Abstract
The article reports on a case of sinus infection management after sinus lift operation. Patient presented to dental clinic with edentulous maxilla for teeth reconstruction with implant supported dental prosthesis. Computer tomography scan has been performed to evaluate alveolar bone property for implantation. As the bone height on both sides was approximately 2 mm, which is inappropriate for implantation, sinus lift procedure was done. After ten days post surgery the patient complained of febrile temperature, pain in left maxillary region, breathing difficulties and purulent discharge from left nostril. Medicinal and surgical treatment process in otorhinolaryngological clinic, discussion on possible inflammatory reaction causes and new implantation possibilities are described in the article.

Keywords: Sinus lift; Maxillary sinus floor augmentation; Rhinosinusitis

Introduction
Insufficient bone quality and quantity in posterior maxilla is a common clinical state, which leads to further prosthetic surgery difficulties. It occurs on account of several causes, most frequently due to the pneumatization of sinus subsequent to the tooth loss and the concomitant excessive alveolar resorption [1]. Depleted alveolar bone is insufficient to host implants of 10 mm in length and 3-4 mm in diameter, which are minimum requirements to allow bone-demanded bilateral implant placement in posterior maxilla. Therefore, maxillary sinus floor augmentation has to be done to provide the foundation for consequent implantation [2]. The sinus lift procedure is a technique of bone reconstruction of the depleted maxillary sinus floor. It is one of the primary surgical options allowing placement of dental implants in the posterior maxilla. Multiple studies have shown that autogenous bone, allogeneic bone, and xenogeneic bone graft materials work well along the sinus floor [3]. The objective of this article is to present a clinical case of bilateral maxillary sinus lift with a year of follow up. Postoperative complications, which presented as a chronic maxillary sinusitis and complete osteograft material failure with nasal discharge and remaining material resorption resulted in oroantral communication on left side. As a result of this processes planned implantation cannot be performed. In a discussion possible causes of complications and options of other methods of teeth prosthetics for this particular patient are discussed.

Case Report Description
Data from the patients’ anamnesis before she presented to the ENT specialist in the clinic. 52 year-old women with edentulous maxilla, presented to dental clinic for prosthetic restorations with implant supported dental prosthesis. Computer tomography scan has been performed to evaluate alveolar bone property for implantation. As the bone height on both sides was approximately 2 mm, which is inappropriate for implantation, sinus lift procedure was done. After ten days post surgery the patient complained of febrile temperature, pain in left maxillary region, breathing difficulties and purulent discharge from left nostril. Medicinal and surgical treatment process in otorhinolaryngological clinic, discussion on possible inflammatory reaction causes and new implantation possibilities are described in the article.

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Teeth loss provides either functional or aesthetic problems to the patients and tooth implantation is one of the best solutions of this condition. The candidates for implantation procedure must have sufficient bone height and width to support the artificial tooth crown [4]. According to the literature alveolar bone height must be at least than 10 mm and the width not less than 4 mm [5]. To evaluate remaining alveolar bone height the panoramic radiographic investigation or cone-beam computed tomography investigation should be done [6].

Implant treatments of the edentulous maxilla occasionally meet with problems due to the lack of bone volume. The most common cause of maxillary sinus floor atrophy is a loss of teeth. Following tooth extraction, as much as 40 - 60% ridge resorption can occur within 1-3 years. Being edentulous for a prolonged period of time, the bone starts to deteriorate, resulting in a lack of bone height to sustain a dental implant. In such cases the sinus lift procedure is performed by placement of the graft material into the maxillary sinus cavity, to prepare the bone for teeth implantation [7]. Patient identification and correct preparation for sinus lift procedure is of a great importance. For achievement of better results multidisciplinary approach is needed. Othorinolaringologist’s consultation is needed before sinus lift procedure to evaluate if patients’ sinus health condition is appropriate. Maxillofacial surgeon is responsible for surgery technique and a prosthetist for further implantation strategy [8]. Implants can be placed simultaneously or as a secondary procedure after graft consolidation [9]. There are several operation techniques and a variety of grafting materials available such as: autogenous graft (patient’s own tissue), allograft (bone from the individuals of the same species), xenografts (bone from other species) and synthetic materials (hydroxyapatite, metals, corals and plastics). Though, nowadays, autogenous bone is the most widely used material for sinus augmentation. It is explained by better osteogenic capacity and a minimal risk of tissue rejection, comparing to other grafting materials [10]. In a reported case for right maxillary sinus floor augmentation autogenous bone fixed with titanium screws has been used and a synthetic material Osteo Graft alloplast, which is low-density hydroxyapatite, has been used for left side sinus floor augmentation.
Sinus lifts Failure Resulting in Chronic Sinusitis

The authors state no conflict of interest.

References


