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Осложнения после хирургии опухоли периокулярной области

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Complications of periocular tumor surgery

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РЕФЕРАТ

Косметические и функциональные деформации – главные осложнения после удаления опухолей век. Учитывая то, что нормальная анатомия века уже нарушена из-за опухоли, операция в зависимости от клинических особенностей и размеров опухоли может привести ко многим осложнениям, таким как эктропион, энтропион, птоз,

лагофтальм. Однако самое главное осложнение после удаления опухоли века – рецидив, что означает отсутствие результатов лечения и ухудшает прогноз.

В данной статье вкратце представлены клинические случаи – осложнения после удаления опухоли века.

Ключевые слова: веко, рецидив, косметический, деформация. ■

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ABSTRACT

Cosmetic and functional deformities are an important group of complications after eyelid tumor surgery. Since the tumor itself already disrupts the original anatomy of the eyelids, depending on the clinical features and size of the tumor, surgery may cause many complications

such as ectropion, entropion, ptosis, and lagophthalmus. However, the most important complication in eyelid tumor surgery is recurrence.

Eyelid tumor recurrence usually means treatment failure and worsened prognosis. In this article, complications of eyelid tumor surgery are summarized with case presentations.

Key words: eyelid, recurrence, cosmetic, deformity. ■

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Еyelid tumors are a group of disease that causes both ocular and life threatening problems. Surgery is the most common and successful choice of treatment today. A wide variety of complications are not uncommon despite advanced techniques in surgery.

Cosmetic and functional deformities come first to our minds regarding complications of eyelid tumor surgery. Depending on the clinical features and size of the tumor, surgery may cause many complications such as ectropion, entropion, ptosis, loss of eyelashes and lagophthalmus. As the tumor itself already disrupts the original anatomy and physiology of the eyelids, varying degrees of deformities may occur as

a result of excision despite a good reconstruction.

RECURRENCES

As a matter of fact, the most important and troublesome complication in eyelid tumor surgery is recurrence. The recurrence of these tumors usually means that previous interventions and surgeries weren't successful or the patient has regressed to the point where the tumor has never been treated. In such cases, there is often a much worse prognosis than having never undergone surgery because every recurrence makes the treatment a bit more difficult. Recurrences due to in-

sufficient treatment may cause severe morbidity and sometimes even mortality as seen in patient in *Fig. 1*.

Here are some case examples below.

Case 1. Sixty years old man referred to us with a recurrent eyelid tumor. He had a history of eyelid tumor excision at least 8-10 times, but the tumor recurred shortly after every surgery. Pathology revealed basal cell carcinoma (BCC). Upper and lower eyelids were found to be totally destroyed in examination (*Fig. 2a*).

Computed tomography showed that the eyelid tumor caused an advanced invasion to the orbit so much so that the globe was depressed severely (*Fig. 2b*). The patient was diagnosed as advanced orbital BCC, and exenter-



Fig. 1. Here, the advanced orbital tumor was caused by inadequate treatment of a small eyelid tumor and recurrences

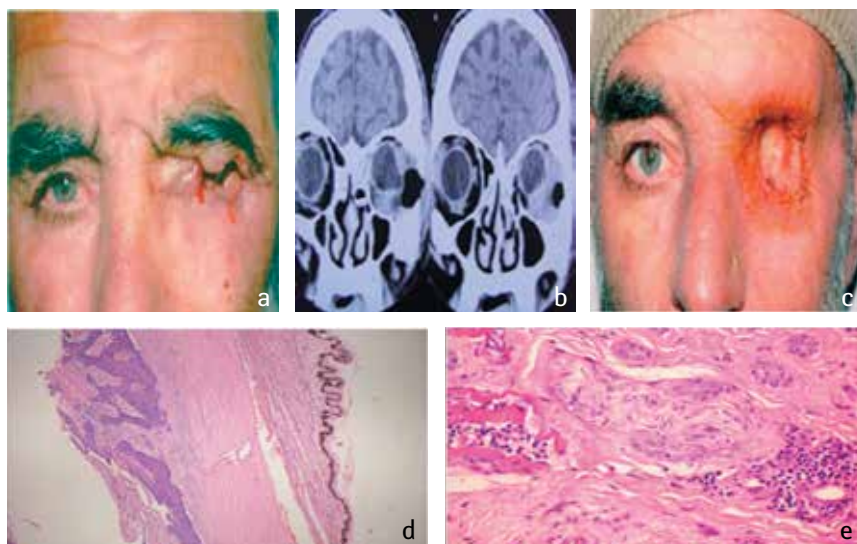


Fig. 2. Eyelid tumor: a) Left advanced orbital BCC with a history of multiple recurrences; b) CT shows deep orbital invasion and distortion of the globe; c) Postoperative appearance of the patient; d) Scleral invasion of basal cell carcinoma cells (HE, x 400); e) Perineural invasion



Fig. 3. a) Right recurrent BCC of previously exenterated orbit; b, c) BCC invasion of the orbit and sinuses on CT; d) Postoperative appearance after reexcision and sinusectomy

ation was planned to remove the tumor completely.

But due to the large size and infiltrative features of the lesion, we had to remove the adjacent periosteum and bone in addition to exenteration.

This patient's tumor had two very rare conditions. *Fig. 2d* shows the ciliary body, sclera, tumor tissue and malignant cells that invaded the sclera. Scleral invasion is almost never seen in BCCs. Even in very advanced BCCs sclera continues to protect the eye as a rigid and robust barrier.

Another rare condition seen in BCCs is perineural invasion (PNI), which occurs when the tumor infiltrates the nerve tissue and sheath (*Fig. 2e*). PNI is an important factor of poor prognosis which facilitates the spread of malignant cells along the nerve tracing. It's very rare in BCCs and seen only in patients who have undergone inadequate excision and who have a history of multiple recurrences.

Finally, radical surgery was required due to advanced orbital involvement, and exenteration was performed (*Fig. 2c*). The procedure included periosteum and bone removal. However, it was necessary to add a high dose of radiation therapy since exenteration alone was not sufficient due to both bone and nerve involvement.

Case 2 is a patient who had undergone multiple surgeries for BCC and was finally exenterated and then closed with a free flap. When presented to us, the recurrent tumor had loaded the orbit and extended to the sinuses (*Fig. 3a, b, c*).

In this case, we reexcised the exenterated orbit and excised all sinuses on that side, with the help of an otorhinolaryngology specialist and a neurosurgery specialist. Since the cerebrospinal fluid leaked accidentally while removing the ethmoid sinus, dura repair was needed. As expected in such a large tumor, postoperative radiation therapy was added to the treatment (*Fig. 3d*).

Case 3 is a patient with a history of 4-times BCC excision (*Fig. 4a*). Unlike the others, we thought we could save the globe in this case. This patient underwent extensive tumor resection with frozen section control of surgical margins. After tumor free margins were provided, an advanced reconstruction was performed using conjunctival flap and skin grafts. Howev-

er, although the surgical margins were reported to be tumor-free, recurrence developed again after a while. In the end, we had to do an exenteration to this patient (*Fig. 4b*).

In conclusion, in the treatment of these tumors, the surgeon's fear of creating a large defect and having difficulty in reconstruction, that is, avoiding cosmetic and functional deformity, can be a major cause of inadequate excision. However, as we have seen in the examples above, this is a very dangerous situation, because the excision of the tumor without clean surgical margins increases the risk of recurrence. This eventually results in larger deformities, sometimes leading to loss of the eye at the end.

Cosmetic and Functional Deformities

One of the cosmetic problems after eyelid tumor surgery is eyelash loss. Case 4 is a systemic cancer patient who has detected carcinomas in various organs due to systemic immune suppression (*Fig. 5a*). He was referred to us because the diagnostic biopsy of the upper lid lesion was reported as intraepithelial Ca. In this case, the most important point to consider is the poor course of carcinomas, especially squamous cancers, as they are immunosuppressed. Although the lesion is small and simple, the risk of recurrence is very high and should be treated appropriately; no microscopic residue should be left. Therefore, it seemed necessary to sacrifice the eyelashes and include them in the excision for obtaining clear margins.

However, since the patient was 30 years old and had cosmetic concerns, the loss of eyelashes was undesirable. We removed a large tissue including the lesion. Then, we received a skin graft including 1 row of hair on the lower eyebrow, turned the graft upside down, and closed the defect to replace the eyelashes. Thus, the hairs on the lowest row of the eyebrows were moved to eyelid margin and replaced the eyelashes (*Fig. 5b*). The eyelashes looked aesthetically pleasing at the beginning. However, because the patient received systemic chemotherapy for a very long time due to systemic cancer, the eyelashes shed again later on.

Case 5 is a 53-year-old patient who underwent surgery 10 years ago for a mass in the right sac, and then underwent 2 more surgeries because of the



Fig. 4. a) Recurrent BCC with a history of 4 recurrences; b) Appearance after exenteration

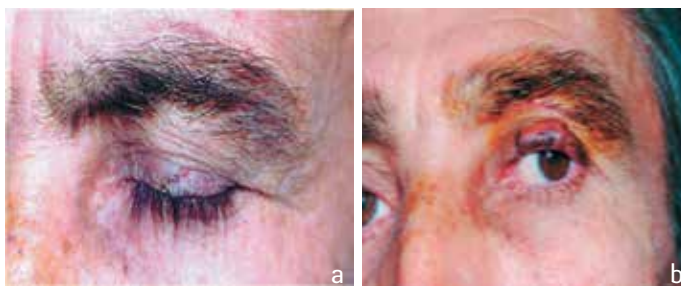


Fig. 5. Systemic cancer: a - Intraepithelial carcinoma in the upper eyelid; b - After the removal of the lesion and reconstruction



Fig. 6. a) A large recurrent mass in right lachrymal region; b) CT showed that the mass completely filled the sac area and extended to the medial orbita; c) Appearance after the removal of the lesion; d) Appearance after the reconstruction

recurred mass (*Fig. 6a*). But ultimately, the patient became accustomed to the mass that remains stable in this way for 4-5 years. The patient's reason for coming to us was his right epiphora. And the epiphora was the major symptom the patient wanted to get rid of. As you

can see in *Fig 6a*, it is a very large and lobulated mass in the lachrymal region, filling the inner canthus. Both punctum were closed.

CT showed that the mass completely filled the sac area and extended to the medial orbita (*Fig. 6b*). Despite

this image, we thought the mass was benign; although it was quite large and recurrent, it did not do bone destruction. In addition, being stable for 10 years indicated that the mass was benign. Nevertheless, diagnostic biopsy was performed as a precaution. Histopathological examination did not reveal any definitive diagnosis, but no malignant findings were detected.

First of all, it was necessary to remove the mass completely, but since the patient's main complaint was epiphora, we also planned to perform conjunctiva dacriocystorhinostomy (conjDCR) with Jones tube in the same session. When the mass excision, the first step of the surgery, was completed, the medial orbit, lachrymal fossa and the canal entry were revealed. As the Jones tube accidentally fractured during surgery, conjDSR could not be performed, and we closed the area with primary suturation.

However, this was a failed reconstruction because medial ectropion occurred due to shrinkage and a bad scar at the inner canthus (*Fig. 6c*). Moreover, the epiphora was untreated. Therefore, this surgery was never successful. In the meantime, the pathological examination revealed an epithelial proliferation type pathology and benign structure of the mass.

A second reconstruction was performed to correct this deformity. The inner canthal deformity was corrected by a thick skin graft containing some orbicular muscle tissue obtained from upper eyelid blepharoplasty (*Fig. 6d*).

In conclusion, the most dangerous and important complication of eyelid tumor surgery is recurrence. While increasing cosmetic and functional deformities, recurrences may also cause life-threatening problems. Several cosmetic and functional complications that develop after eyelid tumor surgeries can

be improved by oculoplastic surgery procedures and advanced techniques.

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