Case Report

Severe Conjunctival Papilloma in a Six year old female - Case report

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ABSTRACT

Conjunctival papilloma is a benign growth arising from the stratified squamous epithelium of the conjunctiva. It is mostly a self-limiting growth. Conjunctival papilloma occurs commonly in male adults especially in their third and fourth decades of life. It rarely occurs in children. This is a case report of a six (6) year-old female patient who was seen at the Solwezi General Hospital Eye Clinic (SGHEC) with complaints of difficulties in seeing, sandy sensation and tearing of the right eye. The patient had a twelve-month history of multiple fleshy growths on the conjunctival surface of the right eye, referred from a rural health centre in the District. A clinical diagnosis of conjunctival papilloma was made at SGHEC and the child was referred to Kitwe Teaching Eye Hospitals (KTEH) for further management. At Kitwe Teaching Eye Hospital, a successful excisional biopsy of the conjunctival papilloma lesions on the right eye was conducted with adjunctive therapy of Mitomycin-C intraoperatively, and topical chemotherapy of 5-fluorouracil (5-FU) after surgery. A definitive diagnosis of Benign Conjunctival Papilloma was confirmed for the patient's condition, based on the results from the histopathology samples that were sent to the Cancer Disease Hospital in Lusaka.

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INTRODUCTION

Conjunctival papilloma is a benign growth arising from the stratified squamous epithelium of the conjunctiva.[1] Papilloma lesions are known to occur in both children and adults although they are most common in adults aged of 20-39 years.[2] A male predominance of 60% has been reported.[2,3] The aetiology is not well established but the Human Papilloma Virus (HPV) is thought to be an important factor in the cause of all papillomas. HPV is a family of double stranded non-enveloped deoxyribonucleic acid (DNA) virus of which over 80% types have been identified.[4] Types 6, 11, 16 and 18 have been identified in the conjunctival papilloma.[3] HPV has been demonstrated in the normal conjunctiva.[4] The transmission route of HPV to the conjunctiva has not been clearly understood. However, some literature indicate that it may be due to infections picked by the baby from the foetal passage through the infected birth canal.[2] Auto-inoculation cannot also be ruled out as HPV in ocular swabs have been found in women with HPV induced lesions in the genital tract.[3]

Squamous cell papilloma is benign and self-limiting. It may be unilateral or bilateral and solitary or multiple.[5] Most lesions are asymptomatic and without associated conjunctivitis and folliculitis. Anatomically, papilloma lesions are commonly located in the inferior fornix, but may also arise from

the limbus, caruncle and the palpebral regions. Grossly, conjunctival papillomas appears as a greyish red fleshy, soft pedunculated mass with an irregular surface, appearing like cauliflower.[3] Different treatment methods for conjunctival papilloma lesions have been described in literature.[6] These methods could be conservative or surgical. Topical antimetabolites like Mitomycin-C and 5 fluorouracil (5-FU) are also known treatment methods though Mitomycin-C is more commonly used as an adjunct therapy to surgical excision.[7] Conservative treatment involves observation and patient reassurance, as lesions may regress spontaneously. Topical interferon alpha-2b has been shown to be an effective adjunctive therapy for small to medium sized lesions but not for large lesions without surgical debulking.[8,9] Cryotherapy is recommended in the treatment of papillomas as it causes minimal scarring and rate of recurrence is low. The double-freeze thaw method is the preferred one and appears to be the most effective technique.[10] Surgical excisional biopsy is preferred to incisional biopsy whenever possible.[7]

CASE PRESENTATION

A case of a six (6) year old female patient presented to Solwezi General Hospital's eye clinic (SGHEC) after being referred from a rural health centre, with history of fleshy multiple growths on the conjunctiva, difficulty in seeing, sandy sensation and tearing of the right eye, for twelve months. There was no history of trauma or eye infection prior to the onset of the eye growth. Over time, the growths had covered most of the lower fornix conjunctiva and gradually spread to the caruncle of the right eye, almost closing up the entire palpebral conjunctiva. The lesions resulted in constant visual disturbance, gritty sensation and excessive tearing. The patient had received chloramphenicol eye drops, from the health centre, for three (3) months with no improvement.

The general condition of the patient was fair, afebrile, not pale, nor jaundiced and had no respiratory distress. Her HIV status was non-reactive (NR). Visual acuity in both eyes was 6/6. Further examination of the eyes under local anaesthesia, revealed lesions that covered about 2/3 of the tarsal conjunctiva, inferior fornix and caruncle of the right eye, (as shown in figure 1). The cornea and the rest of the anterior and posterior segments were normal. The patient was referred to Kitwe Teaching Eye Hospital for further management.

The management of the patient at Kitwe Teaching Eye Hospital (KTEH) involved surgical excision biopsy of the lesions with adjunctive therapy of Mitomycin-C. The patient was put on 5-FU 1% topical therapy, post-operatively. Subsequent follow-up revealed no recurrence of the lesions, twelve months after the successful surgery.

Figure 1: Clinical appearance of the patient's right eye with conjunctival lesions covering the exposed inferior fornix and caruncle.

CONSENT

Considering the fact that the patient was below age of 18 years, consent to publish and use the images was obtained from the mother.

DISCUSSION

Literature indicates that papilloma lesions are known to occur most commonly in adults aged 20-39 years with a male preponderance of more than 60%.[2,3] This case demonstrates that conjunctival papilloma lesions can occur in children and females despite being rare. In accordance with what has been described in literature, there are various treatment

methods for conjunctival papillomas.[6] Conjunctival papilloma could be treated conservatively or surgically. Conservative treatment involves observation and patient reassurance as lesions may regress spontaneously.[7]

Topical antimetabolites like Mitomycin-C and 5-FU are also known treatment methods for conjunctival papilloma although Mitomycin-C is more commonly used as an adjunct therapy to surgical excision. The low-cost, easy storage and wide availability of 5-FU in Sub-Saharan African make it particularly advantageous kind of treatment option.[11,12] It is also both safe and effective.[11,12] Topical Interferon Alpha-2b has been shown to be an effective adjunctive therapy for small to medium sized lesions, but not for large lesions without surgical debulking.[8,9]

Carbon dioxide (CO_2) laser is also safe and effective in the treatment of Conjunctival papilloma.[7] Surgical excisional biopsy is normally indicated in adults to rule out pre-malignant or malignant changes.[7] The surgical care is indicated in cases where the lesions are causing visual disturbances and other symptoms such as cosmetically disfiguring appearance. The late presentation of the patient under review, compounded with significant visual disturbance due to the huge growth of the conjunctival lesions on the right eye, made it inevitable to take surgical intervention as the best option for the condition. It was thus noted that the lesions did not seem to be regressing and were therefore grossly interfering with the patient's vision in the right eye.

Furthermore, while other treatment methods such as topical use of anti-metabolites like Mitomycin-C, 5-FU or cryotherapy lone may have been entertained if the child presented early[7], excisional biopsy was chosen as treatment option because of the level of severity of the condition of the eye and the age of the patient at presentation.

The presence of the massive conjunctival lesions on the eye also prevented the child from opening the eyelids to allow sufficient amount of light entering into the right eye. Consequently, since the visual system may not have been fully developed at age of six (6) years, there was possibly a risk of developing amblyopia if the child was left untreated.

Normally, seedling may occur following excision of the lesions resulting in multiple new lesions.[7] In order to guard against possible recurrence of the conjunctival papilloma lesions on the right eye of the patient in this case report, an adjunct of intraoperative Mitomycin–C and postoperative topical 5-fluorouracil (5-FU) therapy was given.

CONCLUSION

This report highlights that conjunctival papilloma can occur in children and in females as well, despite it being rare. Most commonly conjunctival papilloma occurs in the age group of 20-39 years and predominantly in the males.

In long standing cases of conjunctival papilloma, especially in children, surgical intervention by excision biopsy with an adjunctive therapy of Mitomycin-C and / or 5 FU, may be the management of choice in order to reduce chances of recurrence.

Patients who may present with conjunctival irritation and growths of the eyes, especially children, should be carefully screened and quickly referred to hospital for continued care and advice.

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