Evaluation of Histopathological and Clinical Diagnosis of Chalazion in Albania

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Abstract

*Objective:*The aim of our study is to evaluate the histopathological diagnosis and clinical examination in cases with chalazion in Albania.
Methods: This study included 42 patients with Chalazion that was presented at the Department of Ophthalmology to "Mother Teresa University Hospital". Diagnosis was set by performed a slit-lamp examination. After the intervent procedure, the removed mass was sent for a histopathological examination in the department of anatomopathology at “Mother Teresa University Hospital”. Data from biopsies were taken and analyzed. This study included a period of 14-month; from February 2014 to March 2015.
*Results:*In 42 cases with Chalazion were found that 33.3% (n = 14) were women and 66.7% (n = 28) were male. The mean age and standard deviation of the patients was 58.6 ± 12.3. The chalazion was seen in the right upper eyelid in 42.8% of patients.
From the 42 cases with Chalazion only 9.5% (n = 4) were suspected for malignancy by slit-lamp examination. The histopathological diagnosis shows that 26.2% of biopsy materials were with basal cell carcinoma, where the average age of patients was 61.2 ± 9.8. The remaining 73.8% was reported as benign lesions with an average age 59.1 ± 9.6.
In 73.8% of patients with benign lesions was found that 37.7% were represented with an inflammatory granuloma, 21.9% with an epithelial cyst, 11.2% with papilloma and 3% with necrotizing granuloma.
*Conclusion:*Histopathological examination is gold standard for diagnosis of chalazion, especially in older age. Different benign and malign condition may mask the clinical conditional of a chalazion; biopsy should be done to all the chalazion cases.

KEYWORD: Chalazion, histopathological, Albania

Introduction

Chalazion is a lipogranulomatous inflammation that affects the meibomian glands of the eyelids and may present as a hard nodule or a rupture through the tarsal conjunctiva. Chalazion can simulate a benign or a malign lesion(Ozdal, Codère, Callejo, Caissie, & Burnier, 2004). Different studies have reported the misdiagnosis of chalazion with some malignant neoplasm of the eyelids (Scat, Liotet, & Carre, 1996).

The aim of this study is to evaluate the histopathological diagnosis in rapport with clinical examination in cases with chalazion in Albania.

Methods

This is a prospective study done in the Department of Ophthalmology at "Mother Teresa University Hospital". This included a period of 14 month; from February 2014 to March 2015.
In this study 42 patients with chalazion presented at the clinic were recorded for general information as the disease course, incidence of the chalazion, treatment and site of lesion.

Diagnosis was set by performed a slit-lamp examination; were chalazion was a solitary, non-tender nodule noted in the tarsal plate, and a suspect of malign lesion was set as a solitary, non tender nodule with fine telangiectasia or with central ulceration (Nemoto, Arita, Mizota, & Sasajima, 2014).

To all the 42 patients after the intervent procedure, the removed mass was put in a 5% formalin solution and was sent for a histopathological examination in the department of anatomopathology at "Mother Teresa University Hospital".

Data from biopsies were taken and analyzed by using SPSS. Data was compared with clinical findings and histopathological results. Chi-square test was performed for categorical variables, and significance was put as $p<0.05$.

Results

In 42 cases with chalazion was found that 33.3% (n=14) were women and 66.7% (n = 28) were male. The mean age and standard deviation of the patients was 58.6 ± 12.3. We didn't find any significance between age in women and male, where p=0.232.

	Age ± StDev	Lower eyelid	Upper eyelid	Primary	Recurrence	Total
Male	**60.4 ± 11.8**	**16 (66.7)**	**12 (66.7)**	**24 (64.9)**	**4 (80)**	**28 (66.7)**
Female	**51.6 ± 10.7**	**8 (33.3)**	**6 (33.3)**	**13 (35.1)**	**1 (20)**	**14 (33.3)**
Total	**58.6 ± 12.3**	**24 (57.2)**	**18 (42.8)**	**37 (88.1)**	**5 (11.9)**	**42 (100.0)**

Table 1. Gender incidence and clinical findings.

As we can see from the Table 1. The chalazion was seen in the right eyelid in 42.8% (n=18) of the patients, where 66.7% of them were male.
As we can see from table 1.thechalazion was presented as a primary lesion in 88.1% of the patents and as a recurrence in 11.9%, with a significance p = 0.013. In 11.9% (n = 5) of the patiens that reported a recurrence of the chalazion, 90% (n = 4) where women.

In table 2, from the 42 cases with Chalazion only 9.5% (n = 4) were suspected for malignancy by slit-lamp examination.

		Slit lamp		
		Benign	**Malign**	**Total**
Biopsy	**Benign**	**31 (73.8)**		**31 (73.8)**
	Malign	**7 (16.7)**	**4 (9.5)**	**11 (26.2)**
	Total	**38 (90.5)**	**4 (9.5)**	**42 (100)**

Table 2. Clinical diagnosis and histopathological diagnosis.

The results of biopsy show a high prevalence of benign lesion, but we can see a misdiagnosis in the malignance lesion. The histopathological diagnosis shows that 26.2% of biopsy materials were malign lesion, where the average age of patients was 61.2 ± 9.8. The remaining 73.8% was reported as benign lesions with an average age 59.1 ± 9.6.
The clinical diagnosis by slit-lamp was the same for the malign lesions as the biopsy.

From table 3 we can see the histopathological diagnosis of the begnin lesion. In 73.8% of patients with benign lesions was found that 37.7% were represented with an inflammatory granuloma, 21.9% with an epithelial cyst, 11.2% with papilloma and 3% with necrotizing granuloma.

Histological diagnosis	**Nr. (%)**
Inflammatory granuloma	**12 (38.7)**
Epithelial cyst	**7 (22.6)**
Papilloma	**11 (35.5)**
Necrotizing granuloma	**1 (3.2)**
Total	**31 (100)**

Table 3. Histopathological diagnosis of begin lesion

Discussion

A chalazion is a benign inflammatory eyelid lesion and has a slow and painless evolution(Honavar & Manjandavida, 2015). Different type of benign and malignant tumors can occur in the eyelids (Zurcher, Hintschich, Garner, Bunce, & Collin, 1998).Different studies have shown that clinical diagnosis of eyelid lesions could not be 100% confidence.

In our study, we have 42 patients with chalazion. Only 4 cases were suspected for malignancy by slit-lamp examination but thehistopathologicaldiagnosis found 11 cases of malign lesion.
Other studies have shown that the clinical diagnosed benign lesions, 2% were found to be malignant by histopathological evaluation by Kersten et al (Kersten, Ewing-Chow, Kulwin, & Gallon, 1997). They suggested histopathological evaluation in all lesions. In other study, was notice a difference between clinical evaluation and histopathologicaldiagnosis,where in 16.2% of the eyelids lesions, 4.6% were malign (Huang et al., 2015).

In this study from 31 cases with benign eyelid lesion, the histopathological studies shows 28.7% were inflammatory granuloma and only 1% necrotzing granuloma. Other studies

have shown a high prevalence of inflammatory granuloma in the begin eyelid lesion (Maheshwari, Maheshwari, & Shekde, 2007).

We didn't find any difference between male and female in our study about the primary eyelid lesion. The recurrence eyelid chalazion was seen more frequently in male. Studies have shown a high prevalence of malign lesion in recurrence of eyelid benign lesion (Belshi A. Krasniqi M., 2015).

In our study there are several limitations. In this study we have a small sample size, so we can't talk about prevalence. Another limitation is that we didn't exanimate other type of tumors. But here we were focused only in clinical and histopathological diagnosis.

As a conclusion we can say that not all clinicalchalazion diagnosis are chalazion. In our study we have a clinical misdiagnosis between benign and malign eyelid lesions.Histopathological examination is gold standard for diagnosis of chalazion, especially in older age. Different benign and malign condition may mask the clinical conditional of a chalazion; biopsy should be done to all the chalazion cases

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