INTRODUCTION

Maxillofacial defects may occur congenitally or may be acquired due to surgical resections, burns, infections or trauma and can pose great loss to functional efficiency, phonetics as well as aesthetic profile of the affected individuals. These defects, whenever occur intra-orally, disturb the continuity of the lips, alveolar processes, hard and or soft palate. There can be oro-nasal communication leading to food regurgitation and unintelligible speech. Males are predominantly affected (52.6%).

Plastic surgery and tissue reconstruction is the treatment of choice. However, in extensive defects with limited tissue support, removable and/or fixed obturators are usually provided depending upon the shape and the area involved.

The term “obturator” is derived from the Latin word “obturare” means “to stop up”. These can be fabricated in acrylic resins or silicone materials and can incorporate dental, palatal, nasal and/or speech bulb components.

These cases require a multi-disciplinary team approach after detailed and thorough patient evaluation considering his functional and psychosocial requirements. A comprehensive long-term planning, family counselling and a sympathetic consideration can dramatically improve the result outcomes, and these patients can become a useful component of the society.

This report discusses the intra oral rehabilitation of a complete, unilateral cleft palate along with dento-alveolar rehabilitation.

CASE REPORT

This 17 years old patient was referred to the Department of Prosthodontics, de Montmorency College of Dentistry from the Outpatient Department of Mayo Hospital, Lahore with complaints of missing anterior teeth and a big opening in the palatal region, with nasality of voice as well nasal regurgitation of food. However, patient had adapted to these problems to some extent. His major complaint at this time was mainly missing dental component which was jeopardizing his morale and confidence.

On clinical examination, a complete cleft involving the anterior alveolar bone, hard palate, soft palate extending till uvula was diagnosed (Figure 1). There was missing left lateral incisor with rotated left canine tooth. Dental midline was also shifted. A big scar on the lip also indicated surgical lip repair.

After thorough examination and detailed discussion with the patient and his attendants, a fixed-removable prosthetic rehabilitation was planned. Anterior dental deficit was rehabilitated using a four unit porcelain fused to metal fixed partial denture utilizing the central incisor and the canine teeth. This fixed partial denture...
rehabilitated the missing lateral incisor as well as the shifted midline (Figure 2).

Palatal defect was restored using an acrylic palatal obturator attached to a cast metal palatal plate (Figure 3). Direct retainers were provided on the posterior teeth to gain support and retention. Indirect retention also was achieved by the extensions of the obturator. This obturator was relined as well to seal passage of any air or liquids.

A thorough prosthesis care was explained to the patient and a detailed follow-up was planned. The patient visited after 24 hours and then after one week for minor post insertion complaints. He was happy and contented with his new appearance and better quality of voice.

DISCUSSION

Rehabilitation of maxillofacial defects especially in cases of congenital clefts of the lips and palates is always challenging from a prosthodontist’s point of view. These clinical scenarios always present with unpredictable prognosis, as these require constant patient and family counselling, long term follow-up schedules and repeated maintenance and repair of the prostheses. These cases should always be dealt with thorough evaluation and diagnosis, long-term treatment planning and cost management plans.7

Most recent development in the management of these conditions is the application of a multi-disciplinary team approach involving Prosthodontists, Periodontist, Orthodontist, Paedodontist, Oral Surgeons, Psychologist, Speech Therapist and other medical specialists with shared responsibilities.8

Treatment outcome can be enhanced by early referral to the tertiary care centres where surgical closures should be the preferred option with increased patient’s compliance.

These cases always pose some compromises between aesthetics and functional efficiency, and it is the patient who has to decide that which component should be given preference in order to improve his quality of life.9 Surgical tissue repair including hard and soft tissue grafting to close the palatal defects and later osseo integrated implants for dental rehabilitation can be an ideal approach in this case scenario. However, size of the cleft palate and alveolar ridge defect was too wide, patient was not willing for extensive surgical procedures and was unable to manage its cost. In this case, aesthetics was definitely the first priority of the adult age patient, so anterior dental restoration was provided using fixed prosthesis. Posteriorly, the larger size of the defect made a fixed restoration difficult. So cast palatal removable prosthesis was provided. Moreover, the scope of new flexible, life like materials (Medical grade Mollomed Silicones) and use of CAD-CAM Technologies should always be offered even in the restorations with the removable prostheses.10 However, the patient was very happy and satisfied with the early outcome of the much simplified and cost-effective treatment strategy. He had also enthusiastically participated in the treatment planning and execution. However, in order to achieve a long-term success, regular follow-up visits and maintenance protocols are always mandatory.

REFERENCES


Figure 1: Intra oral view of the cleft.  Figure 2: Fixed partial denture after cementation.  Figure 3: Cast palatal plate with acrylic obturator.

