CONJUNCTIVAL INTRAEPITHELIAL NEOPLASIA: A CASE STUDY.

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ABSTRACT

Ocular surface Squamous cell neoplasia was narrated by Lee and Hirst first. Pterygium is most commonly occurring conjunctival mass causing corneal blindness in countries with dry, hot climate. Benign and malignant tumors like squamous cell carcinoma and basal cell carcinoma are lesions which resembles a pterygium. Various clinical conditions which may hamper function of vision and patient’s life if diagnosis is delayed. Papilloma like benign lesions results in to epidermoid carcinoma like malignant lesions. Conjunctival intraepithelial neoplasia is neoplasia resembling pterygium. Intraepithelial neoplasia is also known as Bowen’s disease, Conjunctival dysplasia, dyskeratosis. Conjunctival tumors very commonly observed frequent tumors of the eye and adnexa. Conjunctiva is a thin and flexible mucous membrane. It extends from the internal surface of the eyelids to the fornix and anterior ocular surface up to the corneoscleral limbus. Conjunctiva includes a non-keratinized stratified epithelium. It has two or more layers over the stroma. These layers are made up of fibrovascular connective tissues. Conjunctive is richly supplied with delicate vessels, nerves and lymphatic tissues. It is similar to mucous membrane in histological point of view. Epithelial and melanocytic are frequent origin in pathogenesis of Conjunctival tumors. Intraepithelial neoplasia is unilateral tumor frequently occurs in male having past history of extensive solar exposure, more than 95% arises at limbus in intrapalpebral zone. It is hence crucial to study Conjunctival intraepithelial neoplasia as it is responsible for structural changes and it can result in to invasive squamous cell carcinoma. Keywords: Conjunctival intraepithelial neoplasia, Carcinoma in situ (CIN), Pterygium, Cornea.

1. INTRODUCTION:

Pterygium is most commonly occurring Conjunctival mass causing corneal blindness in countries with dry hot climate. Conjunctival intraepithelial neoplasia resembling Pterygium. Benign & malignant tumors like squamous cell carcinoma & basal cell carcinoma resembles a pterygium. Conjunctival tumors are very commonly observed tumors of the Eye and Adnexa. Various clinical conditions which hamper function of vision. patient’s life if diagnosis is delayed. Papilloma like benign lesions results in to epidermoid carcinoma like malignant lesions. It is hence crucial to study Conjunctival intraepithelial neoplasia as it is responsible for structural changes and it can result in to invasive squamous cell carcinomas.2 Ocular surface Squamous cell neoplasia was narrated by Lee and Hirst first.3 Intraepithelial neoplasia also known as Bowmen’s disease, conjunctival dysplasia, dyskeratosis. It is unilateral tumor frequently occurs in men with history of extensive solar exposure, more than 95% arise at limbus in intraepalpebral zone. Present case study is aimed at Clinical presentation, Histopathological outcomes and Treatment of patient having CONJUNCTIVAL INTRAEPITHELIAL NEOPLASIA.

2. CASE REPORT

27yrs. male having history of slowly progressing mass with no pain & foreign body sensation in right eye for 3 months. Patient had history of ex-
cessive sun exposure as he has to travel long distance by two-wheeler for his job. There was no history of trauma to eye / surgery, no history of using spectacles, no history of toxic exposure, no history of any systemic illness, no history of any addiction, no significant family history.

2.1 On examination

2.1.1. Visual acuity: 6/6

2.1.2. Slit lamp examination:

Whit limbus. This measures 8 mm in diameter encroaching over cornea. Rest of the anterior segment was normal. Intra-ocular pressure is (RE) 17.3 mm Hg and (LE) 17.3 mm HG Fundus examination normal. Extraocular movements were normal. General & systemic examinations were within normal limits. Localized or generalized lymphadenopathy was absent.

2.1.3. Lab Investigations:

Preoperatively Complete Blood Count (CBC) was within normal limits. Serology negative for Retrovirus, Hepatitis B and Hepatitis C. Urine routine and microbiology, Blood sugar Random & Electrocardiogram normal. The conjunctival mass excised & conjunctiva auto graft done under LA sent for Histopathological examination. Evaluation revealed abnormalities in maturation of smaller cells having eosinophilic cytoplasm & moderately chromatic nucleus & prominent nucleus (epidermoid). Basement membrane integrity was maintained. Subepithelial tissue showed moderate mononuclear cell infiltration. On basis of these findings diagnosis of conjunctival intraepithelial neoplasia was made.

3. RESULTS AND DISCUSSION:

In this report, we describe a 27 years old patient suffering from slow growing conjunctival mass composed of intraepithelial neoplasia which is rare. The incidence of carcinoma in-situ (CIN) is estimated to be 1.9 per1,00,000 population per year. Ocular surface epithelium was having dysplasia. But it was not yet transferred to the conjunctival substantia propria or corneal Bowman layer. These lesions of conjunctiva are often associate with either pinguecula or pterygium & can be regarded as premalignant. Hence it is very crucial to know that Carcinoma in situ (CIN) causes disfigurement & rarely con progress to intraepithelial neoplasia. High rate of recurrence which ranges from 20%-40% observed during study. UV radiation, heavy smoking previous exposure to petroleum derivatives & Human papilloma virus (HPV 16-18) & HIV are important risk factor for development of intraepithelial neoplasia.

Management:

The management of these lesions consists of following measures.

- Alcohol assisted de-epithelization of CIN (Carcinoma in-situ).
- To remove tumor completely.
- Cryotherapy (for margins & tissue closure). It is crucial to integrate and merge a peripheral region of seemingly uninvolved conjunctival epithelium. It helps to save surgical margins during excision of mass. This is crucial part to avoid recurrence of tumor. Topical 5-Fluouracil and mitomycin C drops can be used as primary or as adjuvant to surgery in CIN treatment.

4. CONCLUSION

Conjunctival intraepithelial neoplasia is non-invasive neoplasia having rare potential to metastasis. In order to identify a malignant potential of conjunctival mass need for curative removal of epithelial tumors and exact histopathological work-up of conjunctival masses is highlighted. Counseling of the patient accordingly despite its low virulence; carcinoma in situ has been difficult to cure. Person who are exposed to UV radiations are advised to wear dark glasses. Screening of person who is exposed to chemicals like petroleum fumes should be done and serological test for HIV and polymerase chain reaction for HPV human papilloma virus should be done. There are no specific Ayurvedic reference found with strongly co-relates with concept of Intraepithelial Neoplasia.

5. REFERENCES


5. Lee GA, Hirst LW. Retrospective study of ocular squamous neoplasia Australian NZJ Ophthalmology 1997; 4; 269-76.


6. FIGURE

Photomicrograph showing conjunctiva intraepithelial neoplasia with basement membrane

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