CASE REPORT

Acquired capillary haemangioma of the eyelid in a 10-year-old boy

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SUMMARY

A 10-year-old boy presented with painless, gradually increasing mass in right upper lid without preceding trauma for the past 2 months. On examination, the mass was bluish red, soft to firm in consistency which bleeds on touch. Contrast-enhanced CT showed a well-defined heterogeneously enhancing mass lesion without any continuity with the underlying bone or the orbital cavity. Complete excision of the mass was performed under general anaesthesia, subsequent histopathological examination showed findings consistent with an acquired variant of capillary haemangioma. At the end of 1 year, patient is cosmetically fine without any recurrence/morbidity.

BACKGROUND

Capillary haemangiomas are the most common congenital vascular tumours which commonly occur in superior orbit and upper eyelid. In the congenital variant, women are more affected than men. These lesions usually present at birth or appear within 2 months of birth which usually resolve spontaneously by the first decade.¹ In contrast, the acquired variant is extremely rare which can involve either of the eyelids. Five cases have been reported in the literature.^{2–6} Here we discuss the clinical findings, evaluation and management of a case of acquired variant of capillary haemangioma in a boy which rapidly grew to a large-sized lesion over a span of 2 months with overlying ulceration.

CASE PRESENTATION

A 10-year-old boy presented with the history of gradually increasing mass on the outer canthus of the right eye for the past 2 months. There was no preceding trauma, infection or local predisposing lesion. The mass was bluish red, it also had a large surface ulceration on its lateral aspect; the surface was smooth nodular, soft to firm in consistency, which was bleeding on touch. The mass was a pedunculated one with maximum dimensions of 5 cm×4 cm in size. The upper eyelid was mildly oedematous along with mechanical ptosis. (figure 1A) Visual acuity was 20/20 in either eye, ocular examination showed normal anterior and posterior segment. Complete haemogram and peripheral blood smear were normal.

Contrast-enhanced CT scan showed heterogeneously enhancing globular soft tissue mass in the outer canthus of the right eye (figure 1B). It did not possess any orbital extension or bony erosion/

involvement suggesting a pure preseptal mass lesion. Surgical excision was planned, under general anaesthesia the mass lesion was lifted from all the aspects and an artery clamp was applied to its stump for few minutes. After achieving adequate haemostasis, it was dissected off the skin surface with little skin defect, underlying feeder vessel was noted and immediate cauterisation of the feeder vessels was performed followed by closure of the defect along the muscular and skin planes.

The histopathology examination showed numerous capillaries with flat endothelial cells, no cellular mitosis or atypia and without any inflammatory cellular infiltration suggestive of capillary haemangioma (figure 2). Postoperatively, the patient had acceptable cosmetic results at the end of 5 months (figure 3) and at end of 14 months; follow-up patient is fine without any recurrence.

INVESTIGATIONS

- ▶ Complete haemogram was normal.
- ▶ Contrast-enhanced CT scan showed heterogeneously enhancing globular soft tissue mass along the preseptal compartment.
- ▶ HIV negative.

DIFFERENTIAL DIAGNOSIS

- ▶ pyogenic granuloma
- ▶ acquired capillary haemangioma
- ▶ Kaposi's sarcoma
- ▶ angiosarcoma.

TREATMENT

Complete surgical excision with cauterisation of the underlying feeder vessels followed by closure of the defect.

OUTCOME AND FOLLOW-UP

At end of 14 months, follow-up patient is fine without any recurrence.

DISCUSSION

The acquired variant of capillary haemangioma is an extremely rare entity as compared with its congenital counterpart found in the eyelid and orbit. To the best of our knowledge, there are few reported cases of acquired capillary haemangioma of the eyelid at varying ages (range 12–50 years).^{2,3} These tumours generally present as a painless gradually increasing mass associated with the history of bleeding in absence of any gender predilection. The duration of the lesion usually varies from weeks to

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Figure 1 (A) A bluish-red pedunculated mass along the right lateral canthus. (B) Axial view of a contrast enhanced CT scan showing a well-defined pedunculated heterogeneously enhancing mass without any orbital extension.

months in our case; it increased to a significantly large size in a short span of 2 months.

The presumed reasons for its development are hormonal imbalances during puberty and pregnancy.² Contrary to this, few reported cases have also been noted in the middle-age group. Other causes like trauma and local irritation have also been stated.^{2,3} Clinical diagnosis on the first instance was difficult as this is a rare scenario. The differential diagnoses we considered based on our clinical experience were a pyogenic granuloma, acquired variant of capillary haemangioma, angiosarcoma and Kaposi's sarcoma. Similarly, Stagner *et al* have evaluated the clinical and histopathology aspect of these lesions in adults, the congenital variant which are completely developed at birth can be involuting or non-involuting, whereas the infantile variant

Figure 2 Histopathology of the excised tumour on H&E staining at 10x magnification shows numerous dilated capillaries lined by endothelial cells without mitosis or atypia along with scant stroma.

Figure 3 At the end of 5 months, there was a healed scar along the lateral canthus with acceptable cosmetic results.

which appears few weeks after birth shows natural involutional tendency over a period of years. The lobular variant is seen in children and adolescent age group appearing over the face and hands; these might enlarge rapidly leading to superficial ulceration without any natural tendency for involution on its own. Other differentials are pyogenic granuloma which usually arise at the site mucosal site following trauma/surgical wounds and tufted angioma usually occurring away from the face (neck, trunk and limbs).⁷ The definite diagnosis was made on histopathology.

Pyogenic granuloma was kept as the first differential diagnosis because of the reddish, pedunculated appearance of the lesion which bled on touch. Another reason was that it is a commonly encountered entity in our clinical practice seen after surgical or non-surgical trauma, in contrast, Kaposi sarcoma presents in HIV-positive patients with diffuse reddish brown lesions all over the body including the face and eyelid, histologically these show dense capillary arrangements with vascular spaces and spindle cells.⁸ Angiosarcoma of eyelid presents in older age (>50 years) with a purple coloured maculopapular lesion involving the skin and subcutaneous tissue.⁹

Imaging is required when the tumour is large in size to look for its vascularity and orbital extension. Preoperative biopsy has not been mentioned in the literature as these are vascular tumours. Surgical excision along with cauterisation/diathermy of the base for the feeder vessels is the treatment of choice. Histopathological examination is a must to confirm the diagnosis, there are no noted recurrences in these cases.²⁻⁶

In conclusion, the present case was unique because the tumour grew to a large size in a short span of 2 months. Until this time, only one case has been reported in a child. Though the exact cause is unknown, but hormonal changes could be the possible reason in our case.

Learning points

- ▶ Acquired capillary haemangioma of the eyelid is rare in clinical practice. They need to be differentiated from a number of other conditions with respect to the age.
- ▶ Management in unusually large cases should be aimed to look for any orbital extension followed complete surgical excision with adequate haemostasis and postoperative cosmesis.
- ▶ The cause for sudden appearance with rapid enlargement in absence of any identifiable risk factors is not exactly known.

Contributors AP, MSB, HO and VM, have evaluated the case followed by appropriate surgical management with a good outcome. All four authors have critically analysed the educational value of the case and wrote the report.

Competing interests None declared.

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