Obliteration of the periodontal osseous defect associated with the anatomical variant, palatoradicular groove by an ubiquitous bone graft - NovaBone puttyTM: A case report

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Abstract: Anatomical variations such as Palatoradicular grooves (PRGs) are morphologic defects, found frequently in maxillary anterior teeth. A PRG may serve as a pathway for the development of a periodontal osseous defect. Treatment modalities for PRGs include scaling, root planing, flap curettage and use of various bone grafts. There has been a renaissance of research in the utilization of various bone graft materials in the treatment of periodontal osseous defects. Though a myriad of choices for bone grafting continue to increase, synthetic bone substitutes have gained acceptance. Recent innovation focuses on the use of the synthetic NovaBone Putty containing bioactive calcium phosphosilicate particulate and an absorbable synthetic binder. This novel bone graft possesses both osteoconductive and osteostimulatory effects. Thus, the present case report describes the successful management of a 30 year old man who presented with advanced periodontal destruction associated with a PRG in the maxillary lateral incisor. On examination, a groove was noted on the midpalatal surface of the tooth, extending subgingivally from the cingulum. At baseline, the defect demonstrated a probing depth of 11 mm and bone loss radiographically. Non-surgical periodontal therapy was carried out and patient was recalled after 2 weeks. After thorough debridement, an odontoplasty of the PRG was performed using a round diamond bur. The groove was conditioned with 10% polyacrylic acid and then sealed with glass ionomer cement (GIC). A NovaBone Putty graft was then placed in the defect site and the flap surgery accomplished. At the 6 month evaluation, a 5mm probing depth was recorded at the midpalatal aspect. Twelve months postsurgery, the patient demonstrated a residual probing depth of 3 mm. There was radiographic confirmation of a complete resolution of the bone defect.

Conclusion: The results of the present case report are promising, with obliteration of the periodontal osseous defect.

Biography
Shaeesta Khaleel Ahmed B. has completed her Postgraduation (M.D.S.) in Periodontics from Krishnadevaraya College of Dental Sciences, Bangalore, 2010. In addition to dentistry, she also holds a master's degree in Hospital administration (I.I.M.T. Medical College & Hospital, Agra, 2006). She has worked as teaching faculty in Periodontics since 2010 till date, guiding students academically and clinically at Krishnadevaraya College of dental sciences (2010-2015) and currently working as Assistant Professor at the esteemed King Khalid University, K.S.A. (2015 till date). She is actively involved in many research projects independently and with students. Not just being a regular attendee at national and international conferences, she has also presented several scientific research projects at these gatherings. She has been a guest speaker for Colgate Palmolive at her previous institution. Her work has received recognition in form of publications (13 scientific publications) in varied journals of high merit (I.S.I, Pub Med, Medline journals).

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