

Current Trends in Dentistry

Bouguezzi Adel^{1*} and Abdul Habeeb Bin Mohsin²

¹Department of Oral Pathology and Oral Surgery, University of Dental Clinic of Monastir, Tunisia

²Department of Prosthodontics, Sri Sai College of Dental Surgery, Dr. NTR University of Health Sciences, India

Editor's Note

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*For Correspondence

Bouguezzi Adel, Department of Oral Pathology and Oral Surgery, University of Dental Clinic of Monastir, Tunisia, Tel: 00216 54 457 965

E-mail: Dr-adel@live.fr

INTRODUCTION

Research and Reviews: Journal of Dental Sciences is a highly acclaimed journal in the field of dentistry. It is known across the world as a medium of dissemination of high quality articles that are based on diverse aspects of dentistry including diagnosing, treating and managing dental diseases. The current issue of the journal published many such articles that were based on contemporary practices in dental sciences.

The evaluation of clinical efficacy of any medical procedure is based on its impact on survival and longevity. The assessment of dental procedures also considers highly specific parameters viz. clinical attachment level or probing depth. However, most of the persisting methods of performance evaluation, consider only few primary objectives, which limit the process of evaluation itself. The article published by Just et al. presented a new method of evaluation that encompassed the combination of several weighting parameters. Apart from assessing the success of dental treatment procedures in clinical trials, the new Clinical Success Parameter (CSP) also enables assessment of biological and technical aspects of the treatment method as well as its overall impact on the quality of life of the patients. The new method relies on integrating the results of these three aspects into a virtual and risk-oriented surrogate parameter. Furthermore, the new method also helps in differentiating large number of clinical parameters so they can be focused and adapted for analysing different treatment outcomes^[1].

Soldering is most commonly used in orthodontics for joining wires present at different cross-sections thereby modifying the force systems. Transpalatal arch, quad helix and rapid maxillary expander are the most commonly employed silver solder appliances that are used during dental procedures. During such processes, a stainless steel wire is used to join the molar bands placed across the palate. The article published by Mohamad et al. discussed the risks associated with the use of these orthodontic appliances caused due to leaching of metal ions from them. It has been observed that these soldered appliances often undergo corrosion as a result of which toxic metal ions are released inside the oral cavity. The article made a valid effort towards assessing and comparing the leaching potential of such hazardous metal ions and comparing them with the minimum health and safety standards formulated by the World Health Organization (WHO). This was done by immersing the appliances into low pH solutions (2.5 to 5.5) for prolonged periods of time (22 weeks). Spectrophotometric analysis was performed to assess the amounts of silver (Ag) and nickel (Ni) released and it was found that highest amount of metals were released in solution in low pH conditions. In some of the recorded readings it was showed that the amount of metals release exceeded the values set by WHO^[2]. The article demonstrates the potential risks of using soldering in orthodontic procedures and may help in instigating research studies that may help in replacing it in future.

Change in food habits and life style has caused an increase in the average number of people suffering from periodontal disease. The article published by Fonseca et al. presents the results of a study that investigated the prevalence of periodontal diseases among the adolescents residing in the region in and around the Jequitinhonha Valley, State of Minas Gerais and South-Eastern Brazil. The authors used Geoprocessing technology to analyze the coroplethic maps, associated the color grading of these maps with the Community Periodontal Index (CPI) values that were calculated on the basis of a previously conducted cross-sectional study. The results obtained by incorporating geographical specifications into the results of public health studies helped in understanding the correlations between geographical spaces associated social transformations and its impact on public health. Further analysis of the health data indicated that highest prevalence of periodontal diseases was observed in adolescents residing in cities with greater population size and better oral health services^[3]. The article presents some interesting facts that may be implicated in understanding the multifactorial aspects of periodontal disease incidence.

The article published by Madukwe showcased various aspects of occurrence and implications of hypercementosis. The study conducted by the author analyzed 1,254 human teeth that were collected from the University of Benin Teaching Hospital's Department of Oral Surgery and Pathology. Hypercementosis in the collected samples was analyzed, after which it was observed that the frequency of occurrence of hypercementosis was highest in the molars. The findings of the study indicated the occurrence of specific patterns of hypercementosis that can only be elucidated by further analysis of age-related increase in thickness of the cementum in normal human teeth as well as the effects of induced tooth movement in increasing or decreasing it ^[4].

Ossifying Fibroma (OF) is one of the most common forms of benign fibroosseous lesions (FOLs) in which the normal bone is gradually replaced by an abnormal bone formation that contains fibrous tissue. The study of this oral discrepancy is crucial to the diagnosis and treatment of the discrepancies that it causes. The article by Soyele et al. presented the results of a retrospective analysis of cases of maxillofacial OF that were reported in the Department of Oral Biology and Oral Pathology, Lagos University Teaching Hospital, Idi-araba, Lagos during the period 1970 to 2009. Most of the studied cases were diagnosed on the basis of histological analysis. The collected data was analyzed with the help of IBM SPSS Statistics (windows version 20 (Armonk, NY: IBM Corp)). The results obtained after statistical analysis indicated that OF is more common in females belonging to the age group of 20-29 years and that it occurs mostly in the mandible rather than the maxilla ^[5]. The results of the study presented in the article are highly interesting and may help in the development of standardized procedures of diagnosis and prognosis of FOLs.

The use of stainless steel crowns (SSC) is highly advantageous in pulpotomy or pulpectomy. It provides full coronal coverage and helps in quick healing. Though several methods of crimping and contouring have been developed and adopted to ensure the proper placement and functioning of SSCs, it is quite often that the gingival margins of SSCs cause inflammation. It has been proposed that luting cements may help in better retention of crowns and reduce microleakage. The article published by Reddy presented a comparative analysis on the tensile bond strength and microleakage prevention properties of cements GC Fuji I, Rely XTM luting 2 and new self-adhesive cement Smart cemTM 2 for cementation of Stainless Steel Crowns in the Primary Molars. The results obtained indicated that Smart CemTM2 had least microleakage and highest tensile bond strength as compared to the GC Fuji I and Rely XTM luting 2 when used for cementation of stainless steel crowns. The results presented in the article may be used for the development of more efficient materials suitable for cementing stainless steel crowns ^[6].

Occurrence of traumatic dental injuries is common in school children and adolescents. Apart from causing a great deal of pain, they may also cause many psychosocial and economic problems. The article published by Uppal et al. highlighted the role of school teachers in handling such situations caused due to the occurrence of dental injuries. The authors tested the persisting levels of knowledge and awareness among teachers working in schools of Shimla, Himachal Pradesh through a self-administered questionnaire. The results of the study indicated that most of the teachers are unaware of the basic points that need to be adhered to while handling such situations and proposed that necessary steps should be taken towards enhancing the levels of awareness and knowledge among school teachers ^[7].

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