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STUDY ON CLINICAL AND SURGICAL OUTCOME OF MAXILLARY TUMORS

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ABSTRACT

BACKGROUND AND OBJECTIVES: Maxillary swellings are uncommon and often associated with various disease entities. Multimodal approach of careful patient evaluation and integrated disease management are necessary to decrease the progression of the disease. This study was conducted to determine the clinicodemographic pattern, histopathological diagnosis and surgical outcome of swelling in the maxilla.

MATERIALS AND METHODS: This is a hospital based retrospective observational study conducted in patients diagnosed with maxillary swelling who underwent surgical management . This study was done in Rajiv Gandhi Government General Hospital , Upgraded Institute of Oto Rhinolaryngology from September 2017 to September 2018. All the patients were followed up for a period of 2 to 12 months and observed for their overall survival rate and recurrence of the disease.

RESULT: Among 16 patients included in our study , 4 patients were diagnosed with squamous cell carcinoma (25%) which was the most common HPE diagnosis followed by odontogenic tumor in 3 patients (18.75%) and fibrosseous dysplasia (18.75%) in 3 patients. The Recurrence rate in those patients diagnosed with either neoplastic or Nonneoplastic maxillary antral lesions who underwent surgical management were 12.5% (2 patients) , seen in squamous cell carcinoma and fibrosseous dysplasia each one respectively. The overall survival rate for all the patients diagnosed with maxillary antral swelling was 100 % and disease free survival rate was 87.5% as two patients had recurrence of the disease.

CONCLUSION: An intensive Investigation based surveillance after surgical management of maxillary swelling allowed early intervention in recurrence of the disease which in turn decrease the disease burden in a community.

KEYWORDS :

INTRODUCTION

Maxillary swelling[1-3] are usually a rare clinical presentation often associated with diverse disease entities. Maxillary antral lesions mainly includes Non Neoplastic lesions and Neoplastic lesions. Non Neoplastic lesions[4] were further classified in to inflammatory , cystic and reactive types whereas Neoplastic lesions were further classified in to malignant and benign type. Paranasal sinus malignancies constitutes about 5% of total head and neck surgery. Maxillary antrum[5] is the most common site for paranasal malignant lesions (50% to 70%) which is followed by nasal cavity (15% to 30 %) and ethmoidal sinus (10% to 20%). Advanced diagnostic techniques[6] like Diagnostic nasal endoscopy, Computer tomography , HPE have been helpful in diagnosis of maxillary antral lesions.

Since Maxillary antral lesions[7] are uncommon, there is often associated atypical clinical presentation which is quite challenging to arrive at a clinical diagnosis . Previous studies shows that malignant maxillary antral lesions have poor prognosis and recurrence were common after surgical management.

Therefore combined approach of careful patient evaluation and integrated management is necessary to prevent morbidity and mortality of maxillary antral lesions. This study was done at the aim of evaluating the clinicodemographic pattern and surgical outcome of maxillary antral swelling in our population.

MATERIALS AND METHODS

Study place: Mahatma Gandhi memorial Government Hospital, Trichy Collaborating Department : dept of Oto Rhinolaryngology.
Study Design : Retrospective, Hospital based observational Study.
Study Period : September 2015 to September 2018.

INCLUSION CRITERIA

- Age above 10 years and below 70 years .
- Both males and females were included.
- Patient diagnosed with maxillary antral lesions[8] either neoplastic or Non Neoplastic lesions

EXCLUSION CRITERIA

- Age less than 10 years and above 70 years .
- Patient associated with comorbid conditions unfit for surgical management.

This study is a hospital based retrospective observational study conducted in Rajiv Gandhi Government General Hospital in collaboration with upgraded institute of Oto Rhinolaryngology . patients in the study group comprises of those who presented with maxillary antral mass lesions.

Patient information were recorded in the self designed standard proforma. Data collected includes

- Patient clinicodemographic details(Age , sex, clinical presentation)
- Medical history
- Diagnostic history

1. CT scan of paranasal sinuses
2. MRI of paranasal sinuses
3. Diagnostic nasal Endoscopy
4. Histopathological Examination

- Surgical management done

All the patients who were surgically treated were followed up and observed for disease free survival rate and recurrence of the disease for a period ranging from 2 months to 12 months . Those patients were followed by Diagnostic nasal endoscopy for the 1st and 3rd month. Radiological evaluation was done during the follow up period with CT scan of PNS /MRI of paranasal sinuses at the end of 6th month .

RESULTS:

1.GENDER DISTRIBUTION

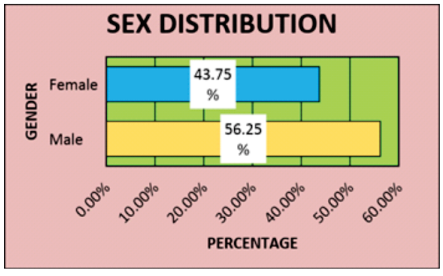

Figure 1: Details of Gender distribution of patients.

There was a male preponderance in patients diagnosed with Maxillary antral swelling.

Out of 16patients, 9 (56.25 %) patients were *males* and 7 (43.75 %) patients were *females*(vide figure no.1).

2.AGE DISTRIBUTION

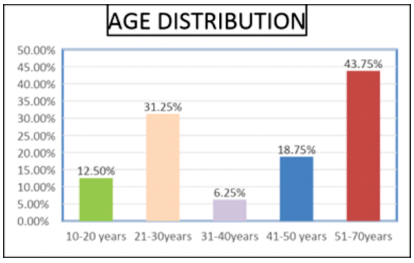

Figure 2: Age distribution of patients

The results of this study revealed that patients diagnosed with Maxillary antral swelling were higher in the age group 51-70 years was 43.75%, in the age group 21-30 years was 31.25%, in the age group 41-50 years was 18.75%, 10-20 years was 12.50% and in the age group 31-40 years was 6.25 % as shown in the figure 2

3. ASSOCIATED CLINICAL FEATURES OF MAXILLARY SWELLING

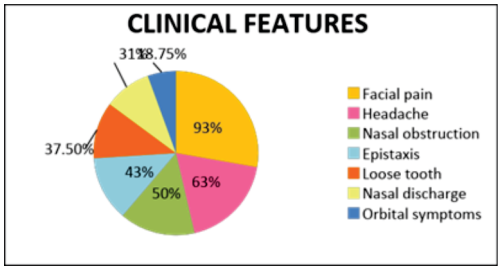

Figure 3: Details of Associated Clinical features

The Associated clinical features noted in the study were facial pain, headache, nasal obstruction, epistaxis, loose tooth, nasal discharge , orbital symptoms.

Facial pain (93%) was the commonly presented symptom followed by headache (24%) , nasal obstruction (50%), epistaxis (43%) ,loose tooth (37.50%), nasal discharge (31%) and orbital symptoms(18.75%) as shown in figure 3.

4. DIAGNOSIS

SNO.	HISTOPATHOLOGICAL DIAGNOSIS	NUMBER OF PATIENTS	PERCENTAGE %
1.	Squamous cell carcinoma	4	25%
2.	Odontogenic cyst	3	18.75%
3.	Fibrosseous dysplasia	3	18.75%
4.	Esthesio neuroblastoma	2	12.5%
5.	Allergic fungal sinusitis	2	12.5%
6.	Adenocarcinoma	1	6.25%
7.	Adenomatous odontogenic tumor	1	6.25%

Table 1: Details of Histopathological diagnosis

Results of table 1 reveals that Squamous cell carcinoma (25%) was the commonly encountered histopathological diagnosis followed by odontogenic cyst (18.75%) and fibrosseous dysplasia (18.75%).

DISCUSSION

In this retrospective , observational study, total of 16 patients were included in the study from September 2017 to September 2018 . The study group population were patients presented with maxillary mass lesion and undergone surgical treatment. As shown in figure 1, out of 16 patients included in the study , male (56.25%) outnumber females (43.75%) which was similar to the results of study conducted by [9]Arotiba GT et al . Patients diagnosed with maxillary swelling were higher in the age group of 51-70 years which contributes about 43.75% shown in figure 2 , which coincides to the results of similar study conducted by [10]Tran L et al.

In our study , all the 16 patients were presented with maxillary swelling in which maxillary antrum was the most common site confirmed by CT paranasal sinus. As shown in the figure 3 , associated clinical presentation noted in our study were facial pain(93%), head ache (24%) , nasal obstruction (50%), epistaxis(43%),loose tooth (37.50%),nasal discharge (31%) and orbital symptoms(18.75%). For the benign lesions , common symptoms at presentation were facial pain, headache, nasal obstruction and nasal discharge. Malignant lesions were presented with clinical features such as facial pain, headache, epistaxis and loose tooth.

Biopsy for histopathological examination was taken for all 16 patients in suspicion of neoplasm or inflammatory lesion. As represented in the table 1, out of 16 patients, 8 patients were diagnosed with neoplastic lesion and remaining 8 patients in Non neoplastic lesion . Of the 8 patients in neoplastic lesion , 4 patients had squamous cell carcinoma (25%) which is the most common histopathological diagnosis of all patients. Remaining 2 were esthesio neuroblastoma and 1 patient in each of adeno carcinoma and adenomatoid odontogenic tumor. Among 8 patients diagnosed with neoplastic lesion , 4 patients were managed by surgical wide excision followed by maxillectomy , remaining 4 patients were managed by endoscopic transnasal resection was done.

Out of 8 patients diagnosed with non neoplastic lesion , 3 patients were odontogenic cyst in which HP report confirms as dentigerous cyst(18.75%). Remaining 5 patients with Nonneoplastic lesion , 3 were fibrosseous dysplasia and 2 patients had allergic fungal sinusitis.

All the 3 patients diagnosed with fibrosseous dysplasia were managed by surgical endoscopic drill excision. In our study , 2 patients had allergic fungal sinusitis , initially both the patients were started on i.v amphotericin B followed by endoscopic biopsy of maxillary lesion which shown mucormycosis. Middle meatal antrostomy and debridement was done in both 2 patients.

All the 16 patients were followed at the end of 1st month, end of 3rd month and at the end of 6th month. Postoperative disease surveillance investigations such as DNE, CT PNS and MRI PNS were done at the end of 1st month , 3rd month and at the end of 6th month respectively. Patients self reported symptoms were noted. Recurrence of maxillary swelling and clinical presentation were seen in 2 patients diagnosed with squamous cell carcinoma and fibrossoeus dysplasia respectively.

The Recurrence rate in all those patients diagnosed with either neoplastic or Nonneoplastic maxillary antral lesions who underwent surgical management were 12.5% (2 patients) , seen in squamous cell carcinoma and fibrosseous dysplasia each one respectively. The overall survival rate for all the patients diagnosed with maxillary antral swelling was 100 % and disease free survival rate was 87.5% as two patients had recurrence of the disease.

CONCLUSION

An intensive Investigational surveillance after surgical management of maxillary swelling allowed early intervention of recurrence of the disease which in turn decrease the disease burden in a community.

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