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內文：

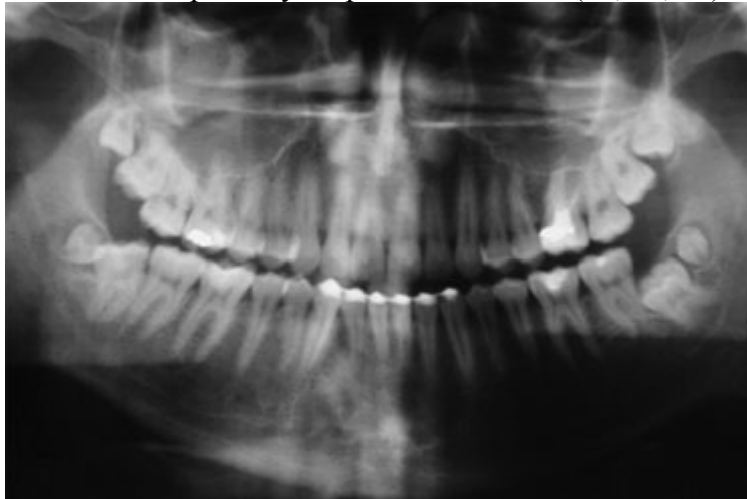
### I. Introduction

1. The term “**supernumerary teeth**” describes **the presence of more than the normal number of teeth** :
  - May occur In both the primary and the permanent dentitions (more prevalent in the permanent dentition)
  - might be single or multiple
  - fully or partially impacted
  - partially or totally erupted
  - lateral or bilateral
2. Multiple supernumerary teeth are usually associated with syndromes, and the conditions commonly associated with an increased prevalence of these cases include cleft lip and palate, cleidocranial dysplasia, and Gardner syndrome
3. Supernumerary teeth are classified according to their morphology and location.
  - **Mesiodens**: between or just posterior to the central incisors
  - Distomolars: in the form of a fourth molar distal to the third molar
  - Paramolars : rudimentary supernumerary teeth that might develop buccally or lingually to the molar series
4. The location of supernumerary teeth can be presented in a decreasing order of frequency as follows:  
 upper distomolars → upper paramolars →→ lower premolars →  
 upper lateral incisors→ lower fourth molars →lower central incisors
5. Etiology
  - Most authors point to phylogenetic factors, specifically hyperactivity within the dental lamina, as causing the appearance of additional dental buds.
  - Hereditary and environmental factors
6. Supernumerary teeth are more frequently seen in the maxilla, and their prevalence in the permanent dentition has been estimated to range from 0.1% to 3.6%
7. The prevalence of supernumerary molars among all supernumerary teeth found in the maxilla has been reported as being approximately 75%
8. A previous study reported the prevalence that :
  - single supernumeraries : 76–86%
  - double supernumeraries : 12–23%
  - multiple supernumeraries : <1% of the cases
9. Due to its normally asymptomatic nature, supernumerary teeth are usually found during routine radiographic examinations.
10. A panoramic radiograph is the most useful screening radiograph for these cases, as it shows all areas of the maxilla and mandible.
11. computed tomography (CT)

- providing precise information for planning and performing the surgical technique, while reducing the operative time and postoperative complications.
12. Not all supernumerary teeth require extraction.
- If asymptomatic, they can be left in situ and kept under observation.
  - surgical removal should always be based on the possible associated pathological sequelae

## II. Case Report

1. A 22-year-old Caucasian, male patient was referred by his general dentist for third molar extraction
  - The patient was in good health
  - medical and family histories : non-contributory
  - no local or systemic contraindications for surgery
2. intraoral clinical examination
  - caries (-)
  - periodontal disease (-)
  - three partially erupted third molars (18, 28, 48)



3. panoramic findings:
  - 18, 28 and 48 partially impacted
  - 38 fully impacted
  - **four impacted fourth molars** distal to the third molars (distomolars), one in each hemiarch

4. Surgical planning : removal of the four third molars and supernumerary teeth in a single procedure under general anesthesia in a hospital environment.
5. Preoperative lab tests (complete blood count, coagulogram, glycemia, urea, creatinine, sodium/ potassium) : within the normal limits
6. Axial and coronal CT scans of the maxillae were obtained for better planning and guiding of the surgical approach.
7. The impacted third molars and distomolars were successfully removed with no perioperative complications.



8. postoperative medication during the 24-h in-hospital stay: (endovenous administration)
  - 20 mg tenoxicam every 12 h (NSAIDs)
  - 1 g cephalexin every 6 h (cephalosporin antibiotic)
9. The sutures were removed 1 week after the surgical procedure, and the patient returned after 1 month for case follow up.

### **III. Discussion**

1. Theories to explain the supernumerary teeth:
  - atavism
  - mechanical tooth germ separation
  - tissue induction
  - dental laminar morphological disturbanceHowever, none of these theories alone offers a sufficient explanation for this phenomenon
2. Fourth molars have a rudimentary shape and are usually seen as solitary and impacted teeth
3. Multiple supernumerary teeth(>3) are rare (less than 1%) in individuals with no other associated diseases or syndromes
4. In the present case, the patient was completely asymptomatic, and the presence of four-fourth molars was an incidental finding. Cases of four distomolars with normal morphology are extremely rare, and have seldom been reported in dental literature in the USA, Israel, and Italy.
5. Radiographic examination and interpretation of the presence of supernumerary teeth are important.
  - As conventional radiographs provide bidimensional images of 3-D structures limiting optimal treatment planning, a comprehensive and detailed interpretation of each film is necessary to avoid diagnostic errors.
6. CT scans and computed-assisted imaging methods:
  - provide location of the supernumerary teeth
  - positional relations with other teeth
  - the assessment of surrounding bone thickness
    - facilitating surgical access and technique choice
    - reducing the procedure time
7. The treatment of supernumerary teeth can be performed in two ways:
  - (a) Surgical extraction

(b) Maintenance of the asymptomatic tooth and periodic monitoring at least once a year.

題號	題目
1	Multiple supernumerary teeth are usually associated with syndromes as following, except? (A) Gorlin syndrome (B) Down syndrome (C) Gardner syndrome (D) Cleidocranial dysplasia
答案(A)	出處：Oral and Maxillofacial Pathology 3 <sup>rd</sup> edition Ch 2 Abnormalities of teeth, p. 78, Box 2-6 & 2-7
題號	題目
2	Regarding prevalence rate of hyperdontia, which of the following is true? (A) Deciduous dentition > Permanent dentition (B) Mandibular > Maxillary (C) Bilateral > Unilateral (D) Single hyperdontia > multiple hyperdontia
答案(D)	出處：Oral and Maxillofacial Pathology 3 <sup>rd</sup> edition Ch 2 Abnormalities of teeth, p. 80