

Incidence of Alveoloplasty Post Extraction – A Retrospective Study

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Abstract:

Aim:

The aim of this study is to analyze the advantages of alveoloplasty at the time of extraction .

Objective:

The objective of this study is to determine whether alveoloplasty, if performed at the time of extraction saves time and ends in faster prosthetic rehabilitation when compared to secondary alveoloplasty.

Background:

An alveoloplasty is a pre prosthetic procedure that smoothens the jawbone. This procedure is done in areas where teeth have been extracted or lost. Alveoloplasty can be done alone, but is usually done at the time of extraction. The aim of this pre prosthetic procedure is to improve the quality of oral supporting structures that provide better retention and stability to dental prostheses.

Reason:

This study is done to implement protocols to reduce the need of secondary alveoloplasty as the procedure causes extra financial and surgical burden to the patients.

INTRODUCTION:

Edentulism is the condition of being toothless. Fall of some teeth results in partial edentulism, whereas loss of all teeth results in complete edentulism. Edentulism can be accompanied by functional and sensory disturbances to the oral mucosa and salivary glands. Edentulous patients are liable to reduced tissue reformation and reduced tissue counteraction that affects the protective function of the oral mucosa. (1, 2, 3)

People lack confidence on their appearance due to edentulism. They hesitate to go out in public as they feel embarrassed to smile and talk to people. Edentulism also affects a person's speech as speech and words are dependent on our anterior teeth. Being edentulous automatically affects the appearance of the person.

Complete loss of teeth leads to facial ageing. Edentulism also affects the health status of an individual. Edentulous people are at a greater risk of cardiovascular disease. Edentulism may lead to a condition called oral dyskinesia which is defined as abnormal, involuntary, shaped or standardized and aimless orofacial movements. It can occur due to several factors such as ill-fitting dentures and unstable prostheses, oral discomfort etc... (4)

However its exact etiology is not known. These ill-fitting dentures and unstable prosthesis can be the outcome of not performing the pre-prosthetic surgeries such as alveoloplasty immediately post extraction. Alveoloplasty is a pre-prosthetic surgery done to improve the quality and condition of the hard and soft oral aiding structures, so that they can provide retentive, supportful and stable dentures. It is carried out by recontouring and smoothing the alveolar arches followed by covering them with healthy soft tissue which helps in providing a stable and retentive

oral prosthesis. Its main objective is to rounden the sharp bony edges and to remove any bony spicules or undercuts present after the extractions.

However alveoloplasty which is performed on the day of extraction may lead to faster prosthetic replacement of edentulous spaces when compared to those that performed after some days of extraction. In our study we have considered the above lines as our assumption and tried to prove it by retrospective analysis.

MATERIALS AND METHODS:

Our study was done in the department of Oral and Maxillofacial Surgery, Saveetha Hospital and Dental College, Chennai. Our study included 30 cases out of which 15 cases that have undergone extractions have undergone alveoloplasty done on the same day and the remaining 15 patients have undergone alveoloplasty after few days of extraction.

The datas were collected by assessing the patient report by entering the patient's registration number in the patient report column in the RMS sheet. The datas collected includes the days of extraction, day of alveoloplasty, start of the prosthetic replacement and completion of the prosthetic replacement.

RESULTS:

The study had a total samples of 30 out of which 15 cases have undergone alveoloplasty on the same day of extraction and remaining 15 have undergone alveoloplasty on a different day of extraction.

The mean time taken for the completion of prosthetic replacement in patients who has undergone alveoloplasty on the same day of extraction is found to be 22.8 days which can be approximated to 23 days.

TABLE 1:

Time taken for the completion of prosthetic replacement in patients who have undergone alveoloplasty on the same day of extraction:

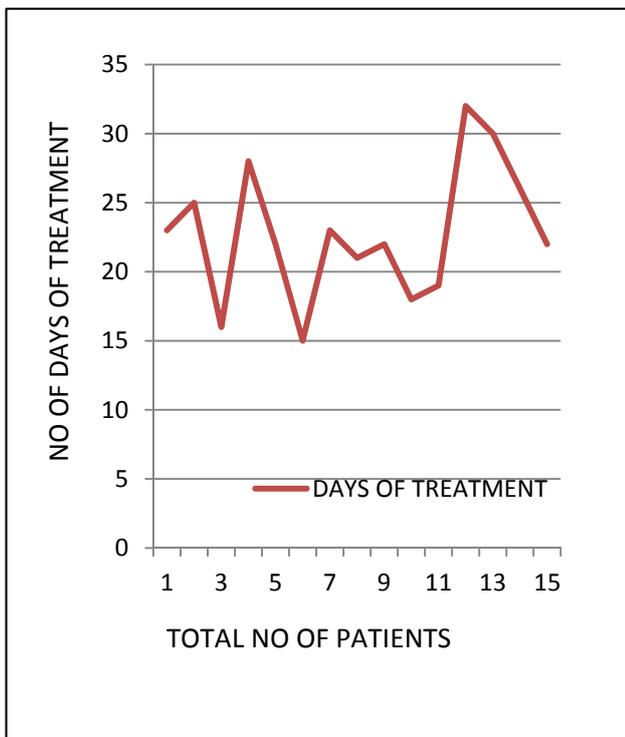
Duration of extraction (in weeks)	Completion of prosthetic replacement (in days)
1	23
3	25
2	16
1	28
2	22
2	15
2	23
1	21
2	22
1	18
1	19
3	32
2	30
1	26
2	22

TABLE 2:

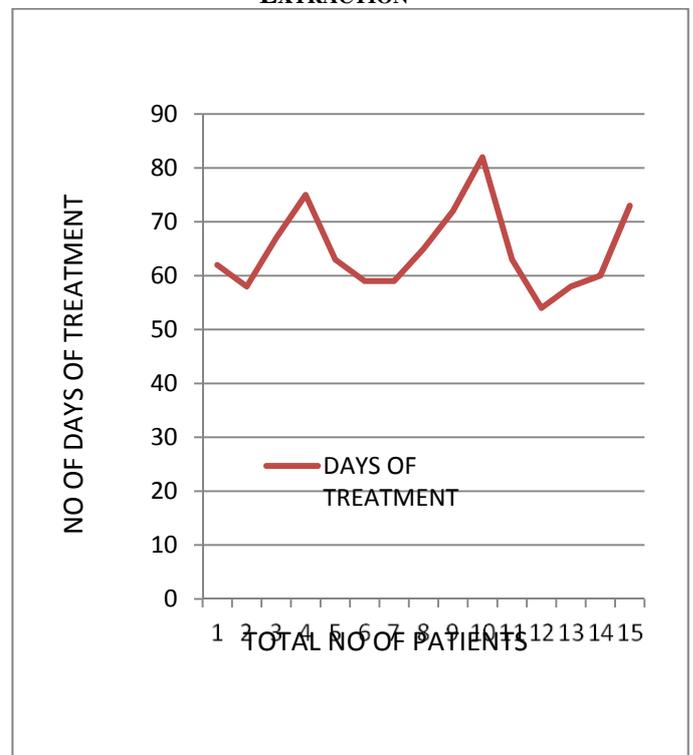
Time taken for the completion of prosthetic replacement in patients who have undergone alveoloplasty on a different day of extraction:

Duration of extraction (in weeks)	Completion of prosthetic replacement (in days)
2	62
2	58
2	67
1	75
3	63
2	59
1	59
1	65
2	72
1	82
2	63
3	54
2	58
1	60
1	73

DURATION OF TREATMENT FOLLOWING ALVEOLOPLASTY ON THE SAME DAY OF EXTRACTION



DURATION OF TREATMENT FOLLOWING ALVEOLOPLASTY ON A DIFFERENT DAY OF EXTRACTION



The mean time taken for the completion of prosthetic replacement in patients who have undergone alveoloplasty on a different day of extraction is found to be 64.6 days which can be approximated to 65 days.

From the results obtained from the above two tables we can find that the mean time taken for the completion of prosthetic replacement is quite higher in cases that had alveoloplasty done on a different day of extraction compared to those cases that had alveoloplasty done on the same day of extraction.

DISCUSSION:

Teeth have a major role in facial appearance, speech and eating. There are many evidences demonstrating the negative effect of edentulism on Oral health^(5, 6). Edentulism have a negative influence on oral function, social behaviour and day to day activities⁽⁷⁾. Compromised oral function leads to self-esteem and a fall in psychosocial well-being⁽⁸⁾.

Edentulous people may restrict themselves from participating in social activities as they feel embarrassed to speak, smile or eat in front of others, which eventually keep them in an isolated state⁽⁹⁾. In these individuals wearing dentures could improve their facial and oral appearance. It can improve social interactions which may increase their self-esteem and can lead to psychological well-being^(10,11).

Elham Emami and others in their article have explained the serious complications of being edentulous. They have mentioned that edentulous individuals are at a greater risk of various systemic diseases such as cardiovascular diseases in addition to lack of self-esteem and change in oral and facial appearances.

Terezinha Rezende Carvalho de Oliveira and others in their article have brought out the malnutrition problems in edentulous patients and have brought out the beneficial effects of mucosupported and implant supported dentures. In addition to these they have analysed the type of foods for these patients and explained them.

Asma Parvez and others have showed the causes that can lead to second surgical procedure and have given the protocols that must be implemented to prevent the need for secondary alveoloplasty.

However in our study we have neither showed the causes of secondary alveoloplasty or the complications of edentulism. In our study we have gathered information on the complications of edentulism and have demonstrated that alveoloplasty which is performed on the same day of extraction can result in a faster replacement of prosthetic dentures which can minimise the duration of edentulism.

CONCLUSION:

By our study we have analysed the delay in the prosthetic replacement of edentulous area in patients who have undergone alveoloplasty on a different day of extraction and its is found to be delayed by approximately 42 days from those who have undergone alveoloplasty on the same day of extraction. By these results we conclude that alveoloplasty done on the same day of extraction aids in faster correction of the edentulism.

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