

Prevalence of Supernumerary Teeth with Regards to Location, Orientation, Number, and Morphology in Hispanics vs. Non-Hispanic Populations



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INTRODUCTION

Supernumerary teeth are, by definition, extra teeth within the normal dentition. The most common location for supernumerary teeth to occur is near the midline of the maxillary arch¹.

Supernumerary teeth are often called “mesiodens” when they are located in this area. The occurrence of mesiodens is relatively rare in the primary dentition, with around a 0.3-0.8% occurrence rate².

Identification of supernumerary teeth can be challenging, as they can often be mistaken for cysts or overlapping cusps. Radiographic assessment plays a key role in diagnosis and specific care must be taken in order to avoid misinterpretation³.

Deciding whether or not to intervene at a certain time in development is determined on a case by case basis. Because supernumerary teeth in the anterior maxilla region can cause pathological disturbances, particularly associated with the permanent dentition, early diagnosis and treatment is often indicated³.

Supernumerary teeth are present in patients of different ethnic backgrounds, with different genetic propensities, and with different developmental abnormalities. By reviewing various factors regarding supernumerary teeth and connecting them with different ethnic groups, we can better understand the prevalence among different populations, and possibly improve treatment options and outcomes for patients with this developmental anomaly.

PURPOSE

The purpose of this research was to study the characteristics of supernumerary teeth (location, orientation, number and morphology) in Hispanic vs. Non-Hispanic patients.

METHODS

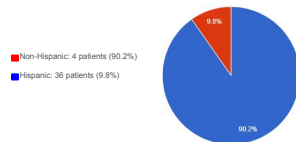
An electronic chart review was conducted to analyze records that met the following inclusion criteria:

1. Pediatric patients ages 1 to 14 years who have been treated at El Rio Community Health Centers or at Tucson Medical Center Children's Clinic (from 01/01/2015 to 11/31/2020) with supernumerary teeth.
2. Patients with developmental syndromes and predisposing factors were included.

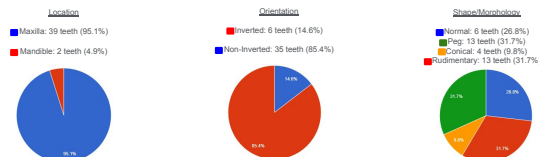
Charts were reviewed to determine the location, orientation, number and morphology of the supernumerary teeth in Hispanic vs. Non-Hispanic patients.

FIGURES

Supernumeraries present in Hispanic Patients vs. Non-Hispanic Patients:



Supernumerary Tooth Location, Orientation, and Shape/Morphology:



RESULTS

The chart review resulted in 32 qualifying patients with a total of 41 teeth.

- The mean age was 14.1 years with 90.2% male patients and 9.8% female patients.
- 90.2% of the patients were Hispanic and 9.8% were Non-Hispanic.
- 22 patients had 1 supernumerary tooth, 2 patients had 2 supernumerary teeth, 1 patient had 3 supernumerary teeth, and 1 patient had 5 supernumerary teeth.
- 82.9% were diagnosed as either tooth #58 or tooth #59, with a total of 95.1% being located in the maxilla.
- 14.6% were inverted.
- 31.7% were categorized as peg shaped, 26.8% were categorized as normal shaped, 9.8% were categorized as conical in shape, and 31.7% were categorized as generally rudimentary.
- 87.8% were treated with extraction. No teeth exfoliated naturally.

There was a statistically significant difference ($P < 0.05$) between supernumerary teeth and treatment, with more teeth receiving treatment than not.

There was no statistically significant difference between supernumerary tooth location, orientation, and shape and treatment.

CONCLUSIONS

Supernumerary teeth are more likely to receive treatment than not, with teeth #58 and #59 more likely to receive treatment.

REFERENCES

1. Meighani, G., & Pakdaman, A. (2010). Diagnosis and management of supernumerary (mesiodens): a review of the literature. *Journal of dentistry (Tehran, Iran)*, 7(1), 41–49
2. (2019). Management of the Developing Dentition and Occlusion in Pediatric Dentistry. *The Reference Manual of Pediatric Dentistry*, 362–378
3. Gupta, S., & Marwah, N. (2012). Impacted supernumerary teeth-early or delayed intervention: decision making dilemma?. *International journal of clinical pediatric dentistry*, 5(3), 226–230. <https://doi.org/10.5005/ijc-journals-10005-1173>
4. Primoush, R. (1981). Anterior supernumerary teeth - assessment and surgical intervention in children. *Pediatric Dentistry*, 3(2), 204–215