowledge of signs recommending the visibility of supernumerary teeth consisting of non- or postponed eruption, modifications in the eruptive pattern, diastema development, midline change, and also crowding. On appropriate diagnosis, early treatment is called for in the form of orthodontic or medical therapy and also mix in order to reduce undesirable negative effects to the creating dentition. Early diagnosis and removal of supernumerary teeth allow to avoid or reduce possible complications

REFERENCES

[1] C. Schulze. Developmental anomalies of the teeth and jaw. In Thoma's Oral Pathology, R. J. Gorlin and H. M. Goldman. 6th edition. St Louis: Mosby Elsevier. 1970

[2] Grimanis GA, Kyriakides AT and Spyropoulous ND. A survey onsupernumerary molars. Quintessence Int 1991; 22: 989-995.

[3] Watted N, Abdulgani Azz, Abu-Hussein M. (2014);Supernumerary teeth in permanent dentition in patients with cleft lip and palate. Int J Dent Health Sci.; 1(3): 410–418

[4] Profitt W. Contemporary Orthodontics. St. Louis: CV Mosby Co; 1986:99

[5] Abu-Hussein M, Watted N, Hegedűs V, Borbély P, Azzaldeen A (2015) Human Genetic Factors In Non-Syndromic Cleft Lip And Palate: An Update. Int J Pediatr Otorhinolaryngol 1: 7-23. Link: https://bit.ly/2SCxXvn

[6] Muhamad AH, Watted N (2019) Genetics in pediatric dentistry: A review. International Journal of Applied Dental Sciences 5: 401-408. Link:https://bit.ly/2SyeUm3

[7] Muhamad AH. Genetic Basis of Dental Disorders, Why Teach Genetics?. Glob J Clin Medical Case Rep. 2021; 1(1): 005-009

[8] Abu-Hussein Muhamad and Nezar Watted. Genetics and Orthodontics. Int. J. Appl. Dent. Sci. 2019;5(3):384-390.

[9] Abu-Hussein M, Watted N, Yehia M, Proff P, Iraqi F (2015) ;Clinical Genetic Basis of Tooth Agenesis, Journal of Dental and Medical Sciences ,14(12): 68-77. DOI: 10.9790/0853-141236877

[10] Abdulgani Azzaldeen, Nezar Watted, Abdulgani Mai, Péter Borbély, Muhamad Abu- Hussein (2017) ; Tooth Agenesis; Aetiological Factors. Journal of Dental and Medical Sciences ,16(1): 75-85

[11] Muhamad AH, Azzaldeen A ; Genetic of Nonsyndromic Cleft Lip and Palate, 2012. 1:510.doi:10.4172/ scientificreports.510

[12] El-Hazmi MA, al-Swailem AR, Warsy AS, al-Swailem AM, Sulaimani R, al-Meshari AA. (1995);Consanguinity among the Saudi Arabian population. J Med Genet ;32:623-6

[13] Muhamad Abu-Hussein, Nezar Watted, Viktória Hegedűs, Péter Borbély, Abdulgani Azzaldeen (2015); Human Genetic Factors In Non-Syndromic Cleft Lip And Palate: An Update International Journal Of Maxillofacial Research 1,3,7-23

[14] Watted A, Awadi O, Watted N & Abu-Hussein M. (2021) Impacted Maxillary Central Incisors: Surgical Exposure and Orthodontic Treatment: A Case Report. J Oral Health Dent Res, 1(1): 1-6.

[15] Abu-Hussein M, Watted N, Proff P, Watted A (2017) ;Clinical Management of Bilateral Impacted Maxillary Canines. Sci J Res Dent 1(1): 1-7.

[16] Ata-Ali F, Ata-Ali J, Peñarrocha-Oltra D, Peñarrocha-Diago M. (2014);Prevalence, etiology, diagnosis, treatment and complications of supernumerary teeth. J Clin Exp Dent. M;6(4):e414-8.

[17] Tadmouri GO, Nair P, Obeid T, Al Ali MT, Al Khaja N, Hamamy HA. (2009);Consanguinity and reproductive health among Arabs. Reprod Health ;6:17.

[18] Muhamad AH, Maria A, Watted A, Watted N(2021);. Surgical and Orthodontic treatment of impaction maxillary central incisor associated with supernumerary. J Dent Sci Res Rev Rep. ;3(1):1-5. DOI: 10.47363/JDSR/2021(3)113

[19] Watted N., Proff P., Reiser V., Shlomi B., Abu-Hussein M., Shamir D(2015): CBCT; In ClinicalOrthodonticPractice: IOSR Journal of Dental and Medical Sciences 2:102-115

[20] Azzaldeen A, Mai A, Abu-Hussein M (2017) Geneticsand Dental Disorders - A Clinical Concept. Part;1.IOSR J Dent Med Sci 16(11): 35-42.

[21] Watted N, Abu-Hussein M (2014) Prevalence ofImpacted Canines in Arab Population in Israel. Int

[22] JPublic Health Res 2(6): 71-77.

[23] Abu-Hussein M, Watted N, Azzaldeen A, Yehia M,Awadi O, et al. (2015) Prevalence of Malocclusion andImpacted Canine in Arab Israelian Population(Arab48). Int J Public Health Res 3(5): 180-191.

[24] Watted N, Abu-Hussein M, Hussein E, Proff P.(2015); A dental transposition: literature review and clinical management. J Dent Med Sci. ;14(11):80-5.

[25] Watted N, Hussein E, Proff P, Dodan A, Abu-HusseinM (2017) Surgery of Labially Impacted Canine &Orthodontic Management - A Case Report. Open JDent Oral Med 5(1): 1-6.

Borbély P, Watted N, Dubovská I, Hegedűs V, Abu-Hussein M (2015) Interdisciplinary Approach in theTreatment of Impacted Canines. Int J Max Res 1(2):116-137.

[26] Watted A, Azzaldeen A, Watted N, Abu-Hussein M(2018) Management of an UneruptedPermanentMaxillary Incisor: Clinical Case. Int J Dent Med SciRes 2(2): 11-17.

[27] Batra P, Duggal R, Parkash H. Non-syndromic multiple supernumerary teeth transmitted as an autosomal dominant trait. J Oral Pathol Med. 2005;34:621–5.

[28] Toureno L, Park JH, Cederberg RA, Hwang EH, Shin JW. Identification of supernumerary teeth in 2D and 3D: Review of literature and a proposal. J Dent Educ. 2013; 77:43–50.

[29] Koch H, Schwartz O, Klausen B. Indications for surgical removal of supernumerary teeth in the premaxilla. Int J Oral Maxillofac Surg. 1986; 15:273–81.

[30] Von Arx T. Anterior maxillary supernumerary teeth: A clinical and radiographic study. Aus Dent J. 1992; 37:189–95.

[31] [31] Liu DG, Zhang WL, Zhang ZY, Wu YT, Ma XC. Three dimensional evaluations of supernumerary teeth using cone-beam computed tomography for 487 cases. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2007; 103:403–11.

[32] Ballal S, Sachdeva GS, Kandaswamy D. Endodontic management of a fused mandibular second molar and premolar with the aid of spiral computed tomography: A case report. J Endod. 2007;35:1247–51.

[33] Garvey MT, Barry HJ, Blake M. Supernumerary teeth—an overview of classification, diagnosis and

management. J Can Dent Assoc 1999;2013:612–16

[34] Scheiner MA, Sampson WJ. Supernumerary teeth—a review of the literature and four case reports. Aust Dent J 1997; 2013:160–5.

[35] Loh FC, Yeo JF. Paramolar with bifid crown. Oral Surg Oral Med Oral Pathol Oral Radiol. 1993; 76:257–8.

[36] Ghoddusi J, Zarei M, Jafarzadeh H. Endodontic treatment of a supernumerary tooth fused to a mandibular second molar: A case report. J Oral Sci. 2006; 48:39–41.

[37] Nunes E, De Moraes IG, De Novaes PM, De Sousa SM. Bilateral fusion of mandibular second molars: A case report. Braz Dent J. 2002; 13:137–41.

[38] Munns D. Unerupted incisors. Br J Orthod 1981 Jan; 8(1):39-42.

[39] Tay F, Pang A, Yuen S. Unerupted maxillary anterior supernumerary teeth: report of 204 cases. ASDC J Dent Child 1984 Jul-Aug;51(4):289-94.

[40] Solares R. The complications of late diagnosis of anterior supernumerary teeth: case report. ASDC J Dent Child 1990 May-Jun;57(3):209-11.

[41] Witsenburg B, Boering G. Eruption of impacted permanent upper incisors after removal of of supernumerary teeth. Int J Oral Surg 1981 Dec; 10(6): 423-31.

Alaçam A, Bani M. Mesiodens as a risk factor in treatment of trauma cases. Dent Traumatol 2009 Apr; 25(2):e25-31.

[42] Henry RJ, Post AC. A labially positioned mesiodens: case report. Pediatr Dent 1989 Mar; 11(1): 59-63.

[43] Garvey MT, Barry HJ, Blake M. Supernumerary teeth--an overview of classification, diagnosis and management. J Can Dent Assoc 1999 Dec; 65(11):612-6.

[44] Yagüe-García J, Berini-Aytés L, Gay-Escoda C. Multiple supernumerary teeth not associated with complex syndromes: a retrospective study. Med Oral Patol Oral Cir Bucal 2009 Jul 1; 14(7): E331-6.

[45] Ali Watted , Nezar Watted , Nidal Ghannam ,Mohammad Abu Yunis

[46] Nikolaos Kolomvos ,Muhamad Abu-Hussein (2025) Surgical and Orthodontic Management of Impacted Maxillary Central Incisor Associated with Supernumerary Tooth. Frontiers in Health Informa 2103-2118

[47] Abu-Hussein M, Watted N, Abdulgani M, AbdulganiA (2016) ToothAutotransplantation:ClinicalConcepts. J Dent Med Sci 15: 105-113.

[48] Abu-Hussein M, Watted N, Emodi O, Zere E (2015)Role of Pediatric Dentist - Orthodontic in Cleft LipandCleft Palate Patients. J Dent Med Sci 14(11): 61-68.

[49] Abu-Hussein M, Watted N, Proff P, Watted A (2017)Clinical Management of Bilateral Impacted MaxillaryCanines. Sci J Res Dent 1(1): 1-7.

[50] Nezar Watted ,Muhamad Abu-Hussein , Péter Borbély , Obeida Awadi ,Samir Masarwa , Ali Watted

(2023);; Impacted Maxillary Canines - Etiology, Diagnosis, Radiologic and OrthodonticClinical, J MultiDent Res. 2023;9(1):30–42

[51] Péter B, Nezar W, Ivana D, Viktória H, Muhamad AH (2015) Interdisciplinary Approach in the Treatment of Impacted Canines-Review. International Journal of Maxillofacial Research 1: 116-137.

[52] Abu-Hussein M, Watted N, Abdulgani A (2015) TheCurve of Dental Arch in Normal Occlusion. OpenSciJ Clin Med 3(2): 47-54.

[53] Bayrak S, Dalci K, Sari S. Case report: Evaluation of supernumerary

teeth with computerized tomography. Oral Surg Oral Med Oral Pathol

Oral Radiol Endod. 2005;100:e65-9.

[54] De Oliveira Gomes C, Drummond SN, Jham BC, Abdo EN, Mesquita

RA. A survey of 460 supernumerary teeth in Brazilian children

and adolescents. Int J Paediatr Dent. 2008;18:98-106.

[55] Liu DG, Zhang WL, Zhang ZY, Wu YT, Ma XC. Three-dimensionalevaluations of supernumerary teeth using cone-beam computed tomographyfor 487 cases. Oral Surg Oral Med Oral Pathol Oral RadiolEndod. 2007;103:403-11.

[56] Rajab LD, Hamdan MAM. Supernumerary teeth: review of the literature

and a survey of 152 cases. Int J Paediatr Dent. 2002;12:244-54.

[57] Munne PM, Felszeghy S, Jussila M, Suomalainen M, Thesleff I,Jernvall J. Splitting placodes: effects of bone morphogenetic protein and Activin on the patterning and identity of mouse incisors. Evol Dev.2010;12:383-92.

[58] Seddon RP, Johnstone SC, Smith PB. Mesiodentes in twins: a case report and a review of the literature. Int J Paediatr Dent. 1997;7:177-84.

[59] Patil S, Pachori Y, Kaswan S, Khandelwal S, Likhyani L, Maheshwari S. Frequency of mesiodens in the pediatric population in NorthIndia: A radiographic study. J Clin Exp Dent. 2013 Dec 1;5(5):e223-6. doi: 10.4317/jced.51162.

[60] Gündüz K, Celenk P, Zengin Z, Sümer P. Mesiodens: a radiographic study in children. J Oral Sci. 2008;50:287-91.

[61] Liu JF. Characteristics of premaxillary supernumerary teeth: A survey of 112 cases. ASDC J Dent Child 1995;62:262-5.

[62] Shah A, Gill DS, Tredwin C, Naini FB. Diagnosis and management of supernumerary teeth. Dent Update 2008;35:510-2.

[63] Ramesh K, Venkataraghavan K, Kunjappan S, Ramesh M. Mesiodens: A clinical and radiographic study of 82 teeth in 55 children below 14 years. J Pharm Bioallied Sci 2013;5:S60-2.

[64] Mallineni SK, Nuvvula S. Management of supernumerary teeth in children: A narrative overview of published literature. J Craniomaxillofac Dis 2015;4:62-8.

[65] Leyland L, Batra P, Wong F, Llewelyn R. A retrospective evaluation of the eruption of impacted permanent incisors after extraction of supernumerary teeth. J Clin Pediatr Dent 2006;30:225-31.

[66] Kocadereli I, Turgut MD. Surgical and orthodontic treatment of an impacted permanent incisor: Case report. Dent Traumatol 2005;21:234-9.

[67] [67]. Das D, Misra J. Surgical management of impacted incisors in associate with supernumerary teeth: A combine case report of spontaneous eruption and orthodontic extrusion. J Indian Soc Pedod Prev Dent 2012;30:329-32.

[68] Yeluri R, Hegde M, Baliga S, Munshi AK. Multiple supernumerary teeth associated with an impacted maxillary central incisor: Surgical and orthodontic management. Contemp Clin Dent 2012;3:219-22.

[69] Proff P, Fanghänel J, Allegrini S Jr, Bayerlein T, Gedrange T. Problems of supernumerary teeth, hyperdontia or dentes supernumerarii. Ann Anat 2006;188:163-9.

[70] Meighani G, Pakdaman A. Diagnosis and management of supernumerary (mesiodens): A review of the literature. J Dent (Tehran) 2010;7:41-9.

[71] Amarlal D, Muthu MS. Supernumerary teeth: Review of literature and decision support system. Indian J Dent Res 2013;24:117-22