IMPLANT RETAINED AURICULAR PROSTHESIS: A CLINICAL REPORT


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Abstract

Ears have an important role in function and aesthetics. The loss of the ear can lead to psychological and hearing problems. Although several reconstructive techniques exist for auricular defect, the use of implants to anchor auricular prosthesis presents a suitable alternative. This article presents a case of right auricular defect which was result of trauma for which two bone-anchored implants were placed. Hader bar with ERA attachments were used for retention of the silicone auricular prosthesis.

Key Words: Auricular defect, ERA, Extraoral implant, Hader bar, Silicone prosthesis

Introduction

Auricular defects may be congenital or acquired which may result from tumors or accidents (1-5). The auricular defect cause esthetic, functional and psychosocial problems for the patient. Rehabilitation of the defect can be achieved by surgical reconstruction or prosthetic rehabilitation. Auricular prosthesis using extraoral implants have been used to offer better retention compared to adhesives or frameworks. However, the main limitation with extraoral implants, including implant retained auricular prosthesis, is the need for hygiene maintenance of the soft tissue around the implants (5). Though the failure rate of the auricular implants due to peri-implantitis is low, it may lead to complications such as bleeding, pain, and discomfort (6-8).

This article presents a case report of implant retained medical grade RTV Silicone auricular prosthesis.

Clinical Report

A 40-year-old male patient was referred to the Maxillofacial Prosthetics Service, Mahidol University for the prosthetic rehabilitation of his right auricular defect which resulted from trauma (Figure 1). On examination, the partial antihelix was remaining. The treatment plan consisted of fabrication of implant retained right auricular prosthesis using Hader bar with ERA attachments in order to obtain a good retention.
Discussion

The use of craniofacial implants for retention of extraoral prostheses not only offers excellent support and retention, but also improves the patient’s appearance and the quality of life. Implant retained auricular prosthesis provides multiple advantages such as convenience, security, consistent retention and positioning, elimination of the need for adhesives which may cause tissue irritation, and maintenance of marginal integrity and longevity (9).

For an auricular prosthesis, two implants are sufficient to retain the prosthesis. Magnet and bar-clip retention are the two other forms of retention used in the auricular region. Use of magnet was not recommended in this case because though magnet may provide acceptable retention, it is less stable under the lateral force (10). The bar-clip system provides good retention for the prostheses. However, bars may limit access for performing hygiene procedures. So, in our case, implant retained auricular prosthesis was indicated (11).

Numerous attachments are available for the retention of implant-retained prosthesis. Locator and O-Ring are also used. In addition to the prosthetic ear, implant-retained auricular prosthesis usually requires a bar-clip with other retentive elements like ERA to offer better retention. (9).

The factors that may cause peri-implantitis in extraoral implants are thick skin graft, movement of skin around the abutment, bar-clip design for retention of the prosthesis, improper hygiene, humid environment, and growth of opportunistic microorganisms (12). In our case, peri-implantitis might be resulted from improper hygiene. This was managed with proper reinforcement of hygiene methods. The patient was satisfied with the prosthesis because of acceptable esthetic and excellent support and retention.

Conclusion

The implant retained silicone auricular prosthesis provides an esthetically and functionally acceptable outcome in patients with auricular defect. Hygiene maintenance is necessary for the success of the implant retained prosthesis.

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