patient's disorder was evaluated using the NRS scale (Numeric Scale, from 0 to 10 in which 0 corresponds to the absence of the symptom and 10 indicates the utmost discomfort), and it emerged that before using the lubricant the mean values of the intensity of the disorder were 6.98. After fifteen days the symptomatology of oral dryness was reduced by 45%.
CONCLUSIONS: From the analysis and the results obtained, the efficacy of salivary substitutes in the treatment of xerostomia and hyposalivation is clearly highlighted. The dental hygienist must take care of the patient's oral health, especially those who have undergone radiotherapy in the head and neck region, motivating them to have a proper oral hygiene and to use permanently oral lubricants to relieve their symptoms.

The management of children with autism spectrum disorder in orthodontic treatment

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Autism spectrum disorder (ASD) refers to a group of neurodevelopmental disabilities with a core set of defining criteria that comprise impaired social interaction, communication, and restricted or repetitive behavioural stereotypes. Most dental manifestations diagnosed are bruxism, tongue thrusting, caries, erosion, xerostomia, gingivitis. In literature a few studies discuss about the management of children with autism spectrum disorder in orthodontic treatment. For this reason, the Unit of pediatric dentistry, Head-Neck Department, Policlinico Umberto I in Rome has taken up a study about management and oral prevention in autistic individuals, using tell-show-do technique, visual pedagogy (CAA), sounds and shapes, verbal reinforcement, and several basic behaviour methods for accomodation of these patients including the presence of parents. We have employed these innovative methods to start an orthodontic treatment on autistic patients following their improvement in oral health.
METHODS: For our study was selected a 7-year-old autistic child who presented eruptive difficulties of 2.1 because of the permanence of 6.1 and single-left posterior cross bite. The dmft was 0.17 and the plaque index was code 3 of silness and loe index, indicating abundant plaque accumulation over the gingival margin.
Orthodontic treatment was performed with a rapid palate expander activated twice a day for 15 days. After 15 days it was held for 6 months, during which, due to the annoyances caused to the child, it was replaced with an upper plate with a transversal expansion screw as maintenance without activating the screw. During each appointment a blackboard was used and images related to the oral hygiene devices were presented on it, adopting the Alternative Aid Communication (CAA). This teqnique improved communication with the patient and influenced the success of orthodontic treatment and oral health management.
RESULTS: From the beginning of orthodontic therapy, once a month, oral hygiene instructions were given, motivating the child and his mother with plaque detectors and toothbrush. During each follow-up, the plaque index was significantly reduced and no caries were reported. The dmft remained, therefore, unchanged and no gingival inflammation or lesions to the oral mucosa were found and the eruption of 21 was successfully achieved.
CONCLUSIONS: In literature only one case of orthodontic treatment on a patient with Autism spectrum disorder was found but this deals with the subject from the orthodontic point of view. In our project the dental hygienist plays a fundamental role in the management of oral hygiene, contributing decisively to prevent the appearance of dental and gingival problems in autistic patient wearing orthodontic appliances, which could result in needing anesthesia sessions for the resolution of these problems.

Analysis of antimicrobial effect and antibiofilm of two toothpastes at different fluorine concentration

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BACKGROUND: Our research was focused on the analysis of the antimicrobial and antibiofilm power of two commonly used oral toothpastes containing different concentrations of fluorine. These toothpastes were tested in vitro on deciduous teeth.
METHODS: Culture of S. mutans was inoculated in 1 mL of sterile phosphate buffered saline (PBS) with a 5% of toothpaste concentration. with 500ppm e 1400ppm of fluorine. The ability of the bacteria to form colonies was measured by counting the number of Colony Forming Units (CFU). Results were compared with the control sample, represented by untreated solution. Later A selection of 20 deciduous molars was prepared. The teeth were extracted as a result of orthodontic treatments or physiological replacements. The procedures were performed at the UOC of Pediatric dentistry Sapienza University of Rome department of Oral and Maxillo-Facial Science. Each element, was preserved in normal saline and then sectioned at a cementum-enamel junction level. Successively the external and occlusal surfaces have been etched with 37% orthophosphoric acid for 1 minute in order to reproduce the demineralization that occurs in the oral environment. Subsequently, 10 elements were treated, by manual brushing, with a toothpaste containing 500 ppm of fluorine, the remaining 10 with a toothpaste at 1400 ppm of fluorine. The brushing process was performed with a duration of two minutes, three times a day for a period of 15 days. In a second phase, each sample was exposed to a bacterial suspension of S. mutans for biofilm cultivation. After growing, a Crystal Violet (CV, Sigma) assay was performed to quantify biofilm formation on teeth samples.
RESULTS: The microbiological tests performed on 5% solutions of the two toothpastes, compared to the untreated aqueous solution (UT), showed a statistically very similar antimicrobial effect. The viability rate of bacterial colonies decreases with the passage of exposure time and is similar for the two products. The analysis of bacterial biofilm formation on the surfaces of the dental elements indicates an inhibiting action of the biofilm, similar for both toothpastes.
CONCLUSIONS: The present study demonstrated that the use of two toothpastes has been shown to have similar antimicrobial and antibiofilm characteristics. The use in pediatric patients of a low-fluoride toothpaste as well as providing protection against the bacterial attack also reduces the potential risk of fluorosis.