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AS-OCT ASSISTED OCULAR SURFACE SQUAMOUS NEOPLASIA DIAGNOSIS AND MANAGEMENT

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MANAGEMENT:

For the first patient due to the more coherent lesion of leukoplakic appearance and the limbic location the surgeon opted for surgical management and excision of the dysplastic lesion with a 3-4mm margin of healthy conjunctiva. The lesion was sent for histology which confirmed diagnosis and complete removal. For the second case a more conservative approach with topical 1% 5 fluorouracil cycles was used due to the more spread out appearance of the lesion surrounding the cornea. 5FU is a pyridine analog that blocks thymidine synthase which inhibits DNA formation. This leads to a reduction in RNA synthetase, therefore causing poor cell growth and cell death

DISCUSSION:

AS-OCT shows a thickened hyper reflective epithelium with an abrupt transition from normal to abnormal epithelium. Furthermore the significance of as-oct in the follow up during medical therapy could prove valuable for comparison of efficacy of treatment by evaluation of the aforementioned parameters

CONCLUSION:

AS-OCT is a valuable diagnostic method for the differential diagnosis of OSSN.

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INTRODUCTION:

Ocular Surface squamous neoplasia (OSSN) are a group of disorders all presenting with dysplasia of squamous epithelial cells. Ossn etiology is multifactorial, affected by sun exposure (UV radiation), smoking, fair skin, xerophthalmia and immunosuppression along other factors. OSSN can be asymptomatic although irritation and hyperemia might be noticed. Upon slit lamp examination the use of fluorescein staining can be used showing granular epithelium on the affected area. Anterior segment OCT has been used in the diagnosis and differentiation of OSSN as it is non/invasive and it depicts a cross section of the cornea and the conjunctiva visualizing any affected tissues and the depth of involvement.

CASE PRESENTATION:

A 65 year old female presented at the Ophthalmology department after observing a painless white mass on the ocular surface of her left eye since a few weeks. An 84 year old male patient visited the emergency department with recent symptoms of irritation in his left eye. In both cases the ophthalmic history was otherwise unremarkable. In the first case Slit Lamp examination revealed a lesion at the limbus of the left eye with abnormal epithelium with leukoplakic appearance (Fig1&2). In the second case there were several lesions of gray and thickened epithelium, extending for more than 10 clock hours at the peripheral cornea with adjacent superficial neovascularisation (Fig3-5). AS-OCT in both cases revealed a hyper reflective, thickened epithelium with abrupt transition from the normal surrounding corneal epithelium. The findings of the AS-OCT were considered characteristic for the diagnosis of OSSN.

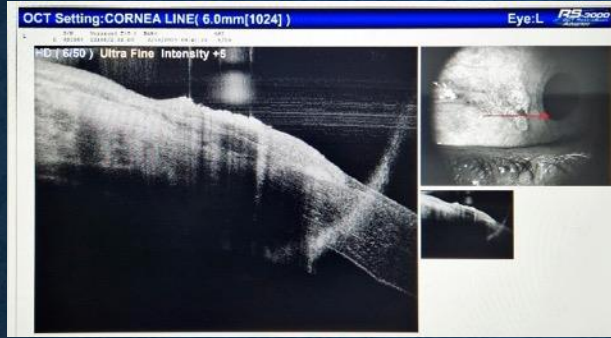


Fig 1. As-oct of 65 year old female patient

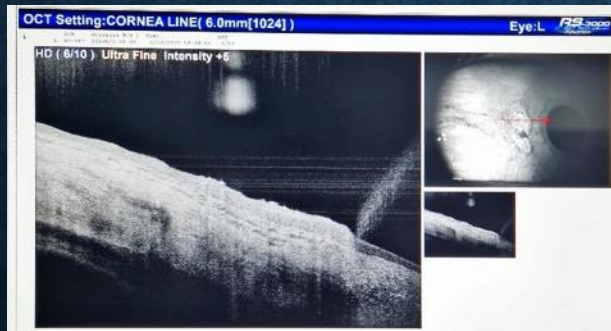


Fig 2. As-oct of 65 year old female patient



Fig 3. Slit lamp photograph of 84 year old male patient



Fig 4&5. As-oct of 84 year old male patient