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Case Report

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Fronto ethmoidal osteoma with orbital extension : surgical treatment case report

Z El-Zouiti, C Amezian, C Mohamed Chatar, A Eabdenbi Tsen

*Department of oral and maxillo facial surgery, University Hospital Center Mohamed Vi Oujda, Morocco

Correspondence: Z El-Zouiti, Department of oral and maxillo facial surgery, University Hospital Center Mohamed Vi Oujda, Faculty of medicine and pharmacy of Oujda, Morocco, Email zainab.elzouiti@gmail.com

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Abstract

Introduction : Osteoma is a benign tumor that can occur in any facial bone, in para-nasal sinus the frontal and the ethmoidal ones are the most involved. Osteoma has a slow development, most likely asymptomatic, and discovered by chance on radiological assessment, until they cause complications due to intracranial or orbital mass effect.

Case report : We report the case of a 34 years old female patient with no pathological history admitted for painful swelling of internal right canthal without inflammatory signs nearby involving for 4 years, in palpation it's tough bony, without an impact on ocular globe with no exophthalmia.

Orbital CT scan has been ordered and shows a process of 20 mm on his big axe in depend of ethmoidal right sinus with orbital and frontal sinus extension.

Surgical management consist of monobloc excision of osteoma with transcanthal cutaneous approach, histological analysis confirms the diagnosis.

Discussion : Sinusal osteoma is a rare benign tumor ;that is mostly asymptomatic , in frontal and ethmoidal sinus; sphenoidal location is exceptional ;found often among men then women ,gravity is linked to intracranial and orbital extensions that can cause ,surgical treatment is done in symptomatic forms, with total excision by a adequate approach considering each presentation site, small sized asymptomatic osteomas dont really need a treatment but must be periodically controlled.

Conclusion : Surgery is required in symptomatic forms.

Introduction

Osteoma is a benign tumor that can occur in any facial bone, in para-nasal sinus the frontal and the ethmoidal ones are the most involved. Osteoma has a slow development, most likely asymptomatic, and discovered by chance on radiological assessment, until they cause complications due to intracranial or orbital mass effect.

The treatment is based on surgery which is only indicated in symptomatic forms.

We present the case of a fronto-ethmoidal osteoma whom evolution was longtime asymptomatic.

Case report

We report the case of a 34 years old female patient with no pathological history admitted for painful swelling of internal right canthus without inflammatory signs nearby involving for 4 years, in palpation it's tough bony, without an impact on ocular globe with no exophthalmia.

Orbital CT scan has been ordered and shows a process of 28*21*20 mm in depend of ethmoidal right sinus with orbital and frontal sinus extension, these results are compatible with ethmidal osteoma with fronto-orbital extension (Figure 1).

Surgical management consist of monobloc excision of osteoma with transcanthal cutaneous approach (Figure 2 & 3), histological analysis confirms the diagnosis.

A follow up results of 15 months were good.

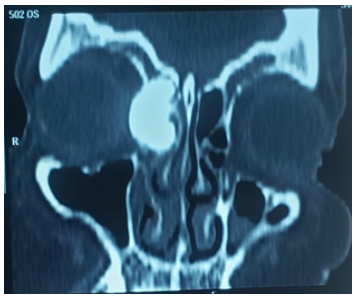

Figure 1 CT scan image in coronal section shows ethmoidal osteoma with fronto-orbital extension.

Figure 2 Per operatory image showing para canthal approach to access the osteoma.

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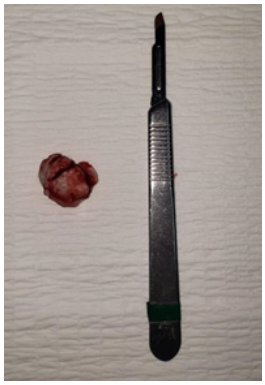

Figure 3 Surgical specimen after resection.

Discussion

Para-nasal sinus osteoma is a benign rare bone tumor, that occurs between the second and third decade for certain authors, fifth sixth decade for others, with slightly masculin preference.[1]

Frontal localisations of these benign bone neoformations are the most frequent (50 to 60 %), followed by ethmoidal osteomas (20 to 30%). these tumors are rarely observed in maxillary sinus (5 to 10%), exceptionally on sphenoidal sinus.[2]

Osteomas are usually asymptomatic, when they are small size and do not obstruct the drainage of the sinus, they are diagnosed incidentally during radiologic studies.[3,4]

Only 4-10% of cases are symptomatic, frontal headaches and facial pain are the most commun symptoms.[3]

Clinical manifestations of osteomas with orbital extension are mostly presented by ophthalmic signs such as progressive installation of non painful, irreducible exophthalmia, diplopia, ptosis with limited ocular mouvement, rarely a decrease of visual acuity, dacryocystitis, fugace amaurose (sphenoidal osteoma case) or signs of optic nerve compression.[2,5]

Facial deformity signs the presence of anterior tumoral extension mostly in orbital superior-intern angle, and the anterior wall of frontal sinus (our patient case).[6]

Facial CT scan on axial and coronal sections allow the diagnosis by precising the exact location, dimensions, the state of sinusal walls, the relations between meninges and optical structures, to help choose the right surgical approach. MRI complete the CT scan exam without replacing it, but it is essential for extension intracranial assessment in sphenoidal osteomas.[7]

Most authors agree on respecting small sized asymptomatic osteomas, in condition of a regular radiological monitoring.[8]

In other cases, surgery is a most, various excision techniques can be used : monobloc excision, tumor fragmentation, controlled fraisage from periphery to center, fraisage removal of central part followed by external coque extraction.[5,6]

In terms of evolution, osteoma is a tumor that never comes back after complete excision.[6]

Conclusion

Sinusal osteomas are rare benign tumors, mostly asymptomatic, their gravity result in ophthalmic and intracranial complications that can cause. Surgical treatment must be performed in symptomatic forms.

Acknowledgments

None.

Conflicts of Interest

None.

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