A Case Report: Squamous Cell Carcinoma of Conjunctiva

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Abstract

A 57- year- old Thai woman presented with a history of right eye irritation and redness for 2 weeks. A slit-lamp examination was revealed a papillary lesion with prominent vascular tufts on the nasal conjunctiva and cornea of her right eye. The extent of corneal invasion was 2 mm, 4 mm, and 2 mm away from superior, nasal, and inferior limbus, respectively. Neither anterior chamber cells nor orbital invasions.

The impression cytology was performed and cytological diagnosis was positive for dysplasia, possibly squamous cell carcinoma. Mitomycin C (MMC) was given as 0.02% eye drop four times daily, with 4 cycles (one week on and one week off). Treatment with topical MMC has been effective without significant adverse effects. The lesion was regress without recurrence during the follow-up period.

Introduction

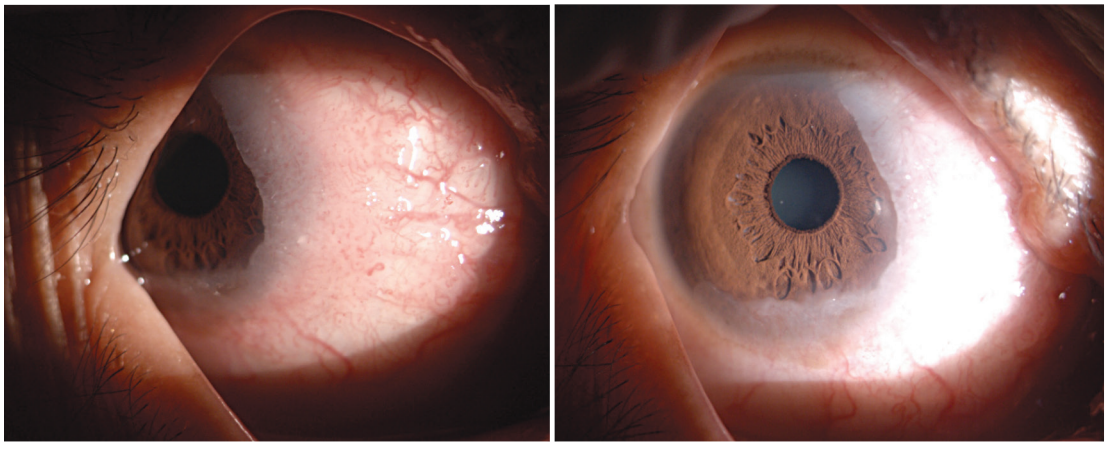
Squamous cell carcinoma (SCC) of the conjunctiva is a rare malignancy; however, it is the most common malignant tumors of the ocular surface[1]. The incidence varies from 0.02 to 3.5 per 100,000[2, 3]. In Thailand, the previous study[4] reported the incidence of squamous cell carcinoma and carcinoma in situ of the conjunctiva approximately 30% of the malignant tumors of the ocular adnexa during 2000 to 2005. Although conjunctival SCC is regarded as a low grade malignancy, SCC known to be sight and life threatening because tumor has the potential aggressive behavior to invade the intraocular structures, sclera, orbit,[5] and there are studies[6,7] reported some patients died of metastatic disease.

In regard to their modalities of treatment; surgical excision with wide margins of about 4 mm and adjuvant cryotherapy is the main traditional treatment. Topical chemotherapy–mitomycin C (MMC) has a role for preoperative use in large tumors to reduce the tumor size[8].Yousef YA, et al., reported the recurrence rate of conjunctival SCC following excision with or without cryotherapy, topical chemotherapy, irridation or exenteration was 22.2%[9]. More recently, in 2014 Miller CV, et al., found 52% of recurrence rate after primary excision alone[10]. We report a case of conjunctival SCC with topical MMC has been effective without significant adverse effects.

Case report

A 57 year old Thai woman presented with a history of right eye irritation, redness with minimally yellow discharge for 2 weeks. She did not suffer from

blurred vision. From the past history, she had blunt ocular trauma of left eye last many years that lead to poor visual acuity, without history of medical diseases or systemic cancers. At the initial examination, her best corrected visual acuities were 20/40 OD and count finger 1 foot OS. The ocular motility was full in both eyes. A slit-lamp examination was revealed a papillary lesion with prominent vascular tufts on the nasal conjunctiva and cornea of the right eye as shown in figure 1. The extent of corneal invasion was 2 mm, 4 mm, and 2 mm away from superior, nasal, and inferior limbus, respectively. No anterior chamber cells were found. She had grade two nuclear sclerotic cataract in her both eyes. A dilated fundus examination was revealed normal optic disc appearance and macula in right eye, whereas pale disc in left eye which possible related to her past history of ocular trauma.

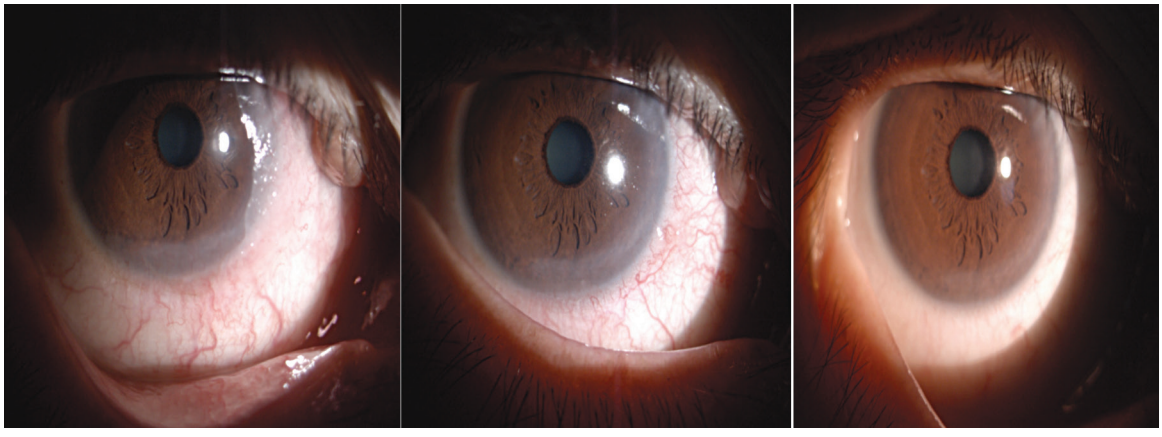


(1a) **(1b)**

Figure 1 Photograph of the right eye showing a papillary lesion with vascular tufts on the nasal conjunctiva with extensive corneal involvement, temporal (1a) and primary position view (1b).

Due to the appearance of papillary conjunctival lesion, the location and the extensive corneal involvement, the ocular surface squamous neoplasia (OSSN) have to be rule out. The impression cytology was performed and cytological diagnosis was positive for dysplasia, possibly squamous cell carcinoma. Because the large- sized lesion in this patient may need the surgery with large excision that may cause limbal stem cell deficiency. Topical chemotherapy has a role for preoperative use in large tumors to reduce the tumor size. Due to the limited availability of topical interferon (IFN)-α2b in our hospital, we used topical 0.02% MMC four times daily, with 4 cycles (a cycle mean one week on and one week off). During the treatment period, her symptom was improved and the lesion size was decreased (Figure 2a-2c). The serology test (anti-

HIV) was done and showed the non-reactive result. A complete tumor regression was found at 3 months after start topical MMC. Surgical treatment was not required and the patient was satisfied with the result of medication treatment.



(2a) **(2b)** **(2c)**

Figure 2 Photography of the right eye showing the clinical response of topical MMC at 1 week (2a), one month (2b) and 3 months (2c) after starting; a complete tumor regression was found at 3 months follow-up periods (2c).

Discussion

Currently, the accept treatment modalities in conjunctival SCC are surgical excision with or without cryotherapy[11]. Other modalities are combination of surgical excision with absolute alcohol, excimer laser[12], and the adjunctive topical chemotherapy[13, 14].

Using topical chemotherapy as a primary option has a role for large tumors since the large excision area can lead to limbal stem cell deficiency and ocular surface irregularity. Topical MMC is one of topical chemotherapy, the dose varies from 0.02 % to 0.04%. The regimen was given four times daily, with cycles of one to two weeks “on” and one to two weeks “off”[15]. The reported adverse effects of topical MMC are photosensitivity, redness, allergic reaction, severe epitheliopathy and punctual stenosis; the careful monitoring has importance during the treatment period and the artificial tear was used to relieve the symptom.

We report a case of conjunctival SCC with topical 0.02% MMC of 4 cycles regimen has been effective without significant adverse effects. The tumor was completely regressed without recurrence during the follow-up period of 3 months with impression cytology was normal finding. Since the SCC has the potential to recurrent, therefore the long-term follow-up should be advised to the patient.

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รายงานผู้ป่วย: Squamous Cell Carcinoma ของเยื่อบุตา

ผู้ช่วยศาสตราจารย์แพทย์หญิงวิมลวรรณ ตั้งปกาศิต
แพทย์หญิงฐณิชยา เหรียญภิญญวัฒน์
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บทคัดย่อ

ผู้ป่วยหญิงไทยอายุ 57 ปี มาด้วยอาการเคืองตาและตาแดงข้างขวามา 2 สัปดาห์ ผลการตรวจด้วยกล้อง slit lamp พบเยื่อบุตาและกระจกตาทางด้านใกล้จมูก (nasal part) มีลักษณะเป็น papillary ที่มีกลุ่มเส้นเลือดร่วมด้วย โดยรอยโรคมีการลุกล้ำเข้ามาที่กระจกตาขนาด 2, 4, และ 2 มิลลิเมตร ทางด้านบน, ด้านใกล้จมูก และด้านล่างตามลำดับ ไม่พบเซลล์อักเสบในช่องหน้าม่านตาหรือการลุกล้ำเข้าในลูกตา

ผลการตรวจเซลล์ทางห้องปฏิบัติการ (impression cytology) พบเป็นกลุ่มเซลล์ dysplasia ซึ่งอาจเป็น squamous cell carcinoma ผู้ป่วยรายนี้ได้รับการรักษาโดยการหยอด 0.02% Mitomycin C (MMC) วันละ 4 ครั้ง นาน 1 สัปดาห์ และหยุด 1 สัปดาห์ จากนั้นให้หยอดตาอีก ทั้งหมดรวมเป็น 4 รอบ (cycles) หลังจากการรักษาด้วย MMC ได้ผลเป็นที่น่าพอใจ โดยไม่พบการกลับเป็นซ้ำและอาการไม่พึงประสงค์ ในช่วงเวลาที่ทำการตรวจติดตามการรักษาในผู้ป่วยรายนี้