



"HISTOMORPHOLOGICAL SPECTRUM OF OPHTHALMIC LESIONS IN A TERTIARY CARE HOSPITAL OF NORTHEAST INDIA" A RETROSPECTIVE STUDY FOR 3 YEARS

Pathology

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ABSTRACT

The Eye is a heterogenous tissue. It is unique in many respects as it encompasses wide range of tissues, epithelial elements, connective tissue and specialized tissues. **Aim:** of the present study to analyze the histomorphological spectrum of orbito-ocular lesions and to find the frequency of various ophthalmic lesions with respect age, and sex distribution. **Methods And Materials-**The study was conducted in department of Pathology in collaboration with department of Ophthalmology, Assam medical college and hospital Dibrugarh, Assam on 84 cases of ophthalmic lesions received in the Histopathology laboratory during period from May 2021 to April 2024. Ophthalmic specimens were routinely processed and H& E stain was performed. **Result:** In our study a total of 84 ophthalmic lesions were received out of which majority were benign that is 60 cases(71.4%) and 24 cases (28.6%) were malignant. **Conclusion:** Many neoplastic conditions clinically mimic other less aggressive neoplastic or inflammatory conditions and needs differentiation before definitive therapy is planned. So, to establish the accurate diagnosis histopathological examination is utmost important.

KEYWORDS

Orbital ocular lesion, neoplastic lesion, aggressive lesions

INTRODUCTION

The Eye is a heterogenous tissue . Eye and ocular adnexa is composed of eyelids, lacrimal passages and glands, orbit, conjunctiva, cornea, sclera and intraocular tissue, etc. as it encompasses wide range¹. The eyelids are affected by variety of lesions which may be epithelial, adnexal, vascular, neural, histiocytic, melanocytic or inflammatory in origin².

Many lesions are identified by clinical appearance and its behaviour; however there are few diagnostic challenging cases which need histopathological evaluation²

AIMS:

This study aims to analyze the histomorphological spectrum of ophthalmic lesions and to find the frequency of various ophthalmic lesions with respect age, and sex distribution.

MATERIAL AND METHODS

This study was a retrospective study carried out in a tertiary care hospital for a total period of 36 months. Adequate consent had been procured for the inclusion of surgical specimens in this study. All the biopsies related to the ocular site were included; eg-excision biopsies, and intact tissue biopsies. The samples were processed according to the standard protocol and stained with routine Haematoxylin & Eosin stain. Histopathological interpretation was made by correlation of provided clinical data, studying of gross morphology and light microscopic examination.

RESULTS AND OBSERVATION

Table-1: Age Wise Distribution Of Eye Lesions

AGE GROUP	NO OF CASES
1-20	12
20-40	26
40-60	24
ABOVE 60	22

In our present study out of the 84 cases maximum cases were found in the age group of 20-40 (26 cases, 31%), followed by the 40-60 years (24 cases,28.6%). The age ranges from 2 years to 90 years with mean age of 50 years

Table 2: Sex Wise Distribution Of Eye Lesions(Total cases=34)

FEMALE	MALE
48(54.7%)	38(45.3%)

Total of 84 cases comprising 46 females (54.7%) and 38 males (45.3%) having ophthalmic lesions were studied.

Table3: Incidence Of Various Lesions Studied

TYPE OF LESION	INCIDENCE
BENIGN	60(71.4%)
MALIGNANT	24(28.6%)
TOTAL	84

Out of total 84 cases, in our study 60 cases(71.4%) were benign, and 24 cases (28.6%)were malignant.

Table 4:- Various Benign Lesions Studied In Present Study:

TYPES OF LESIONS	NO OF CASES STUDIED
a) Cyst	12
b) Chalazion	12
c)Naevus	10
d) Lipoma	2
e) Fibromyoma	1
f) Sebaceous adenoma	4
g) Pilomatrixoma	1
h) Syringocystadenoma papilliferum	2
I) Other inflammatory lesion	17

Among the 60 Benign lesions, Cysts (epidermal) and chalazion were the most common lesion with 12 cases each(20%) followed by other inflammatory lesion like granulomatous inflammation.

Table 5:- Various Neoplastic(malignant)lesions Studied In Present Study

TYPES OF LESION	NO OF CASES STUDIED
Squamous cell carcinoma	14
Basal cell carcinoma with adnexal differentiation	6
Conjunctival intraepithelial neoplasia	2
Sebaceous carcinoma	1
Fibrosarcomatous DFSP	1

In our present study we got 24 malignant lesions among them Squamous cell carcinoma was the most common malignancy (14 cases,58.6%),followed by Basal Cell Carcinoma (5 cases ,25%).

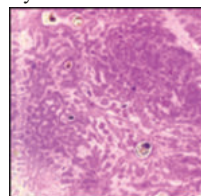


Figure 1:- Pigmented Basal Cell Carcinoma

Section shows (H&E stain; X4) nests of varying sizes formed by atypical basaloid cells along with focal areas of melanin pigments. Peripheral palisading, peritumoral clefting along with few mitotic figures are seen.

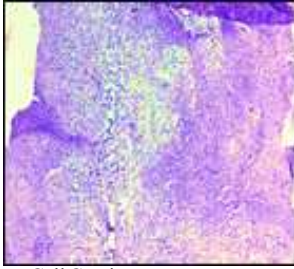


Figure 2: Squamous Cell Carcinoma

Showing moderate differentiation.

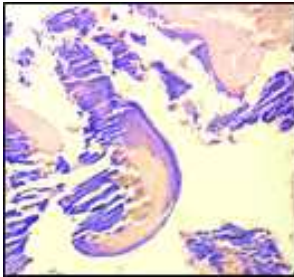


Figure 3: Pilomatricoma

with islands of basaloid cells at the periphery and centre showing ghost cells

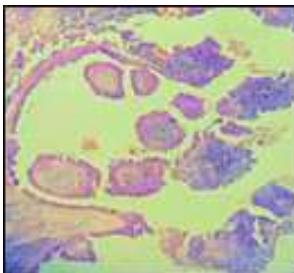


Figure 4: Syringocystadenoma Papilliferum

with fibrous cores of papillae containing plasma cells and are lined by double layers of cuboidal and columnar cells

DISCUSSION:

In our present study out of the 84 cases maximum cases were found in the age group of 20-40 (26 cases, 31%), followed by the 40-60 years (24 cases, 28.6%). Female preponderance was found in our study with 46 cases being females (54.7%) and 38 cases being males (45.3%) with female to male ratio of 1.2:1. Similar studies done by Shah N & Trivedi N et al¹, Bastola P & Koirala S et al², Shaikh I et al³, Akpe BA & Omoti AE et al⁷ and Ud-Din N et al⁸; found similar results comparable to present study. Chauhan SC & Shah S1 et al⁹ reported slight female preponderance. While Pudasini S, et al¹⁰, reported 3th and 4th decade as the commonest age group in their studies.

Out of total 84 cases, in our study 60 cases (71.4%) were benign, and 24 cases (28.6%) were malignant. Various studies found similar results comparable to present study. Ud-Din N, et al¹¹, reported neoplastic lesions more in their study.

Among the 60 Benign lesions, Cysts (epidermal) and Chalazion were the most common lesion with 12 cases each (20%) followed by Naevus 10 cases (16.6%), Sebaceous adenoma 6 cases (6.6%), Syringocystadenoma papilliferum 2 cases (3.3%) and rest being inflammatory conditions.

Out of the 24 malignant cases, Squamous cell carcinoma was the most common malignancy (14 cases, 58.6%), followed by Basal Cell Carcinoma (5 cases, 25%), Conjunctival intraepithelial neoplasia (2 cases, 8.3%), Sebaceous Carcinoma (1 case, 4.2%) and

Fibrosarcomatous DFSP (1 case, 4.2%). Various studies done by Gundogan CF, et al¹², Chauhan S, et al¹³, Al-Faky YH, et al¹⁴ and Paul S, et al¹⁵ found similar lesions

CONCLUSION

Numerous Neoplastic disorders imitate or pose as other less severe Neoplastic or non-Neoplastic conditions. Some of the histological characteristics, however, are unique to each entity. A definitive diagnosis is thus provided by the combination of appropriate clinical observation and histological research. Thus, So, we can conclude that all ophthalmic lesions removed surgically should always be subjected to histopathological examination to establish correct diagnosis for further management.

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