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Göz Kapağı Tümörlerinin Klinik Ön Tanı ve Histopatolojik Tanılarının Karşılaştırılması

Comparison of Clinical Pre-diagnosis and Histopathological Diagnoses of Eyelid Tumors

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ABSTRACT

AIM: To determine the accuracy rates between preoperative clinical diagnoses and postoperative histopathological diagnoses in cases presenting with masses in the eyelid and periocular area.

MATERIAL AND METHOD: Medical records of patients who underwent surgery for masses in the eyelid and periocular area between December 2019 and May 2025 were retrospectively reviewed. Demographic characteristics, lesion localization, preoperative clinical diagnoses, postoperative histopathological diagnoses, surgical methods used, and complications were evaluated.

RESULTS: A total of 137 cases were included in the study. Of these, 84 (61.31%) were female and 53 (38.68%) were male. The mean age of the patients was 58.17±16.52 years (range: 9–85). The mean follow-up period was 23.77±15.77 months (range: 1–59). Histopathologically, 101 of the eyelid tumors were benign, 1 was carcinoma in situ, and 35 were malignant. Among the malignant eyelid tumors, 32 cases were basal cell carcinoma, 2 were squamous cell carcinoma, and 1 was basosquamous carcinoma. The overall concordance rate between preoperative clinical diagnoses and final postoperative pathology results was 69.34%. The highest diagnostic accuracy was observed in basal cell carcinoma cases, with a concordance rate of 93.75%.

CONCLUSION: Basal cell carcinoma was the most frequently observed malignant eyelid tumor in this study and had the highest rate of accurate clinical pre-diagnosis. The diagnostic accuracy rates were consistent with the literature. Acceptable functional and cosmetic outcomes were achieved in all patients postoperatively.

Keywords: Basal cell carcinoma, Malignant eyelid tumors, Benign eyelid tumors

ÖZET

AMAÇ: Göz kapağı ve perioküler alanda kitle nedeni ile başvuru yapan olguların pre-operatif klinik tanı ile post-operatif histopatolojik tanılarının doğruluk oranlarını belirlemek.

GEREÇ VE YÖNTEM: Aralık 2019- Mayıs 2025 tarihleri arasında göz kapağı ve perioküler alanda kitle nedeni ile opere edilen olguların retrospektif olarak dosyaları tarandı. Olguların demografik özellikleri, kitlenin lokalizasyonu, pre-operatif öngörülen tanı ve post-operatif patolojik tanıları, uygulanan cerrahi yöntem ve gelişen komplikasyonları değerlendirildi.

BULGULAR: Çalışmaya 137 olgu dahil edildi. Olguların 84 (%61.313) ü kadın 53 (% 38.686) ü erkek idi. Olguların ortalama yaşı 58.17±16.52 (9-85) yıldı. Olguların ortalama takip süresi 23.77 ±15.77 (1-59) aydı. Göz kapağı tümörlerinin 101 i iyi huylu, 1 i karsinoma in situ, 35 i ise malign karakterde rapor edildi. Malign gözkapağı tümörleri 32 olguda bazal hücreli karsinom, 2 olguda skuamöz hücreli karsinom, 1 olguda bazoskuamöz karsinom olarak raporlandı. Cerrahi öncesi tüm klinik ön tanılar % 69.34 oranında cerrahi sonrası nihai patoloji sonucu ile uyumlu idi. Cerrahi öncesi klinik tanı ve patolojik tanı doğruluk oranı %93.75 ile en yüksek bazal hücreli karsinomlu olgularda idi.

SONUÇ: Çalışmada bazal hücreli karsinom hem en sık izlenen hem de klinik ön tanı doğruluk oranı en yüksek göz kapağının malign tümörü idi. Klinik tanılar doğruluk oranları literatür ile uyumlu idi. Cerrahi sonrası tüm olgularımızda kabul edilebilir fonksiyonel ve kozmetik sonuç elde edildi.

Anahtar Kelimeler: Bazal hücreli karsinom, Kötü huylu göz kapak tümörleri, İyi huylu göz kapağı tümörleri

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INTRODUCTION

Due to their anatomical location, the eyelids are highly exposed to ultraviolet (UV) radiation. Eyelid tumors are the most frequently encountered tumors in the periocular region in clinical practice (1,2). As the eyelid contains a variety of tissue types, a wide range of benign and malignant tumors can develop in this area, and these lesions may sometimes mimic common inflammatory conditions such as chalazion (3). Among malignant tumors, basal cell carcinoma is the most frequently observed, accounting for approximately 90% of cases (1). It is followed by squamous cell carcinoma, sebaceous carcinoma, and malignant melanoma. For neoplastic lesions, incisional biopsy is the recommended diagnostic method (4). However, in ophthalmology clinical practice, lesions suspected of malignancy or those considered to have malignant potential are usually excised completely based on clinical diagnosis. Therefore, the accuracy of the clinical diagnosis is of great importance.

In this study, we evaluated the clinical and final histopathological diagnoses of eyelid masses that were completely excised in our hospital and assessed the diagnostic accuracy rates.

MATERIALS AND METHODS

Medical records of all patients who presented to our clinic between December 2019 and May 2025 with a mass in the eyelid or periocular region, underwent excisional surgery, and received a definitive diagnosis through histopathological examination were retrospectively reviewed. The age, sex, preoperative clinical diagnosis, and postoperative histopathological diagnosis of each patient were recorded. Patients for whom no preoperative diagnosis could be made were excluded from the study. Ethical approval was obtained for this study with protocol number 2011-KAEK-25 2023/11-09.

A complete ophthalmological examination was performed on each case. The history of the lesion was taken, and the mass was evaluated using slit-lamp biomicroscopy. Anterior segment photographs were obtained. The lesion's localization and appearance were recorded based on both gross and biomicroscopic examinations. Features such as lesion size, nodularity, ulceration, vascularization, mobility in the surrounding tissue, and presence of lymphadenopathy were evaluated. A history of lesion growth, presence of ulceration and vascularity, irregular borders, and pigmentation were considered suggestive of malignancy.

In patients under 16 years of age, those requiring extensive tissue reconstruction, and those planned for orbital exenteration due to intraorbital spread, surgery was performed under general anesthesia. In all other patients, total excision was completed under local anesthesia. Depending on the location and size of the lesion, the surgical reconstruction techniques employed included primary repair following total excision, Tenzel advancement flap, or a combination of periosteal flap and Tenzel advancement flap. For lesions with a preoperative suspicion of malignancy, excision was performed with a 4 mm margin of healthy tissue to ensure oncologically safe surgical borders.

The excised tissues were marked with sutures at the margins and sent for pathological evaluation. Postoperative follow-up was conducted on day 1, week 1, and month 1.

RESULTS

A total of 137 patients were included in the study, of whom 84 (61.3%) were female and 53 (38.7%) were male. The mean age of the patients was 58.17 ± 16.52 years (range: 9–85 years). The mean follow-up period was 23.77 ± 15.77 months (range: 1–59 months).

Benign eyelid tumors were observed in 101 patients (73.7%). These included 17 (12.4%) intradermal nevi, 16 (11.7%) granulation tissues, 15 (10.9%) xanthelasmas, 14 (10.2%) epidermal cysts, 7 (5.1%) seborrheic keratoses, 5 (3.6%) squamous papillomas, 5 (3.6%) trichilemmomas, 4 (2.9%) fibromas, 3 (2.2%) cavernous hemangiomas, 3 (2.2%) hidradenomas, 2 (1.5%) condyloma acuminata, 2 (1.5%) sebaceous cysts, 2 (1.5%) verruca vulgaris, 2 (1.5%) eccrine hidrocystomas, 2 (1.5%) xanthogranulomas, 1 (0.7%) spiradenoma, and 1 (0.7%) actinic keratosis. Malignant tumors are listed in

Table 1. The Malign Eyelid Tumors

Histopathological Diagnosis		
Carcinoma in Situ	1	0.7%
Basosquamous carcinoma	1	0.7%
Squamous Cell Carcinoma	2	1.5%
Basal Cell Carcinoma	32	23.4%
	36	26.27%

Figure 1. Squamous Cell Carcinoma

Preoperative clinical diagnoses were consistent with the final histopathological diagnosis in 69.34% of all cases. Among malignant eyelid tumors, this concordance rate was 93.75% for basal cell carcinoma and 50% for squamous cell carcinoma, with an overall malignancy concordance rate of 88.88%. For benign eyelid tumors, although malignancy was not suspected clinically, the histopathological diagnostic accuracy was 62.37%.

All surgical procedures were performed by the same surgeon (DD). Depending on the tumor size and surgical area involved, reconstruction techniques included primary repair, Tenzel semicircular advancement flap, periosteal flap combined with Tenzel flap, and exenteration in one patient with orbital invasion by basal cell carcinoma.

In one patient who underwent orbital exenteration surgery, a postoperative resistant Klebsiella infection was observed

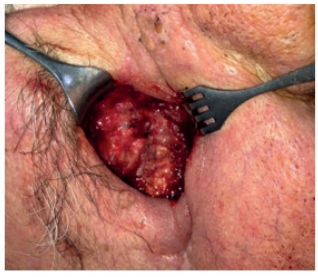

Figure 2. In the case undergoing exenteration for basal cell carcinoma with orbital invasion, a postoperative infection with drug-resistant Klebsiella was observed

Following treatment of the infection, the patient developed a lacrimal tract fistula. Additionally, one patient exhibited scleral show appearance (preoperative and postoperative photographs of this case are shown in Figures 3 and 4)

Figure 3. Basal Cell Carcinoma

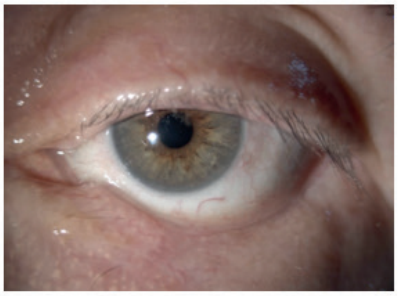

Figure 4. Postoperative scleral show

one patient had positive surgical margins, and one patient experienced early postoperative wound dehiscence.

DISCUSSION

According to this study, the histopathological features of benign eyelid tumors with cystic characteristics may differ from the clinical diagnosis; however, their benign nature can still be clinically predicted. The accuracy rate of clinical diagnosis is high in basal cell carcinoma, whereas it is lower in squamous cell carcinoma due to its less specific clinical features. In a study conducted by Yazıcı et al. involving 85 cases, the clinical pre-diagnosis was correct in 95% of basal cell carcinoma cases and in 43% of squamous cell carcinoma cases. The overall diagnostic accuracy for all cases was reported as 91% (5). In a study by Kersten et al., the accuracy of clinical diagnosis for malignant eyelid tumors was reported to be 92.8% (6). In our study, the accuracy rates for basal cell carcinoma (93.75%) and squamous cell carcinoma (50%) were consistent with the rates reported in the literature.

In a study conducted by Göncü et al., the concordance between clinical and pathological diagnoses in benign eyelid tumors was found to be 72.7% (7). In another study evaluating the accuracy of clinical diagnosis in benign eyelid tumors, Deokule et al. reported a diagnostic accuracy rate of 96.8%. However, this study only assessed diagnoses in terms of benign versus malignant classification and did not compare them with histopathological results (8). Kersten et al. reported a 98% accuracy rate for clinical diagnoses in benign eyelid tumors; however, they also categorized tumors as benign or malignant without providing histopathological subtype accuracy (6). In our study, the accuracy of clinical diagnosis in benign eyelid tumors was found to be 62.37%, consistent with the findings of Göncü et al.

Deprez et al., in a very large study involving 5504 cases, reported that the most common benign eyelid tumor was squamous papilloma (3). On the other hand, Uzun et al. identified dermal nevus as the most frequent benign tumor in their study (9). In our study, dermal nevus was also found to be the most common benign tumor.

In this study, the overall diagnostic accuracy was found to be lowest in benign eyelid tumors. This may be attributed to the fact that the periocular region contains a wide variety of tissues of different histological origins. Therefore, it may be appropriate to perform histopathological examination on all masses presumed to be benign in order to establish a definitive diagnosis.

Author's Contribution:

Derya Doğanay1; çalışmanın dizaynı, veri toplama, istatistik, makalenin yazılması

Berk Kadir Kaynar2; veri toplama

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