A fixed convenient esthetic solution- Andrew’s Bridge: A case report

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Abstract
A patient with several missing teeth in the anterior aesthetic region along with severe ridge defect poses a challenge for prosthodontic rehabilitation. A removable partial denture may become heavy as it replaces the teeth as well helps to restore the normal facial musculature, while a conventional fixed partial denture and implant supported FPD may fail to replace the soft tissue structure. The present case discusses a fixed removable partial denture rehabilitation of a patient that will helps us to achieve optimum esthetics, replace the missing teeth along with the supporting structure, be convenient and pocket friendly.

Keywords: Andrew’s bridge, Removable fixed prosthesis, Economic.

Introduction
The basic aim of prosthodontics involves the replacement and restoration of teeth by artificial substitutes for restoring function, esthetics, and comfort. Tooth loss is often followed by loss of alveolar bone, thus while rehabilitating such cases it is essential to fabricate a prostheses which helps to achieve optimum esthetics, phonetics, comfort of the patient and at the same time be economical to the patient. Not all the patients are an implant patient, thus in an era that is considerably moving towards implant dentistry, it is necessary to find an alternative too.

It was Dr James Andrews of Amite, Louisiana, who introduced the fixed removable Andrew’s system (Institute of Cosmetic Dentistry, Amite, LA). The Andrew’s system was constructed from a fixed bridge with removable pontics. The fixed removable partial denture has a pontic assembly that is removed by the patient for preventive maintenance. The retainers are either porcelain fused to metal (PFM) or full veneer metal, which are permanently cemented to the abutments. The retainers are joined with prefabricated castable or custom made bars and then cast together, or a prefabricated metal bar is soldered to the metal copings after casting. The removable pontics are retained by a clip on the intaglio surface which fits precisely over the bar attachment.

Indication
1. Ridge / jaw defects either due to trauma and/or surgical ablation.
2. Cleft palate patients with congenital or acquired defects.
3. Often fixed partial denture failure with badly damaged, cracked or weakened teeth by fillings and disproportionate teeth.
4. Sometimes could be used in patients with periodontal problems.

Case Report
A 48-year-old female patient reported to the department of prosthodontics with a symptom of pain and foul smell in relation to fixed partial denture in the mandibular anterior arch since past 2 months. Dental history revealed extraction of mandibular anterior teeth 3 years earlier due to mobility, followed by fabrication of Porcelain fused to metal bridge extending from mandibular left first premolar to right first premolar for replacement of mandibular anterior teeth. Clinically the prosthesis had fractured with respect to 34, 33, 34, 35, 43, 44, 45 (Fig. 1). Gingival inflammation was present, thus there was failure of the fixed partial denture prosthesis.

It was decided to remove the existing FPD for proper accessibility to the particular area (Fig. 2). Radiographic examination revealed periapical pathology with relation to 33, 34, 43. Distal caries involving pulp with 35, 44, 45 (Fig. 3). Ridge area was inflamed due to lack of oral hygiene. Inappropriate pontic placement was the reason for inflammation and halitosis.

The treatment started with root canal procedure w.r.t 33, 34, 35, 43, 44, 45. Periodontal treatment consisting of phase 1 therapy of oral prophylaxis, oral hygiene instruction and maintenance was carried out. The mandibular canine were chosen as abutments to support the Andrew’s System. 33, 34, 35, 43, 44, 45 were prepared to receive Porcelain fused to metal (PFM) crowns (Fig. 4). Elastomeric impressions were made using putty wash technique with and master casts were poured in die stone (Kalstone, Kalabhai Karson Pvt. Ltd., India). Temporization for the prepared teeth was done using tooth colored self cure acrylic resin by indirect technique. Wax pattern was fabricated for PFM retainers and they were connected with a custom made bar prepared and adapted according to the curvature of the ridge running parallel to it. The bar was attached to the abutment teeth as posteriorly as possible. The prepared pattern with the bar was then casted in chrome cobalt alloy. The metal framework was then finished and polished to try in the patient’s mouth and was checked for esthetics and clearance between the bar attachment and underlying soft tissues (Fig. 5). Shade selection was done followed by ceramic firing on the copings. The temporary restoration was removed and the...
finished restoration was cemented using GIC cement (Fig. 6).

Once the crowns were cemented, an irreversible hydrocolloid impression was made along with the bar. Occlusal rims were fabricated and the missing anterior teeth were arranged for trial to check for esthetics. A flexible removable partial denture was then fabricated replacing the missing teeth and placed on the bar attachment (Fig. 7). Following this the patient was trained to properly remove and replace the RPD fabricated over the fixed component of Andrew’s Bridge and to maintain proper oral hygiene (Fig. 8). The patient was on periodic recall to follow up the prognosis of the treatment.

**Discussion**

Patient selection is critical and problems that develop post treatment are the result of diagnostic errors during treatment planning. The bar should be placed as close to the gingival margin of the crown technically feasible, but tissue contact should be avoided as it may result in tissue proliferation if
The above discussed case was short listed for presentation at the Oral Healthcare Innovation Conference 2019 organized by the Ministry of Health and Family Welfare Govt. of India & CDER AIIMS, New Delhi.

**Source of funding**
None.

**Conflict of interest**
None.

**References**


**How to cite this article:** Aaran H, Kumar V, Dubey A. A fixed convenient esthetic solution- Andrew’s Bridge: A case report. *Int J Oral Health Dent* 2019;5(3):163-165.