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HISTOMORPHOLOGICAL STUDY OF OPHTHALMIC LESIONS IN A TERTIARY CARE HOSPITAL IN JAMMU

Pathology

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ABSTRACT

Introduction: Opthalmic lesions deal with the diseases of eye and its neighbouring tissues.These lesions include a wide spectrum of conditions which need to be studied as eye is a unique sensory organ with diverse histologic structures and vision is a major quality of life issue for individuals.Aim of the present study was to assess the histomorphological spectrum of ophthalmic lesions and to determine their prevalence in this part of the country .Material and Method :The study was conducted in the post-graduate department of Pathology from 1st Jan 2015 to 30th June 2017.A total of 81 biopsies and whole specimens were received from the ophthalmology department of the institute .Results :Opthalmic lesions showed a bimodal age distribution with a M:F ratio of 1.53:1.Eye lid(66.66%) was the most common site involved followed by conjunctiva (17.28%).Benign lesions (85.18%) outnumbered the malignant ones (14.81%).Dermoid cyst was the commonest benign condition and malignant one was Squamous cell carcinoma .Conclusion :Correct diagnosis of ophthalmic lesions plays an important part in patient care and management so all the ophthalmic biopsies should be subjected for histopathological examination

KEYWORDS

Opthalmic lesions ,Histopathology ,Eye

INTRODUCTION:

Eye is a special sensory organ and provides the only site where we can visualize a variety of pathophysiological changes which need to be studied both clinically and pathologically. Opthalmic pathology deals with the diagnosis and characterization of neoplastic and non neoplastic diseases of the eye . A variety of cell types in and around the eye makes it liable to show a wide spectrum of lesions . Eyelid is the most frequent site involved and is a composite of skin externally and a mucosa (conjunctiva) on the surface apposed to eye that is why eyelid lesions can be epithelial, adnexal, vascular, neural, histiocytic, melanocytic or inflammatory. Histopathological examination has a great benefit in reducing the morbidity and mortality due to ophthalmic lesions.

MATERIAL AND METHODS:

This is a retrospective study carried out in the department of pathology from 1st Jan 2015 to 30th June 2017. A total of 81 opthalmic biopsies and whole specimens were included. A proforma was used to obtain a detailed history regarding age, sex, chief complaints, site and other relevant findings. The specimens were fixed ,processed and stained with Haemotoxylin and Eosin (H&E).The diagnosis was given after examining the stained slides.

RESULTS:

In the present study there were 49 males (60.49%) and 32 females (39.50%) with a M:F ratio of 1.53:1.The maximum number of cases were seen in age group of 11-20 years (n=17)20.98% followed by 51-60 years (n=15) 18.51% i.e a bimodal age distribution. The least number of cases were seen in age group of 71-80 and 81-90 years with (n= 1) 1.23% case each .Table 1

Benign lesions (n=69)85.18% outnumbered the malignant ones (n=12) 14.81%.Dermoid cyst was the most common benign lesion found in both eyelid and conjunctiva followed by epidermal inclusion cyst .Squamous cell carcinoma was the commonest malignant lesion and that too with(n=5) cases in limbus only.

Eyelid(n=54)66.66% was the most frequent site involved ,followed by conjunctiva (n=14)17.28% and limbus (n=7) 8.64%.Table 2.Among the eyelid lesions, Dermoid cyst was most frequently seen (n=18) 33.33% followed by epidermal inclusion cyst (n=16) 29.62%and Intradermal nevus (n=4) 7.40%. There were total 4 malignant lesions seen in eyelid i.e (n=2) cases each of Basal cell carcinoma and Squamous cell carcinoma. Table 3

Table 4 shows the diistibution of conjuctival lesions .Again dermoid was commonest benign lesion and Well differentiated squamous cell carcinoma was the malignant lesion. There was (n=1) case of Rhinosporidiosis whose provisional diagnosis was growth conjunctiva .

Limbus showed the maximum number of malignant lesions (n=5) 71.42% diagnosed as Well differentiated Squamous cell carcinoma .Table 5.

There were total (n=4) 4.93% intraocular lesions and all of them were received as whole eyeball specimens .One case was diagnosed as Retinoblastoma with extension into optic nerve in a 4 years old boy. Rest 3 of them were (n=2) cases of staphyloma and (n=1) was panopthalmitis. Table 6

Table 1 Shows Age and Sex distribution of Total cases.

Age Group (Years)	Female(%)	Males (%)	Total (%)
1-10	4(12.5%)	8(16.3%)	12(14.81%)
11-20	7(21.8%)	10(20.4%)	17(20.98%)
21-30	6(18.7%)	4(8.1%)	10(12.34%)
31-40	3(9.3%)	7(14.2%)	10(12.34%)
41-50	4(12.5%)	6(12.2%)	10(12.34%)
51-60	5(15.6%)	10(20.4%)	15(18.51%)
61-70	2(6.2%)	3(6.1%)	5(6.17%)
71-80	1(3.1%)	0(0%)	1(1.23%)
81-90	0(0%)	1(2%)	1(1.23%)
Total	32(39.50%)	49(60.49%)	81(100%)

Table 2. Shows Location Wise Distribution Of Ophthalmic Lesions.

Location	Cases	Percentage (%)
Eyelid	54	66.66%
Conjunctiva	14	17.28%
Limbus	7	8.64%
Intra-ocular	4	4.93%
Orbit	2	2.46%
Total	81	100%

Table 3. Shows different types of eyelid lesions

Eyelid Lesions (n=54)	Total Cases (%)
1.Epidermal Inclusion cyst	16(29.62%)
2.Dermoid cyst	18(33.33%)
3.Squamous papilloma	1(1.85%)

4.Squamous cell carcinoma	2(3.70%)
5.Fibro epithelial polyp	1(1.85%)
6.Verrucae	1(1.85%)
7. Capillary Hemangioma	1(1.85%)
8.Cavernous Hemangioma	1(1.85%)
9.Intradermal nevus	4(7.40%)
10.Vascular hamartoma	1(1.85%)
11.Seborrhoic keratosis	2(3.70%)
12.Benign fibrous histiocytoma	1(1.85%)
13.Benign appendageal tumor	1(1.85%)
14.Memobian gland cyst	1(1.85%)
15.Molluscum contagiosum	1(1.85%)
16.Basal cell carcinoma	2(3.70%)

Table 4.Shows different types of conjunctival lesions.

Conjunctival lesions(n=14)	Total cases(%)
Well differentiated Squamous cell carcinoma	2(14.28%)
Dermoid cyst	4(28.57%)
Epidermal inclusion cyst	2(14.2%)
Lipomatous swelling	1(7.15%)
Conjunctival cyst	3(21.4%)
Lymphangectasia	1(7.15%)
Rhinosporidiosis	1(7.15%)

Table 5. Shows Limbus lesions

Limbus Lesions(n=7)	Total cases(%)
Squamous cell carcinoma	5(71.4%)
Dermoid	2(28.5%)

Table 6. Shows Intraocular lesions

Intra-ocular lesions(n=4)	Total cases (%)
Retinoblastoma	1(25%)
Staphyloma	2(50%)
Panophthalmitis	1(25%)

DISCUSSION:

In the present study benign lesions (n=69) 85.18% outnumbered the malignant ones (n=12) 14.81%.This is similar to the study by Bastola P et al[1] and Chauhan SC et al[2],both found benign lesions to be 70% and malignant ones 30%.

Bimodal peak of age distribution was seen in present study similar to the findings of Bastola P et al [1] and Ud –Din N et al[3]. Yashita gupta et al[4] however found that ophthalmic lesions were highest(23.6%) in 0-9 years of age group.

Regarding sex wise distribution there were 60.49% males and 39.50% females in this study. Thakur SK et al[5] reported 51.2%males and 48.8% females.

Location wise Eyelid(66.66%) was the most common site involved, followed by conjunctiva(17.28%) similar to the findings of Chauhan SC et al[2]. This is because eyelid is composed of heterogenous tissues. Orbit was the least common site involved in the present study with just 2 cases Among the benign eyelid lesions, Dermoid cyst was commonest followed by epidermal inclusion cyst, similar to the findings of Bastola P et al[1]. Paul S et al[6] however found seborrheic keratosis to be the commonest benign lesion .Paul R et al[7] found Basal cell carcinoma (36.4%)followed by sebaceous gland carcinoma (27.3%) and Squamous cell carcinoma (27.3%)to be the common malignant lesions. In the present study there were equal number of cases of Basal cell carcinoma and Squamous cell carcinoma with 2 cases each. There was only 1 case of Molluscum contagiosum affecting eyelid in this study. It is caused by the pox virus that affects the eyelid and the periocular skin[8].

Conjuctival Rhinosporidiosis was seen in one case which presented as growth conjunctiva. Rhinosporidiosis is caused by Rhinosporodium seeberi and is worldwide in distribution but relatively more common in India[9].

Among the limbus lesions (n=7)8.64%5 cases were malignant diagnosed as Squamous cell carcinoma. The limbus is a common site for the occurence of corneal epithelial neoplasm. The limbus contains radially oriented fibrovascular ridges known as the palisades of vogt that may harbour a stem cell population[10].The malignant conjuctival –limbus lesions squamous cell carcinoma was the commonest, similar finding in other studies.[11,12.]

Out of the 4 intraocular lesions one was diagnosed as Retinoblastoma with extension into optic nerve in a 4 years old boy whose whole right eyeball was sent as specimen .Microscopically it showed sheets and lobules of small round to oval cells with vesicular nuclei ,scanty cytoplasm and few rosettes.Retinoblastoma was the only malignant lesion seen in pediatric age group in the present study.

CONCLUSION:

Histopathological examination of all the ophthalmic biopsies should be done as eye is a vital organ of the body and its location close to other important structures increases the importance of early diagnosis and treatment.

Fig1.Conjunctival Rhinosporidiosis. Numerous globular cysts representing thick walled sporangium containing numerous spores

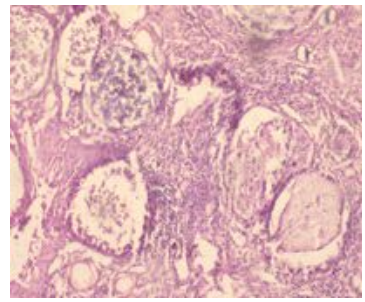


Fig 2. Molluscum contagiosum of the eyelid showing many molluscum bodies.

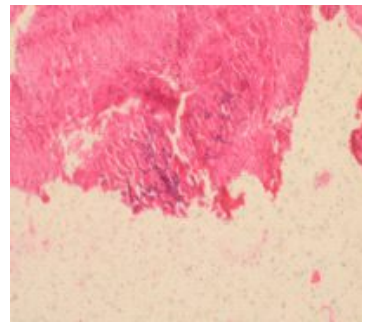


Fig 3. Basal cell carcinoma of the eyelid

Fig 4. Lobular capillary hemangioma.

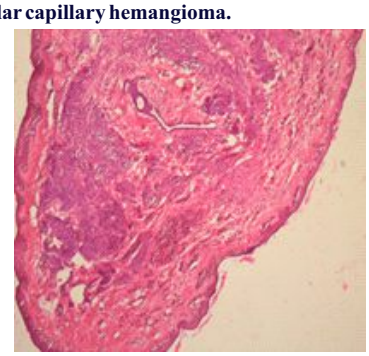


Fig 5.Dermoid cyst of the eyelid

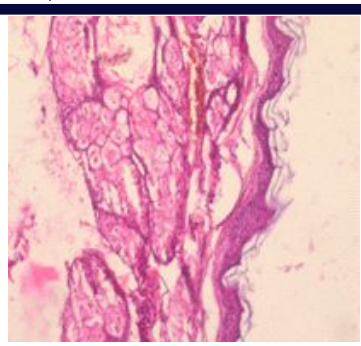


Fig 6. Well differentiated Squamous cell carcinoma of the limbus, eye

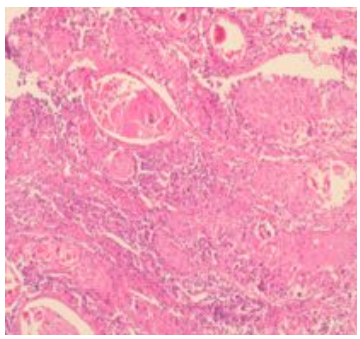
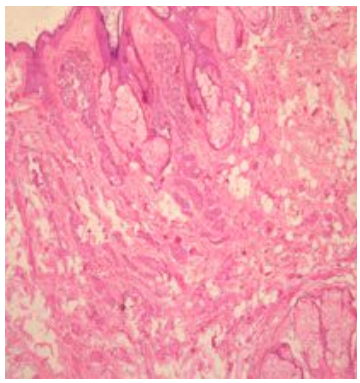


Fig 7. Compound Nevus, eyelid



REFERENCES:

1. Bastola PS et al .A Clinico-Histopathological Study Of Orbital and Ocular Lesions ;A Multicentric Study.Journal of Chitwan Medical College 2013;3(4):40-44.
2. Chauhan SC,Shah SJ,Patel AB,Rathod HK,Surve SD,Nasir JG.A histopathological study of ophthalmic lesions at a teaching hospital .National J of Medical Rereach . 2012;2:133-36.
3. Ud-Din N,Mushtaq S,Mamoon N,Khan AH,Malik IA.Morphological spectrum of optalmic tumors in northern Pakistan.J Pak Med Assoc.2001;51:19-22.
4. Yashita gupta et al. Clinico-pathological Spectrum of Opthalmic Lesions :An Experience in Tertiary Care Hospital of Central India .Journal of Clinical and Diagnostic Research. 2017 Jan ,vol -11(1):EC09-EC13.
5. Thakur SK et al .Primary malignant tumours of eye and adnexa in Eastern Nepal .Clin Experiment Opthalmol ..2003 Oct ;31(5):415-7.
6. Paul S et al .Malignant and Benign Eyelid Lesions in San Francisco:Study of a Diverse Urban Population .American Journal of Clinical Medicine .Winter 2011.vol8(1).
7. Paul R et al .Tumors of the Eyelid –a histopatholigical study at tertiary care hospitals in Dhaka, Bangladesh.IMC J Med Sci 2017 ;11(1):5-10.
8. Averbuch D,Jaouni T,Pe'er J,Engelhard D.Confluent molluscum contagiosum covering the eyelids of an HIV –positive child .Clin Experiment Opthalmol.2009;37:525-527.
9. Satyanarayana C.Rhinosporidiosis with a record of 255 cases.Acta Otolaryngologica. 1960;5:348-66.
10. Thomas PB, Liu YH, Zhuang FF,Selvain S ,Song SW ,Smith RE ,Trousdale MD,Yiu SC (2007).Identification of Notch -1 expression in the limbal basal epithelium. Mol. Vis.13:337-44.PMC2633467.
11. Kumar R,Adhikari RK,Sharma MK,Pokhrael DR,Gautam N.Pattern of ocular malignant tumors in Bhairahwa, Nepal. The Internet Journal of Opthalmology and Visual Science .2009 ;7(1).
12. Mondal SK, Nag DR, BandyopadhyayR,Adhikari A,Mukhopadhyay S.Conjunctival biopsies and ophthalmic lesions.A histopathological study in Eastern India.Journal of Research in Medical Sciences .2012;1176-79.