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| Oroantral Fistulas in Comparison with other Fistulas of the OMF Region in Tirana, OMF Surgery Service | |  | Healthcare |
| | | | Keywords: OMF region fistulas, Oroantral fistula. |
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| Abstract | | | |
| <p>Objectives: To evaluate the report that the OAF have with other fistulas of the OMF region and also to give the most frequent method of their treatment in our OMF Surgery Service. Material and methods: N=25 patients, treated from 2011-2015 in our OMF Surgery Service, "Mother Teresa" University Hospital Centre were included in this study. Diagnose and treatment plan was done after carefully examination. digital panoramic x ray or CT scan was asked depending on the case. Results: Oroantral fistula make up 60% of the cases with OMF fistulas. Man were more effected than female from OMF and OAF fistulas. The main cause of the OAF was the first maxillary molar extraction ,followed by the second maxillary molar extraction.</p> | | | |

Introduction

Fistulae is any abnormal, tubelike passage within body tissue, usually between two internal organs, or leading from an internal organ to the body surface. Some fistulae are created surgically, for diagnostic or therapeutic purposes; others occur as a result of a pathology or as congenital abnormalities .Fistulas in the oro maxillo facial region can be devided in oro cutaneous fistulas and intra oral fistulas. In the oro cutaneous fistulas we have oro facial fistulas and fistulas of the neck. An orofacial fistula is a pathologic communication between the cutaneous surface of the face and the oral cavity. Fistulas of the neck and face may be classified by cause [1] as: congenital, cystic, traumatic, infective and neoplastic.

Most of the intraoral fistulas are oroantral fistulas. Oroantral fistula (OAF) [2] is an epithelialized communication that develops between the pseudo stratified columnar ciliated epithelium of the maxillary antrum and squamous epithelium of the oral mucosa. OAF could be caused by dental infection, osteomyelitis, radiation therapy, trauma or following removal of maxillary cysts or tumors. Due to the proximity of the maxillary bicuspid and molar radix to the antrum, dental procedures like tooth extraction ,root canal treatment ,dental implant inseration etc are the most common causes of OAF. Diagnose of the fistulas is done in addition to the careful history and examination. One or more of the following tests will usually be required to confirm the diagnosis and determine the cause:

1. passing a probe into the channel
2. radiology – may include panoramic x-rays, x-rays using contrast medium, CT or MRI scans
3. microbiological assessment of swabs or biopsy material
4. endoscopy

To diagnose the the oroantral fistulas Krause, Pruzzo, Fonseca [3] suggested the conduction of Valsalva's maneuver - in case of fistula, there is discharge of air through alveolar canal or pus through the communication, depending on the maxillary sinus status.

Treatment of the fistulas beside fistuloplastic surgery will be determine by the specific cause of the fistula. In the management of the oroantral fistulas is very important to establish if the sinus infection has occurred or not.[4].

Smaller OAF fistulas of less than 5 mm in diameter may close spontaneously, with antibiotics therapy and nasal vasoconstrictor. While larger fistulas always require surgical closures. The literature review [5] revealed various procedures for the closure of oroantral fistulas.

These procedures may be subdivided into local flap, distant flap and grafting. The surgical technique that will be used in closing the OAF will depend from the fistula size and the ability or the preferences of the surgeon.

Objective

The purposes of this study is to evaluate the report that the OAF have with other fistulas of the OMF region and also to give the most frequent method of their treatment in our OMF Surgery Service.

Material and Method

This is a clinical statistical study with descriptive nature. SPSS 19,0 system was used to analysed the data. In the period of time 2011-2015, n=25 from which n= 17 male and n= 8 female patients were hospitalized and treated with fistulas in the oro maxillo facial region.

Patient age varies from 4 to 70 years old. Patients presented to our OMF Surgery Service some with no pain just the presence of the fistula and others with orofacial pain, headache and pus discharge from the fistula. To determine the diagnose for all the patients after the anamnezae was taken, a careful objective examination was performed, and a digital panoramic X-ray or CT scan was asked depending on the case.

In the cases where the oroantral fistula was found, a careful evaluation of nasal meatus, maxillary sinus and maxillary posterior teeth was done. In some of the cases were maxillary sinus infection was present, foreign body presence, like filling material, tooth radix etc was observed in the X-ray examination. Valsalvas's maneuver was performed to determine the presence of the air or pus discharge from the fistula.

All the patients were treated under general anesthesia. After the principle cause of the fistula was determine and treated, fistuloplastic procedure was done for the closure of the fistula. In cases of the oroantral fistulas, teeth near the fistula were endodontically treated or extracted depending on their condition.

The maxillary sinus was clean from the foreign bodies, polyps or granulation tissue and then fistuloplastic with different kind of lembo was performed for the closure of the oroantral fistula. After the surgery patients received antibiotic therapy for one week. In cases of the oroantral fistula nasal irrigation solution and topical steroid was used for 3 weeks.

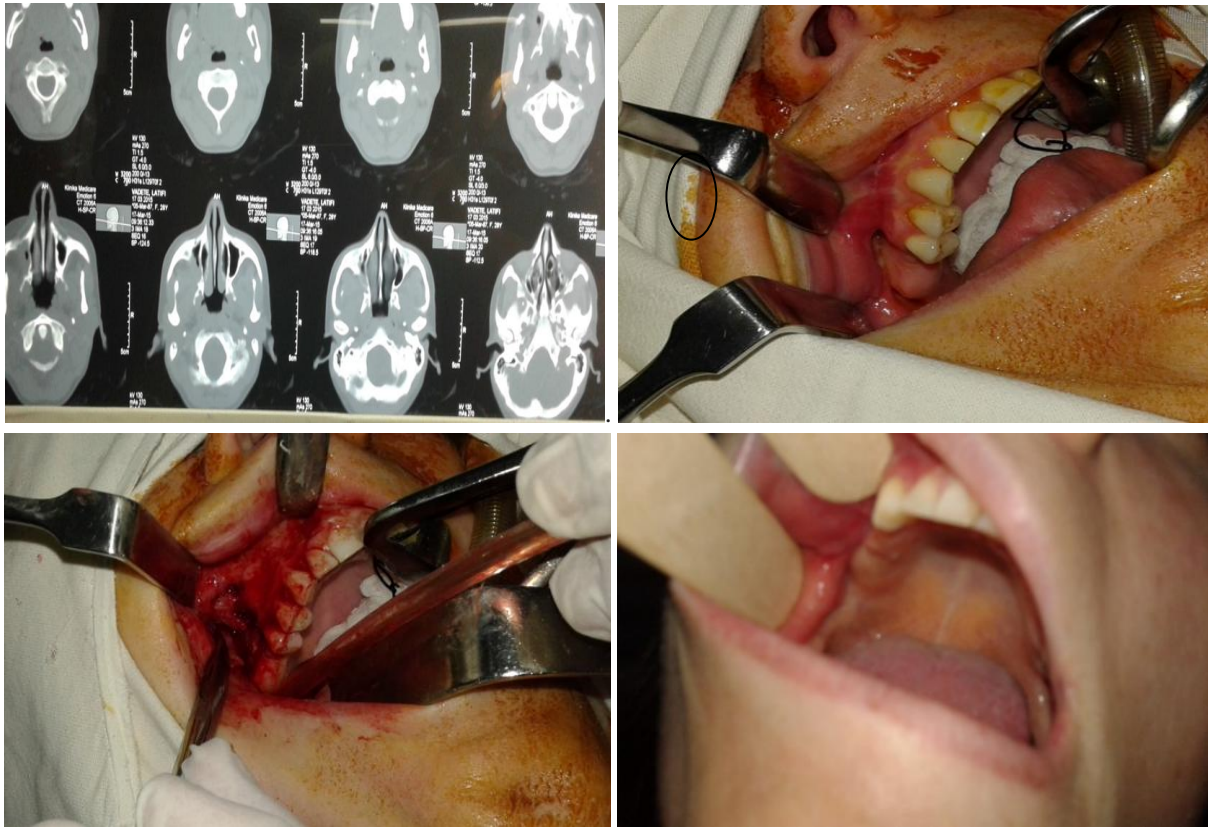


Photo1(a,b,c,d) : Clinical Case ,Oroantral fistula and maxillary sinusitis,(a) CT scan ,(b)oral view before the treatment ,(c)surgical treatment 14,15 teeth extraction, Caldwell Luc Surgery and fistuloplastic ,and (d)3 month after the surgery

Results

Oroantral fistulas (OAF) make up about 60 % of the OMF fistulas in our surgery service. (Chart No 1) In our study males were more effected from the OMF fistulas than female. Male : Female rate 17:8. (Chart No 2) (Chart No 1) Patients age varies in our study. In the group of the patients with OMF fistulas patient between 51-60 years old were most effected, while in the non oroantral fistula we found out that the age was younger due to the fact that most of this fistulas were congenital. (Chart No 3)

In the group of patients with oroantral fistulas we found out that the main cause was the first maxillary molar extraction, followed by the second maxillary molar extraction. (Chart No 4)

For the closure of the OMF fistulas after the main cause was determine and treated, the surgery technique consist of fully excision of the fistula and fistuloplastic surgery. For the oroantral fistula closure we use buccal flap, palatal flap, combine bucco-palatal flap and buccal pad of fat flap. (Chart No 5).

In the follow up of the patients we had one case of oroantral fistula relapse. Patient was a heavy smoker.

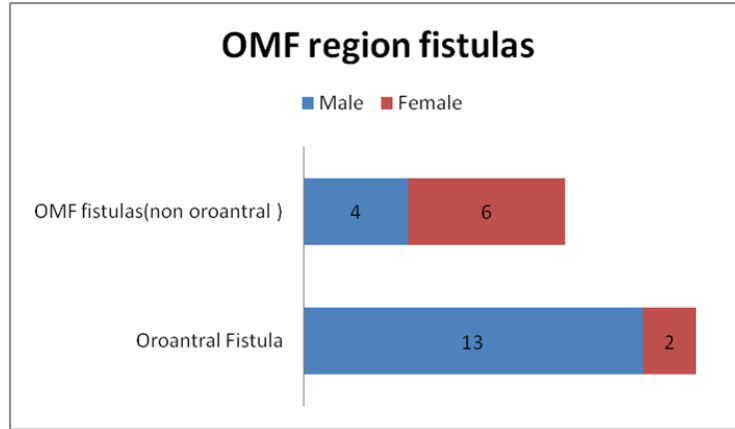


Chart No 1.Oroantral fistula in comparison of the other OMF fistula

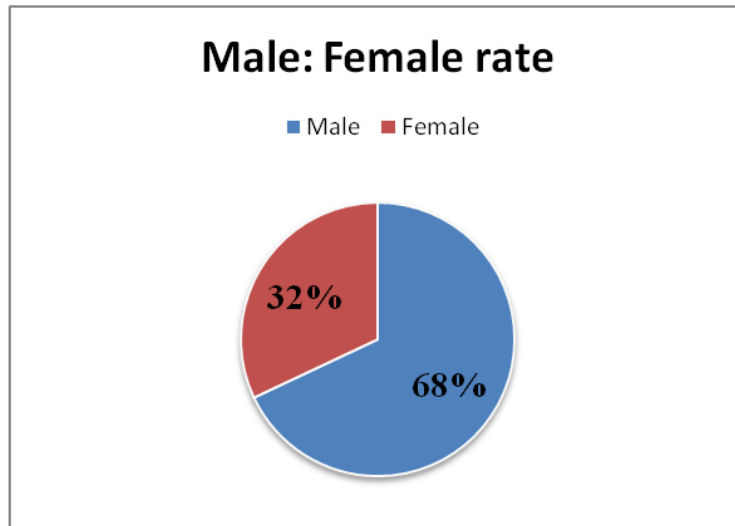


Chart No 2.Male: Female Rate for all the patients

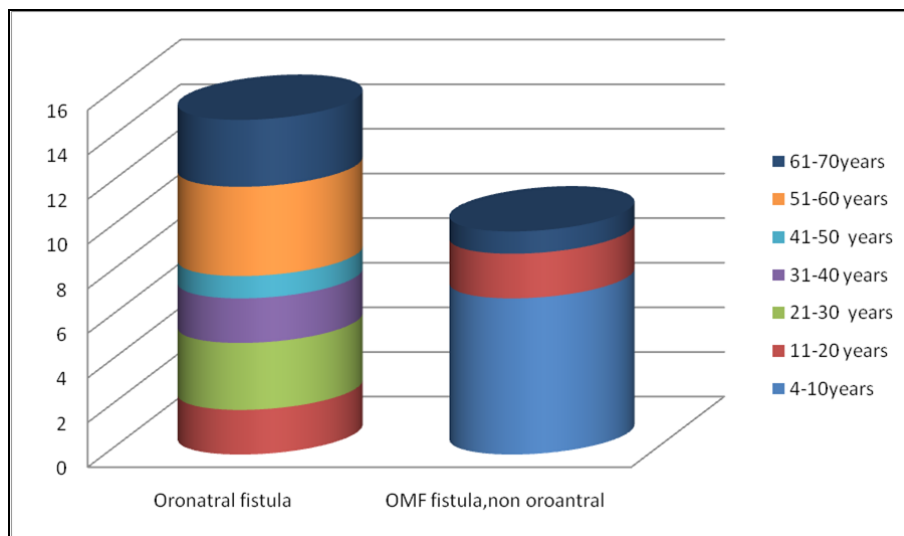


Chart No 3.Age distribution in each group.

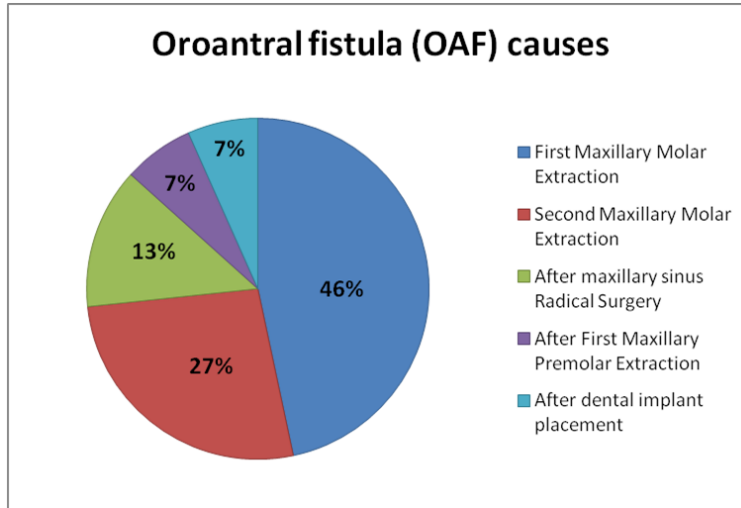


Chart No 4. Oroantral fistula Causes

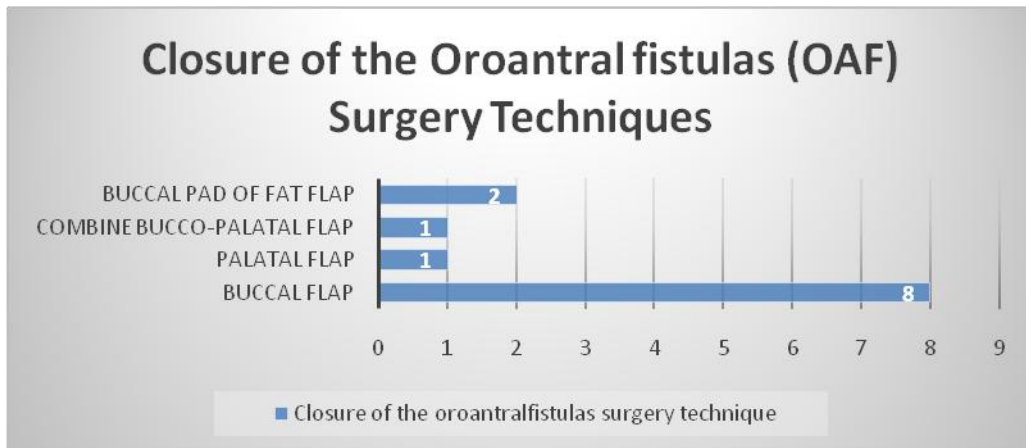


Chart No 5. Oroantral fistulas closure, Surgery techniques

Discussion

In our study oro antral fistula are more frequent in comparison to other fistulas in the oromaxillo facial region. This frequency of oroantral fistulas can be explain with the fact that they are caused mostly by the dental problem, which are very common. Congenital fistulas are most common form of fistulas in the orofacial fistulas in our study.

Man were most effected by fistulas in the OMF region. In the group of patients with oroantral fistulas also man were most effected. This result coincide with other studies results like the one from Delgado Galindez B⁸ or the study from Elarbi MS⁹ were the rate of oroantral fistulas in male was significantly higher.

The maxillary sinus reaches its greatest size during the third decade of life consequently, the incidence of OAF should be higher after that age [11.12] Also in our study patients aged from 51 to 60 years result to be more effected by the OAF .In the study from Hernando J⁷ the average age of the patients was 47,5 while in the study from Guven⁴ the incidence of OAF was higher in the 3rd and 4th decade of life .From our study orofacial fistulas were more common in young age due to the fact that most of them were congenital fistulas.

First maxillary molar extraction result as the most important cause of oroantral fistulas in our study. This result coincide also with other studies like the one from Hernando J, Gallego L⁷ at al in 2010 or the study from Graziani M¹³ in 1995 were the upper first molar extraction followed by the second maxillary extraction results as the most common cause of oro antral fistula.

The treatment of ortoantral fistulas in our study was done under general anesthesia. The maxillary sinus was evaluated before surgery from the x ray and clinical symptoms. In the cases were the maxillary sinus was infected Caldwell Luck surgery with modified incision for fistuloplastic was performed. This kind of treatment coincide also with the study from Krause CF et al³ or the study from Hernando J, Gallego L⁷ at al.

The surgery technique mostly used for the oroantral fistula (OAF) closure in our study was the one with buccal flap. This technique was mostly used also by Guven⁴ in his study for OAF less than 3mm in diameter . In case were the fistula was larger we have used buccal pad fat flap with very good results in the two year of the follow up of the patient.

In the other cases of oro maxilla facial fistulas after the fistula was determine and the main cause was treated excision of the fistula and fistuloplastic was performed. Especially care was done in cases were the fistula was in the lip. Lip line, its length and width was carefully preserved.

Conclusion

1. Oroantral fistulas (OAF) due to the fact that are very common among other OMF fistulas and are mostly caused by the dental procedures ,need a special attention from the general dentist and OMF surgeon
2. Taking in consideration the experience of our OMF surgery service ,we can say that oroantral fistula with small and medium size can be very well treated with buccal flap, taking in consideration the OMF surgeon skills in auto regional plastic surgery .

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