Clinical Case Reports

An unusual presentation of conjunctival aspergillosis as a polyp in an immunocompetent child

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ABSTRACT

Fungi are a part of normal ocular flora and usually do not cause clinical infection in the absence of predisposing factors. We report a 7-year-old healthy boy from a rural area of India, who presented with a gradually increasing mass in the left eye. Excisional biopsy of the mass was performed, and pathological examination revealed multiseptate hyphae with acute-angle branching consistent with aspergillosis.

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INTRODUCTION

Fungal infections of the conjunctiva are much less common compared to bacterial and are rarely reported in the literature. Although normal conjunctival flora includes fungi, they are rarely implicated in ocular adnexal infections in the absence of any predisposing factors, i.e. pre-existing ocular disease, trauma with organic matter, immunocompromised state. We report conjunctival aspergillosis in a young immunocompetent child without an antecedent trauma.

THE CASE

A healthy 7-year-old boy presented to our centre with a history of a reddish mass in the nasal part of his left eye for 20 days. He belonged to a rural, middle socioeconomic background and was accompanied by his father who was a farmer by occupation. The lesion began as a small lump on the conjunctiva, initially the size of a pin-head and gradually increased in size. There was no associated pain or discharge from the affected eye, and the patient did not have a history of even a minor preceding trauma, any surgery or use of any topical medication.

The unaided visual acuity in both eyes was 20/20. Ocular examination showed a 2 mm×2.5 mm pedunculated lesion in the inferonasal part of the left bulbar conjunctiva, just lateral to the caruncle with mild adjacent hyperaemia. Rest of the ocular and general physical examination did not reveal any abnormality. A provisional diagnosis of a papilloma was made, and the patient was planned for an excision biopsy after 2 weeks. Few days before the planned surgery, the patient reported again with a history of spontaneous bleeding from the lesion. An increase in size of the mass was noted along with the presence of black necrotic slough on it (Fig. 1a).

An excisional biopsy of the lesion was done under general anaesthesia with cauterization of its base and primary closure of the conjunctiva using 8-0 vicryl suture (Fig. 1b). Postoperatively, the patient was started on topical antibiotic-lubricant regimen which was continued for 1 month. Histopathological examination of the mass revealed multiple, unstained fungal hyphae on the surface of the excised mass on haematoxylin and eosin stain (Fig. 2a). Silver methenamine stain showed numerous septate fungal hyphae with acute angle branching consistent with aspergillosis (Fig. 2b). Topical antifungal drugs were not started as there was no clinical evidence of any infection or residual lesion following excision.

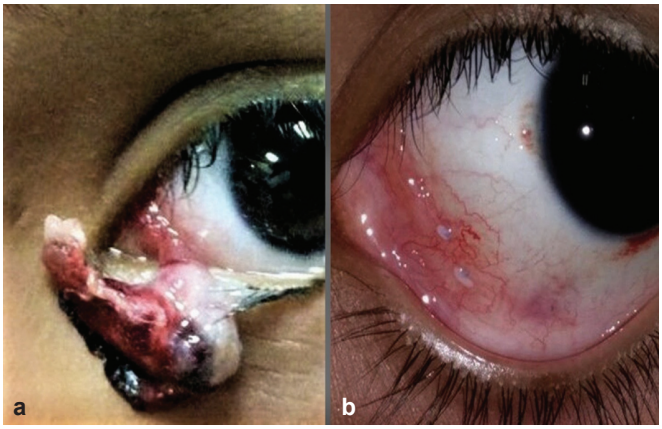

FIG 1. (a) Clinical photograph shows a fungating mass in the inferonasal part of the left eye. Clotted blood with necrotic tissue can be seen on its surface; (b) only minimal congestion is present at 1-week follow-up, and no residual lesion is detected

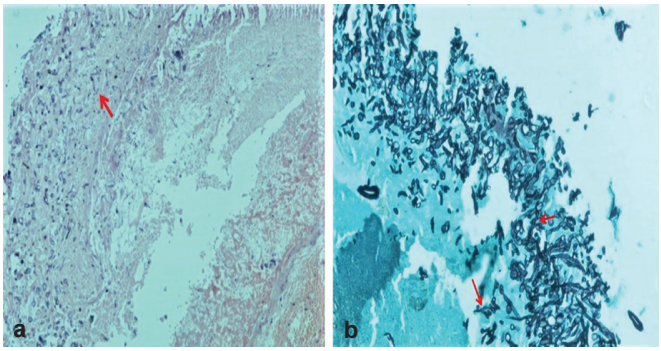

FIG 2. (a) Light microscopic image of the excised lesion on haematoxylin and eosin stain (×200), reveals septate fungal hyphae; (b) numerous septate fungal hyphae with acute angle branching on silver methenamine stain (×400) provide a definitive diagnosis of aspergillosis

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Surgical excision led to complete resolution without any topical antifungal therapy and no recurrence was noted till 1 year of follow-up.

DISCUSSION

Ocular mycoses in children are commonly seen in the form of fungal keratitis or keratoconjunctivitis, and most can be attributed to an exogenous source with an antecedent history of trauma, surgery or use of topical steroids.[1,2] Even though fungi have been isolated from healthy conjunctival sacs, with a reported incidence of 2.9%–27.4% across various age groups, their frequency is found to be much lower (0.8%–2%) between 0 and 9 years of age.[3–5] Mycotic flora of healthy ocular surface is mainly considered as transient aerial contaminants that can act as potential pathogens in the presence of altered tissue resistance. *Aspergillus* is a common mould present in the environment and has been reported to be the most commonly isolated fungus from eyes with no pre-existing diseases.[5] In the presence of predisposing factors such as trauma and immunosuppressed states, *Aspergillus* species can cause a wide array of sight-threatening ocular infections (e.g. keratitis, endophthalmitis, scleritis and orbital cellulitis). Chen *et al*. reported a case of conjunctival aspergilloma presenting as chronic refractory conjunctivitis in an immunocompetent woman and proposed opportunistic subconjunctival seeding of the fungus as the factor responsible.[6] We suspect a similar causal factor in our case. Tropical/subtropical countries with higher temperature and humidity have increased rates of fungal isolation, and contamination of external eye can occur more frequently during summer and harvesting season when more fungal spores are present in the environment. Arora and Tyagi reported that in India, a majority of the fungal infections were in agricultural workers.[5]

In our patient, the exact inciting cause for the fungal conjunctivitis could not be determined, but he was at an increased risk of developing the infection secondary to environmental factors. Coming from a rural area of a tropical country and agricultural background, the chance of exposure to fungal contaminants was high and even accidental rubbing of the eye could have been responsible for subconjunctival seeding and eventual development of aspergillosis. The presence of multiseptate filamentous hyphae on silver methenamine stain helped in providing a definitive diagnosis. Hence, we believe that this report will increase awareness for general practitioners to keep in mind the rare but possible differential diagnosis of conjunctival aspergillosis besides other more common causes of a conjunctival mass in a child.

To the best of our knowledge, this is the first report in a child of conjunctival aspergillosis presenting as a pedunculated polyp which was adequately managed by surgical excision without the need for antifungal therapy.

Conflicts of interest. None declared

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Severe autoimmune-mediated thrombocytopenia in an elderly woman

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ABSTRACT

The efficacy of immunotherapies that use antibodies to block programmed cell death 1 (PD-1) has been extensively investigated for lung cancer. Along with reactivation of the patient's immune response to tumour cells, immune-related adverse effects with anti-PD1 therapy have been reported. We report an 80-year-old woman who had suffered from a primary lung adenocarcinoma pre-treated with pembrolizumab and was admitted to our hospital with serious autoimmune-mediated thrombocytopenia induced by pembrolizumab.

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INTRODUCTION

The efficacy of immunotherapies that use antibodies to block programmed cell death 1 (PD-1) has been extensively investigated for advanced/metastatic non-small cell lung cancer (NSCLC). Monoclonal antibodies that block PD-1 provide substantial benefit, prolonging both progression-free and overall survival. However, along with reactivation of the patient's immune response to tumour cells, immune-related adverse effects (iRAEs) with anti-PD1 therapy have been reported.[1] Haematological iRAEs have been described occasionally. These include immune thrombocytopenia, autoimmune haemolytic anaemia, agranulocytosis or pure red-cell aplasia.[2,3] Severe forms of autoimmune-mediated thrombocytopenia have been reported rarely.

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