(10)

Squamous cell carcinoma of the lower eyelid penetrating into the orbit – case report

Rak kolczystokomórkowy powieki dolnej penetrujący do oczodołu – opis przypadku

Skowrońska Nina[1], Szumiński Michał[1], Bakunowicz-Łazarczyk Alina[1], Pawłowski Przemysław[1], Tomaszewski Bożydar[2]

[1] Department of Pediatric Ophthalmology with Centre for Treatment of Strabismus, Medical University of Bialystok, Poland
Head: Professor Bakunowicz-Łazarczyk Alina, M.D., Ph.D.
[2] Department of Ophthalmology, Medical University of Bialystok, Poland
Head: Professor Mariak Zofia, M.D., Ph.D.

Streszczenie: Celem pracy jest przedstawienie przypadku raka kolczystokomórkowego u 86-letniej pacjentki, która trafiła do szpitala z powodu dolegliwości bólowych spowodowanych obecnością guza powieki dolnej oka prawego.
Wykonano podstawowe badania okulistyczne oraz badanie tomografii komputerowej oczodołów. Zmianę usunięto chirurgicznie i opracowano histologicznie. Badanie ostrości wzroku wykazało światłopoczucie w oku prawym. Ostrość wzroku oka lewego wynosiła 0,1. W badaniu okulistycznym stwierdzono łzawienie oka prawego, bakteryjne zapalenie worka spojówkowego, unaczynione bielmo rogówki oraz twardą, ubarwioną i unaczynioną masę, która wychodziła ze spojówki powieki dolnej i przenikała do oczodołu prawego.
Badanie histopatologiczne wykazało obecność komórek raka koczystokomórkowego. Podstawą postawienia dokładnej diagnozy i wyboru właściwego leczenia guza złośliwego powieki zawsze musi być badanie histopatologiczne.
W przypadku, kiedy zmiany wywołane przez raka kolczystokomórkowego są rozległe, konieczne jest ich chirurgiczne usunięcie z włączeniem radioterapii.

Słowa kluczowe: rak kolczystokomórkowy – SCC, oczodół, powieka dolna, nowotwór złośliwy powieki.

Summary: The aim of our study is to report a case of pigmented squamous cell carcinoma of the palpebral conjunctiva referred to our clinic because of eye pain. A 86 year old patient suffering from eye pain due to a lower right eyelid tumour was admitted to our department. The basic ophthalmic examination and CT scans of orbits were performed. A lesion was surgically removed and histologically examined. The best corrected visual acuity in the left eye was 0.1 and there was light perception in the right eye. Ocular examination of the right eye revealed hard, pigmented and vascularized mass in the lower palpebral conjunctiva penetrating into the lid margin and the orbit, epiphora, bacterial conjunctivitis and vascularized corneal scar with adherent leucoma. Histopathologic examination revealed a squamous cell carcinoma. The accurate diagnosis and correct management of the malignant eyelid tumours always requires histological examination. Surgical removal and additional radiotherapy in the case of extensive SCC conjuctival lesions is necessary.

Key words: squamous cell carcinoma – SCC, orbit, inferior eyelid, eyelid malignant tumour.

Introduction

Squamous cell carcinoma (SCC) is the most common malignancy in conjunctiva but it rarely occurs in the eyelid (1). Clinically, the lesions usually show a nodule with crusting and telangiectatic vessels and rolled edges. Overall incidence of SCC is ranging from 0.09 to 2.42 cases per 100 000 population (2). It accounts for 2 to 9% of all eyelid malignancies (3, 4). These tumours have a predilection for Caucasians, with a history of excessive exposure to ultraviolet radiation (5). The lower eyelid is affected more frequently and the lesion can involve the eyelid margin (6). Squamous cell carcinoma is locally invasive and can metastasize to regional and distant lymph nodes in approximately 20% of patients (7). It occurs at substantially increased rates in immunocompromised patients, with HIV infections or after kidney transplantation (8, 9). There are 3 clinical types of SCC: erythematous scaly patches, ulcerated lesions, nodular or papillomatous lesions.

The wide variation in clinical appearances presents great difficulty in differentiating squamous cell carcinoma from other benign and malignant lesions. Even experienced observers may have a high rate of inaccuracy in the preoperative clinical diagnosis (10). Therefore histopathological examination is critical to confirm diagnosis.

Case history

A 86 year old patient was admitted to our clinic with a 4 month history of pain in the right eye and fast progressive development of a right lower eyelid nodule. Her general health history revealed hypertension that was controlled with enarapril. She also had a family history of porphyria. A basic oph-

ISSN 0023-2157 Index 362646

Fig. 1. Right lower eyelid nodule penetrating into the orbit.
Ryc. 1. Guz powieki dolnej prawej penetrujący w głąb oczodołu.

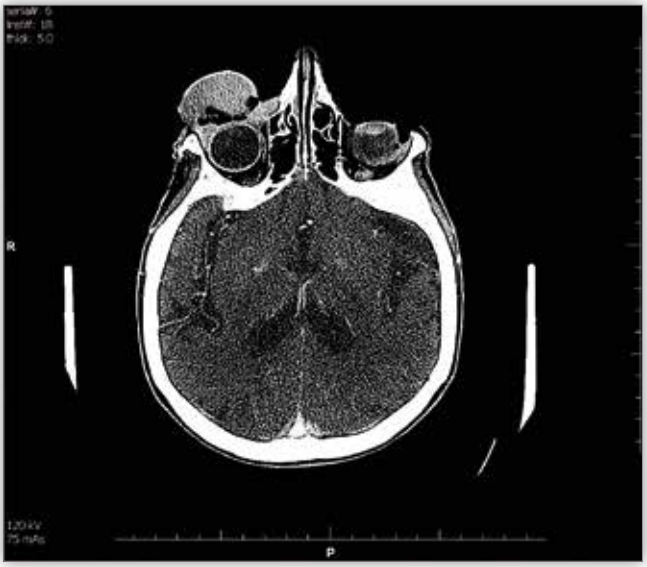

Fig. 2. CT scan of the orbits with a tumour extending into the right orbit.
Ryc. 2. Obraz badania tomografii komputerowej guza penetrującego w głąb prawego oczodołu.

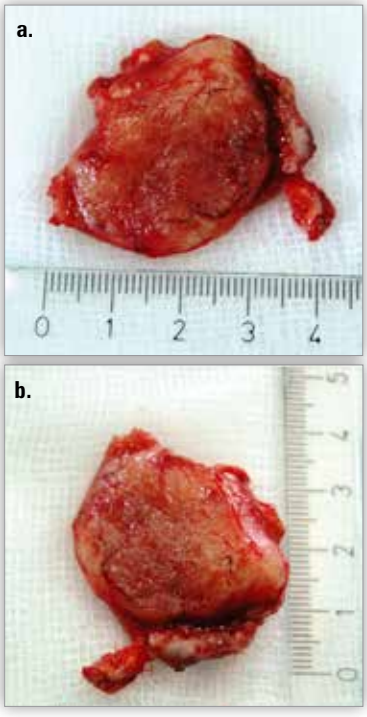

Fig. 3a., b. Eyelid mass during surgery – dimensions.
Ryc. 3a., b. Śródoperacyjny obraz guza powieki – wymiary.

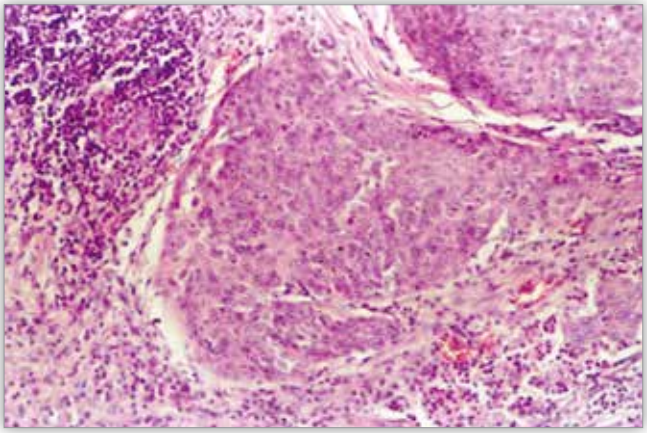

Fig. 4. Photomicrograph showing lobules of invading tumor cells (hematoxylin and eosin stain).
Ryc. 4. Obraz mikroskopowy przedstawiający naciekanie zrazików komórkami nowotworowymi (barwienie hematoksyliną i eozyną).

Fig. 5. Eyelid appearance on the first day after surgical removal of SCC.
Ryc. 5. Obraz powieki w pierwszym dniu po chirurgicznym usunięciu raka kolczystokomórkowego.

thalmic examination with additional, including ultrasonography and CT of the orbits were performed. Her best corrected visual acuity in the left eye was 0.1 (due to corticonuclear cataract and central geographic atrophy resulting from dry AMD) and there was light perception with localisation in the right eye. The intraocular pressure was normal in both eyes (12 mmHg in the right eye, 11 mmHg in the left eye). Ocular examination of the right eye disclosed hard, pigmented and vascularized mass in the lower palpebral conjunctiva penetrating into the lid margin and the orbit, epiphora, bacterial conjunctivitis and vascularized corneal scar with adherent leucoma (Fig. 1.). The structures of the eyeball's anterior segment and eye fundus could not be assessed in slit lamp biomicroscopy due to corneal opacity. Ultrasonography showed no retinal detachment. CT scans of the orbits confirmed a well reinforced mass measuring 34 x 24 mm (Fig. 2.). The lesion was surgically removed under general anesthesia and sent to histopathological examination (Fig. 3.). On histopathological examination eosinophilic cells invading the dermis and subcutaneous tissue were present. Carcinoma cells were located in medium and large nests that were surrounded by chronic inflammation process (Fig. 4.). The postoperative photograph of the patient is shown in Figure 5. As the SCC margin clearance was not confirmed and the patient did not agree to the next operation, so she was sent for additional palliative radiotherapy to the Department of Oncology. A total

dose of 30Gy over 10 fractions was applied. After 2 months from radiation the eyelid skin appeared normal with no sign of recurrences. On the third month from radiation a small nodule measuring 4 mm x 5 mm occurred, but patient did not accept additional treatment.

Discussion

SCC demonstrates a broad spectrum of clinical appearances. Eyelid lesions may develop *de novo* or within areas of widespread ultraviolet skin damage. The presence of orbital invasion significantly complicates the management of an eyelid SCC. It is a serious complication of aggressive or neglected lesions, which has been reported to occur in 2.5% of all eyelid squamous cell carcinomas (10). An orbital exenteratio is then required. When a patient declines surgery a palliative radiotherapy should be considered.

References:

1. Cook B.E., Bartley G.B.: *Epidemiologic characteristics and clinical course of patients with malignant eyelids tumors in an incidence cohort in Almorted County, Minnesota*. Ophthalmol. 1999; 106: 746–750.
2. Kumar R.: *Clinicopathologic study of malignant eyelid tumours*. Clin. Exp. Optom. 2010; 93: 224–227.
3. Coroi M.C., Roşca E., Muţiu G., Coroi T., Bonta M.: *Eyelid tumors: histopathologicaland clinical study performed in County Hospital of Oradea between 2000-2007*. J. Morphol. Embryol. 2010; 51: 111–115.
4. Mehta M., Fay A.: *Squamous cell carcinoma of the eyelid and conjunctiva*. Int. Ophthalmol. Clin. 2009; 49: 111–121.
5. Sullivan T.J.: *Squamous cell carcinoma of eyelid, periocular, and periorbital skin*. Int. Ophthalmol. Clin. 2009; 49: 17–20.
6. Reifler D.M., Hornblass A.: *Squamous cell carcinoma of the eyelid*. Surv. Ophthalmol. 1986; 30: 349–365.
7. Doxanas M.T., Jackson-Iliff W., Iliff N.T., Green W.R.: *Squamous cell carcinoma of the eyelids*. Ophthalmol. 1987; 94: 539––541.
8. Kwitko M.L., Boniuk M., Zimmerman L.E.: *Eyelid tumours with reference to lesions confused with squamous cell carcinoma. Incidence and errors in diagnosis*. Arch. Ophthalmol. 1963; 69: 693–697.
9. Nixon R.L., Dorevitch A.P., Marks R.: *Squamous cell carcinoma of the skin: accuracy of clinical diagnosis and outcome of follow-up in Australia*. Med. J. Aust. 1986; 144: 235–236.
10. Green A., Leslie D., Weedon D.: *Diagnosis of skin cancer in the general population: clinical accuracy in the Nambour survey*. Med. J. Aust. 1988; 148: 447–450.

The study was originally received 25.06.2012 (1392)/
Praca wpłynęła do Redakcji 25.06.2012 r. (1392)
Accepted for publication 10.10.2012/
Zakwalifikowano do druku 10.10.2012 r.

Adres do korespondencji (Reprint requests to):
lek. Nina Skowrońska
Klinika Okulistyki Dziecięcej z Ośrodkiem Leczenia Zeza
ul. Waszyngtona 17
15-274 Białystok
e-mail: skowronska.nina@gmail.com

ISSN 0023-2157 Index 362646