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Case report

GIANT PRESEPTAL UPPER EYELID LIPOMA, A CASE REPORT

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ABSTRACT

Lipomas are fatty subcutaneous lesions. Eyelid lipomas are rarely described and reported. A lipoma is a painless tumor; however, it may interfere with the eyelid function and cosmetics. The objective of this study is to illustrate a case of giant preseptal upper eyelid lipoma on the left eye. A 39-year-old man presented with a large painless tumor on the left upper eyelid. It was a slow-growing tumor that caused mechanical ptosis. The Orbital Multi Sliced Computed Tomography Scan (MSCT-Scan) revealed a hypodense lesion in left periorbital region, well-circumscribed, with no infiltration into the intraorbital and retrobulbar area. Orbital Magnetic Resonance Images (MRI) showed an oval lobulated mass, well-circumscribed, slightly isointense at T1, hyperintense at T2, and slightly hyperintense on FLAIR, which also revealed that the mass was bound firmly with the left superior orbit. Fine Needle Aspiration Biopsy revealed a C2 Benign smear, indicating a possible Lipoma. Simple anterior orbitotomy was performed and resulted in the successful removal of the entire tumor. The diagnosis of Lipoma was based on the histopathological examination results. The simple anterior orbitotomy that was performed, successfully removed the tumor. There was no recurrence of tumor after 3 years follow up. To our knowledge, this is the first reported case of a giant preseptal upper eyelid lipoma.

1. Introduction

Lipomas usually develop in the body as benign tumors of mature adipose tissue that are sometimes surrounded by a fibrous tissue capsule. Orbital lipomas are rare, even when the orbit contains a significant amount of fat (1,2,3). We can consider them as preseptal eyelid lipomas if the tumor is painless and grows slowly on the anterior orbital septum. It is commonly occurring in adults between the ages of 40-60 years (4,5). Lipomas may grow in various sizes, but rarely reach a size larger than 2 cm. Lipomas larger than 5 cm are known as giant lipomas, which can develop in all parts of the body, but are uncommonly found in the eyelid. Giant lipomas must be treated using an appropriate procedure (6,7,8).

2. Case report

A 39-year-old male was admitted to the ophthalmology department of Haji Adam Malik Hospital, Medan, Indonesia, presenting a large painless tumor on the left upper eyelid for the past 3 years.

The tumor became significantly prominent and grew over the course of a year, causing mechanical ptosis. There was no history of eyelid trauma or previous eyelid surgery. The patient did not complain of diplopia or impaired vision on that side. The patient had difficulty lifting the upper eyelid and the superior visual field was secondarily interrupted due to the presence of the tumor. Examination of the left eye revealed a giant tumor from the medial canthal to the lateral canthal area, reaching the left eyebrow. There was no hyperemia on the eyelid skin or other signs of inflammation. The tumor had a firm border and was non-tender upon palpation (Figure 1).

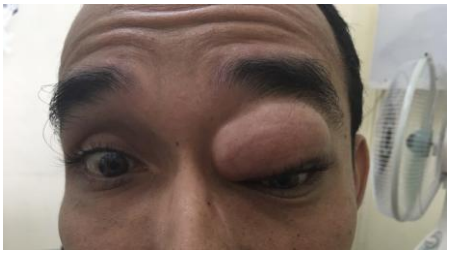

Figure 1. Giant Preseptal Upper Eyelid Lipoma on the Left Eye

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The rest of the ocular examination was normal. The right eye examination was normal. The patient had no systemic manifestation. Sliced Computed Tomography Scan (MSCT-Scan) was performed and revealed hypodense lesion in the left periorbital region, well-circumscribed, with no infiltration into the intraorbital and retrobulbar area. Orbital Magnetic Resonance Images (MRI) showed an oval lobulated mass, well-circumscribed, slightly isointense at T1, hyperintense at T2, and slightly hyperintense on FLAIR, which also revealed that the mass was bound firmly with the left superior orbit. The tumor pushed down on the superior oblique muscle and the orbit. Fine Needle Aspiration Biopsy revealed a C2 Benign smear, indicating a possible Lipoma. An anterior orbitotomy was performed through a superior eyelid crease incision, revealing that the tumor was located on the anterior orbital septum (preseptal plane) and could be completely removed (Figure 2). The excised tumor was 68×38×15 mm in size (Figure 3). The histopathological examination revealed lobulated proliferative mature adipose cells, separated by fibrous connective tissue septa. The visual examination clearly supported the diagnosis of lipoma. 3-years after surgery, there was no recurrence nor any residual tumor, resulting in a very satisfying cosmetic appearance (Figure 4).

Figure 2. Tumor was in the preseptal area and was completely removed.

Figure 3. The tumor size was 68×38×15 mm, measured after it was removed.

Figure 4. Three years after surgery, no tumor recurrence

3. Discussion

Lipomas are well-circumscribed slow-growing, benign lobulated tumors composed of mature adipose tissue cells separated by connective tissue septa, and rarely occurring in the orbit, less than 1% of all orbital tumors. The exact etiology is still unknown, even though trauma may trigger the occurrence of lipoma. A reported case of intraoral lipoma mentioned the "hypertrophy theory", which hypothesizes that there is a possibility that the growth of the tumor is caused by obesity and inadvertent growth of adipose tissue. A more convincing theory known as "metaplasia theory" states that the evolution of lipomas occurs due to distorted differentiation of *in situ* mesenchymal cells into lipoblast, since fatty tissue can be derived from mutable connective tissue cells almost in the entire body (2). Lipomas occur mostly in adult men during the fifth or sixth decade of life (a), even though it may develop at a younger age. There were a number of reports where the congenital Lipomas on the tongue occurred in 20-day and 47-day old babies, while an upper eyelid lipoma in an 18-month-old male (9,10,11). The various clinical features of lipomas depend on their growth rate, size and location. According to the literature, it is difficult to evaluate the actual incidence of this tumor because it appears as asymptomatic, painless and slow-growing, firm or soft consistency and a well circumscribed clinical appearance (12,13). Unfortunately, patients visit their clinicians only when they become symptomatic and for functional problems. Most of the lesions, based on the location, are less than 3 cm in size. The lesion consistencies vary from soft to firm, depending on the distribution of fibrous tissue, the quantity and tumor depth (14,15).

Lipomas may develop in all organs throughout the body. The majority are located subcutaneously, although they can be found intramuscularly and may invade locally in a diffuse infiltrative pattern. The locations of lipomas may include eyelid and orbit, eyebrow skin, gastrointestinal tract, oral cavity, nose, deltoid, head and neck, etc. The anatomy depends on the tumor site. Subcutaneous lipomas are usually not fixed to the underlying fascia(16,17,18). The characteristic of subcutaneous lipomas include soft, fluctuant feel, lobulation, and free mobility of overlying skin. The fibrous capsule must be removed to prevent recurrence.

Recurrence of lipoma may occur due to incomplete excision (19,20). Lipomas are widely reported but there are still very few cases that reported lipomas on the eyelid, especially giant lipomas.

Due to the various presentations of lipomas, other lesions should be considered in the clinical differential diagnosis, such as fibrous histiocytoma, fasciitis nodular, schwannoma, and mechanical ptosis due to the occurrence of drooping eyelid.

Definitive diagnosis can be based on histological appearance. The treatment for all the histological variants is complete surgical excision. In our case, the patient was admitted for tumor removal because of concerns its rapid growth, it was cosmetically disruptive, and functional aspects resulting from the compression of focal structures.

4. Conclusions

Preseptal upper eyelid lipoma is confirmed by differential diagnosis of eyelid mass. The size and location of eyelid lipomas can result in various problems, even though they do not cause visual impairment. Giant preseptal upper eyelid lipoma causes mechanical ptosis and cosmetic problems, but by performing an appropriate surgical procedure, known as anterior orbitotomy, the tumor can be removed, tumor recurrence can be prevented, and a good cosmetic outcome can be ensured.

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