



A study on Salzmann's Nodular Lt. Eye Degeneration

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Abstract

Salzmann's Nodular Degeneration (SND) is a condition where a small growth like nodule forms on front surface of cornea disease progress slowly and measures 1-4 mm which is located on anterior to bowman's layer of cornea. These are gray white to bluish in colour. Nodules are removed by superficial keratectomy under topical anaesthesia.

Keywords: Salzmann, Nodule, Callus, Bowman's layer, Cornea, Keratectomy, topical anaesthesia, Slit lamp.

Introduction

Salzmann's Nodular Degeneration (SND) is a condition where a small 'growth' callus like nodule forms on frontal surface of cornea. Its progress is slow and usually located on anterior to bowma's layer of cornea. Nodules are usually of gray-white to bluish in colour. This disease is usually bilateral and no diurnal variation in vision is seen. There is no benefit with spectacle.

Incidence

Incidence is more in females than males but exact ratio is not known.

Etiology

Etiology is not very clear. It is not associated with trauma, xposure to toxic materials to the eye and

use of contact lences. It has no association with systemic disease.

Predisposing Factor

Chronic inflammatory conditions of cornea acts as predisposing factor.

Pathology

There are multiple flakes present on eyelashes of both eyes and most affected eye shows waxy secretions over lid margins. Greyish-white nodules are usually present on cornea like callus of uniting bone, especially between the corneal epithelium and Bowman's layer. Other ocular examinations including fundus is normal.

Histopathology

Histological examination shows corneal epithelium overlying the nodule was atrophic and hyalinised fibrous plaque was present between epithelium and bowman's layer. On periodic acid Schiff stain the epithelial basement membrane was thickened and irregular.

Diagnosis

Diagnosis of Salzmann's nodules degeneration (SND) is done on basis of presentation of nodules on slit lamp examination. There is gradual deterioration of vision and progressive increase irregular astigmatism.

Case Report

45 year old female came in eye OPD with 4 years history of painless with gradual loss of vision in both eyes. The diminution of vision was more in left eye than right eye. Pt. had also symptoms of itching, foreign body sensation and photophobia in left eye. She had changed spectacle many times but problem was not eliminated. There was no variation of vision in day and night. There was no h/o neither systemic disease nor local history like trauma and exposure of foreign materials to the eye. Visual acuity in Rt eye was 6/24 while in left eye was 5/60. On slit lamp examination, there were multiple flakes present on eye lashes of both eyes and Lt eye showed waxy secretions over the lid margins. Greyish-white nodules were present on cornea between corneal epithelium and Bowman's layer. Other ocular examinations including fundus was normal.

Treatment

The main treatment of SND is superficial keratectomy. Pre operative oral and topical antibiotic started. Before surgery location and extent of the nodules identified with the help of microscope and slit lamp. Pt. Was prepared and topical anesthesia was administered in left eye. With blade and assistance of alcohol epithelial debridement was done. Once plane of dissection became visible the nodule was peeled off by

pulling the edge towards periphery. Dissected tissue was sent for histopathological examination. After removal of nodule topical antibiotic was applied and contact lens was placed. To induce reepithelialization topical steroid was tapered over a period of one month.

Discussion

Salzmann's nodular degeneration is reported as bilateral degeneration of cornea. Nodules are usually present over cornea. Its colour is usually bluish-grey or white. It is usually elevated above the corneal surface. Pts are usually asymptomatic but in acute stage pain, redness and photophobia are present. Light microscopy shows hyalinized dense deposits. Collagen fibres arranged irregularly in front of broken and sometimes absent Bowman's layer. Surgical removal of nodules and medical management are main basis of treatment of SND.

Conclusion

Salzmann's nodular corneal degeneration is non inflammatory condition. It is like callus of uniting bones. Females suffer more than males. Chronic inflammatory condition of cornea acts as predisposing factor. It causes slow diminution of vision and progressive irregular astigmatism. Nodule is confirmed by slit lamp and histopathological examination. Surgical removal is the basis of treatment.

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