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بعض الوثائق الأصلية تالفة

بالرسالة صفحات لم ترد بالأصل

THE USE OF BUCCAL ALVEOLAR BONE IN CLOSURE OF OROANTRAL COMMUNICATION

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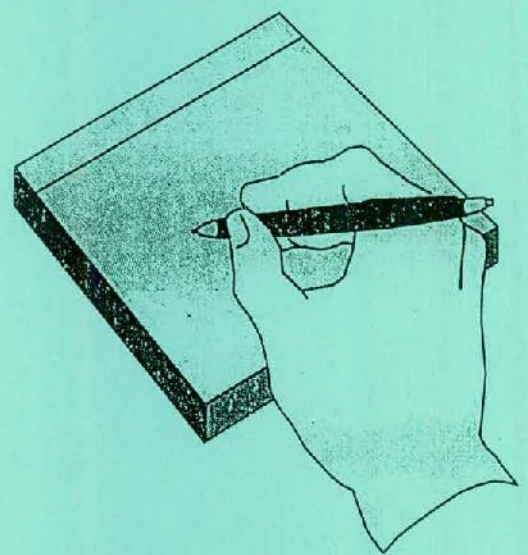
INTRODUCTION



INTRODUCTION &

REVIEW OF LITRATURE

An oroantral communication is a distressing problem for both the patient and the surgeon. So; many surgical procedures have been deviced for the treatment of the condition [1]

The term oroantral communication comprises two pathological conditions, one is the acute oroantral perforation and the other is the chronic communication " Fistula" [3].

Szabo [2] found that seven to eight days are the average time for an oroantral perforation to epithelialize and become a chronic fistulous tract.[3]

The establishment of oroantral communication is a complication that occurs during exodontia and other operative procedures in the maxilla.

Some pathologic conditions that might also cause oroantral communication such as : noma, syphilitic gumma, leprosy, lishmaniasis, or secondary to the sequelae of radiation therapy, also, removal of tumours or cysts of the palate or antral trauma may cause oroantral communication[4,13]

Bonsdorff [5] presented the following ranking list of the teeth in the order of their proximity to the maxillary sinus : the second molar, the third

molar, the first molar, and the second premolar. The canine and the first premolar are found to exhibit the greatest distance to the sinus. [5]

Bonsdorff [5] measured the distance between the floor of the sinus and the apices of the molar teeth. He found a distance of less than 0.5 mm in about 45% of second molars and about 30% in first molars. [4]

Approximately 50% of oroantral communications encountered during exodontia happen in conjunction with the removal of the first molar, while-approximately – the extraction of the second molar accounts for only 25% - 30% [6, 8]

In adults, the sinus volume is usually within the range of 10-20 ml. Furthermore, the maxillary sinus volumes are usually nearly identical within an individual [5]. The lower part of the maxillary sinus is often called the alveolar sinus. The antral floor may be located 0:.5mm to 10 mm lower than the nasal floor, while, the maxillary sinus opening " ostium " is situated in the middle meatus of the nasal wall [7].

It is estimated that about 15% of the maxillary sinus disease is of dental origin.

One third to one half of these diseases being secondary to oroantral communication[9]. However, there is reason to believe that a great number of accidental perforations are never diagnosed, since they may be small and consequently heal without complications. [10, 11].

An oroantral communication left untreated may rapidly cause acute sinusitis.

Wassmund [3] found that sinusitis occurs in 60% of the cases on the fourth day after sinus exposure. [3]

Eneroth and Mårtensson reported sinusitis frequency of about 50% on the third day after oroantral communication.[6]

Some reports indicate 24-48 hours as the time limit within which surgical closure is likely to have a good prognosis. This time limit should not be considered absolute, as several other criteria are also of importnace[1]. Early intervention with surgical closure is the treatment of choice and prevents the development of chronic and irreversible changes of the sinus mucosa [3,6]. Before exodentia and operative procedures in the maxilla, good radiographs are mandatory to evaluate the relationship of the apices of the teeth to the sinus floor.[4] When roots are curved and the sinus floor is thin, forceps extraction is likely to cause the removal of delicate bone barrier and produce oroantral communication. For this instance, there is less chance of this happening if the tooth is sectioned and roots are removed separately.[4]

When only a solitary maxillary molar remains, there is often marked antral pneumatization. A forceps extraction in this instance can cause tuberosity fracture and large oroantral opening.[4]

Numerous techniques have been recommended for the closure of these communications, most of which share an equal degree of success and failure. [13]

The optimal operative procedure to accomplish closure of oroantral communication ought to fulfil the following requirements:

1. Be applicable in most cases.
2. Have minimal incidence of failure when adequately performed.
3. Be relatively simple.
4. Not require removal of additional teeth or bone [14].

If the opening into the maxillary sinus is the result of inadvertently puncturing the lining of maxillary sinus by the injudicious use of curette or an elevator, the buccal cortical plate is reduced several millimeters and sutures are applied to reduce the size of the socket and protecting the blood clot, it is not necessary to obtain absolute apposition of the buccal and palatal soft tissue in these cases. It is necessary to place sponges. The placement of absorbable haemostatic gauze sponges and other foreign materials directly into the open alveolus is to be condemned [16].

The patient should be placed on antibiotic therapy for several days and nasal drops are prescribed in order to keep the antral ostium opened for drainage.

The patient is instructed not to blow his nose. If he sneezes he should open his mouth while sneezing to avoid intranasal pressure.

In patients who smoke smoking should be stopped. [14]

The Buccal Flaps :

Another technique is the buccal flap as described by Môczâr [15] . In this opproach a marginal incision is made along the teeth from the tuberosity to the mesial of the canine or the first premolar depending on the case. Here, the relaxing incision is carried obliquely upward and mesially in the vestibule. The buccal flap is reflected subperiostealy and a relieving parallel incision is made in the periosteum to aid in the mobilization of the flap. Next, the palatal gingiva is loosened and slightly elevated so as to expose the palatal cortical bone of the socket., Trimming of the bony edges is performed. The buccal flap is then positioned with its gingival part moved one width of a tooth to the distal resulting in transpositioning of the mesial papilla to the distal of the teeth to which they belong. This technique gives the operator an ample flap for the approximation of the buccal mucoperiosteum towards the palatal soft tissue without creating undesirable tension on the flap. Sutures in the socket area are used to secure the firm position of the flap, and interrupted sutures are used to approximate the incision lines [4]

Also, one of the commonest techniques used in closure of oroantral communication due to dental extraction is the technique suggested by Rehrmann[17].in which an extension of a buccal broad trapizoid mucoperiosteal flap was designed related to the defect and its horizontal incision is passing through the defect.