Orthodontic management on a Down Syndrome patient: A case report

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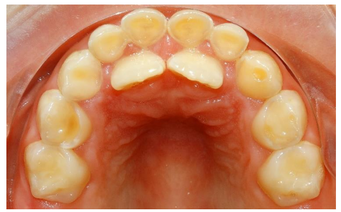
Introduction

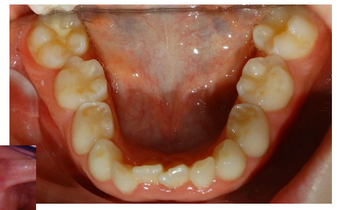
Down syndrome (DS) is a common genetic disorder, with phenotypical characteristics such as craniofacial features or dental anomalies, being tooth agenesis one of the most common and reported dental anomaly in people with DS. Other anomalies include persistency of primary teeth or delayed teeth eruption, which leads to an increasing necessity in DS patients for orthodontic treatment.

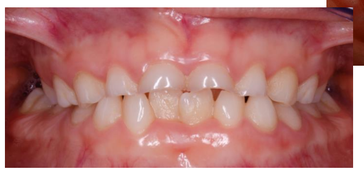
Case Report

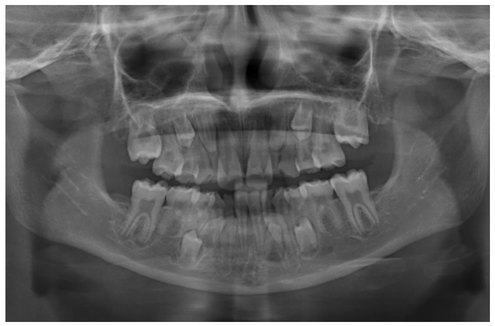
- 11-year-old, male patient, Frankl 3 scale
- Down Syndrome
- Mixed dentition, oligodontia
- Generalized gingivitis induced by dental biofilm
- Mandibular anterior crowding and attrition, attrition on tooth 5.4
- Tooth 3.2 in transposition with tooth 3.3
- Maxilar compression
- Oral breathing

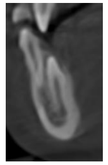
When received, the patient was 9 years, 5 months old. He was referred from orthodontics, since he presented persistency of teeth 5.1 and 6.1, with teeth 1.1 and 2.1 with palatal eruption and in reverse bite.
Distobuccal cusp of tooth 5.5 in bis-to-bis bite.

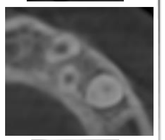










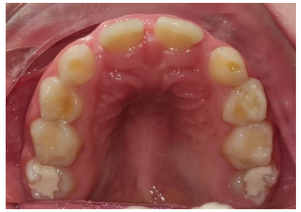


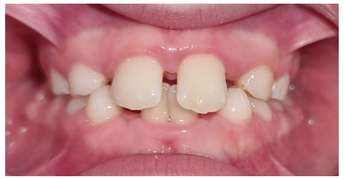
Radiographically he presented agenesis of teeth 1.7, 1.5, 1.3, 2.3, 2.5, 2.7, 4.7, 4.5, 3.5 and 3.7. Teeth 4.3 and 3.3 in mesioversion. Lack of space for the eruption of teeth 4.3, 4.2, 3.3 and 3.2.
In cone beam exam, tooth 3.2 in transposition with tooth 3.3

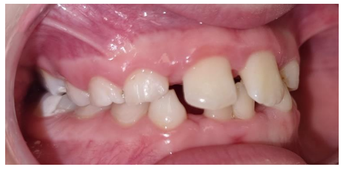
Treatment

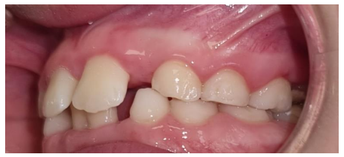
Phase 1

Exodontia of teeth 5.2, 5.1, 6.1 and 6.2. Afterwards, a McNamara disjunctor was installed, with fast expansion protocol (1 daily turn for 15 days).with protrusion arch.

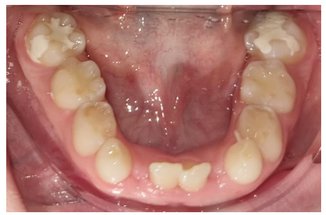




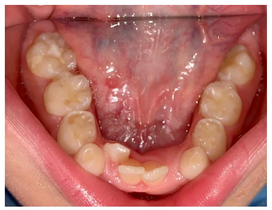




Phase 2

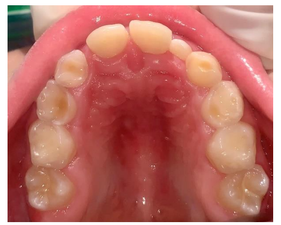


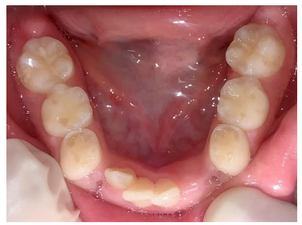
Exodontia of teeth 7.2 and 8.2

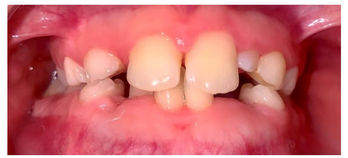


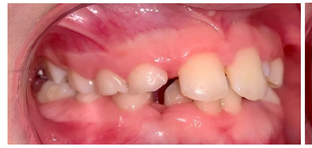
A year later, extraction of teeth 7.3 and 8.3 was performed.

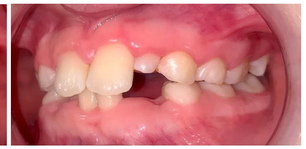
Final photos











Conclusion

It is important to follow patients with Down Syndrome from early stages, since it is a common finding in them to have dental anomalies. With an early diagnosis and treatment, corrective orthodontics could be avoided, giving the patient an adequate resolution for their malocclusions.

References

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2. Scalioni, F. A. R., Carrada, C. F., Tavares, M. C., Abreu, L. G., Ribeiro, R. A., & Paiva, S. M. (2023). Oral health characteristics in children and adolescents with Down syndrome. *Special care in dentistry : official publication of the American Association of Hospital Dentists, the Academy of Dentistry for the Handicapped, and the American Society for Geriatric Dentistry*, 10.1111/scd.12883. Advance online publication. https://doi.org/10.1111/scd.12883