

Large Capillary Haemangioma: A Case Report And Review Of Literature

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Abstract: Background: A capillary haemangioma (strawberry birthmark) is a benign tumour consisting of an abnormal overgrowth of tiny blood vessels. Capillary haemangioma may not be present at birth, but may appear at 6 months of life. This vascular tumour is not common. We therefore report a case of large capillary haemangioma of the cheek in a five month old boy.

Aim: To outline the clinical presentation and management of a large capillary haemangioma of the cheek in a five month old baby boy.

Findings: The tumour occurred on the left cheek and measured 5cm by 4cm at presentation. Injection of sclerosant was done three times under general anaesthesia and final excision of the fibrous tissue was done.

Conclusion: Large capillary haemangiomas of the cheek affect the appearance of the child and causes undue pressure on the contingent tissues. This causes anxiety for the care givers. It is essential to treat the tumour as early as possible especially in large lesion with disfigurement or where it is complicated by haemorrhage or infection.

Keywords: Capillary, haemangiomas, cheek, sclerosants, vascular, tumour, malformations.

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I. Introduction

A capillary haemangioma (strawberry birthmark) is a benign tumour consisting of an abnormal overgrowth of tiny blood vessels.¹ It may not be present at birth, but may appear at 6 months of life.¹ This vascular tumour is not common. They are benign endothelial cell neoplasm that are typically absent at birth and characteristically have rapid growth in infancy with spontaneous involution later in life.² This is in contrast to another known group of childhood vascular anomalies; vascular malformations. Vascular malformations such as lymphangiomas and arteriovenous malformations are present at birth and are characterized by very slow growth with persistence into adult life.³ Capillary haemangiomas are believed to be hamartomatous proliferations of vascular endothelial cells.³

Capillary haemangioma is more common in premature infants and in girls.² Female patients are more affected than male patients by ratio of 3:1 and mostly common in Caucasians.³ It could be found anywhere in the body, eyelids, cheek, tongue and the lips are common site of involvement.³ About 50% of capillary haemangiomas occur in the head and neck region.⁴ However, of the entire patient who eventually develop capillary haemangiomas, 30% of them have evidence of their presence at birth while, 100% have manifest them by age 6 months.⁴ Systemic involvement with haemangiomas can be a significant source of morbidity and mortality.⁴

It is present in approximately 1-2% of neonates.⁵ All patients who eventually develop haemangioma have them by the age of 6 months.⁵ The most common variant of hemangioma which appear as a raised, red lumpy area of flesh anywhere on the body is common on the head and neck region.⁵ It is the most common tumour of orbit and periorbital areas in childhood. It may occur in the skin, subcutaneous tissues and mucous membranes of oral cavities and lips as well as in the livers, spleen and kidneys.⁵

Haemangiomas are benign tumours composed of blood vessels and are classified on the basis of their histological appearance as capillary, mixed cavernous or a sclerosing variety that tends to undergo fibrosis.⁵ The purpose of this report is to elucidate the clinical presentation and management of a large capillary haemangioma in a five month old baby boy.

II. Case Report.

A five month old boy was referred to the maxillofacial clinic of the Barau Dikko Teaching Hospital from a Peripheral Hospital due to a massive cheek swelling of four month duration. The mother first noticed the tumour when the boy was two weeks old. However, it was painless and slow growing with no significant discomfort until recently when the size became massive and affected the child appearance.

Extra oral soft tissue examination revealed a solitary, pedunculated, spherical and baggy shaped, reddish pink swelling with distinct border and irregular surface [Fig. 1].

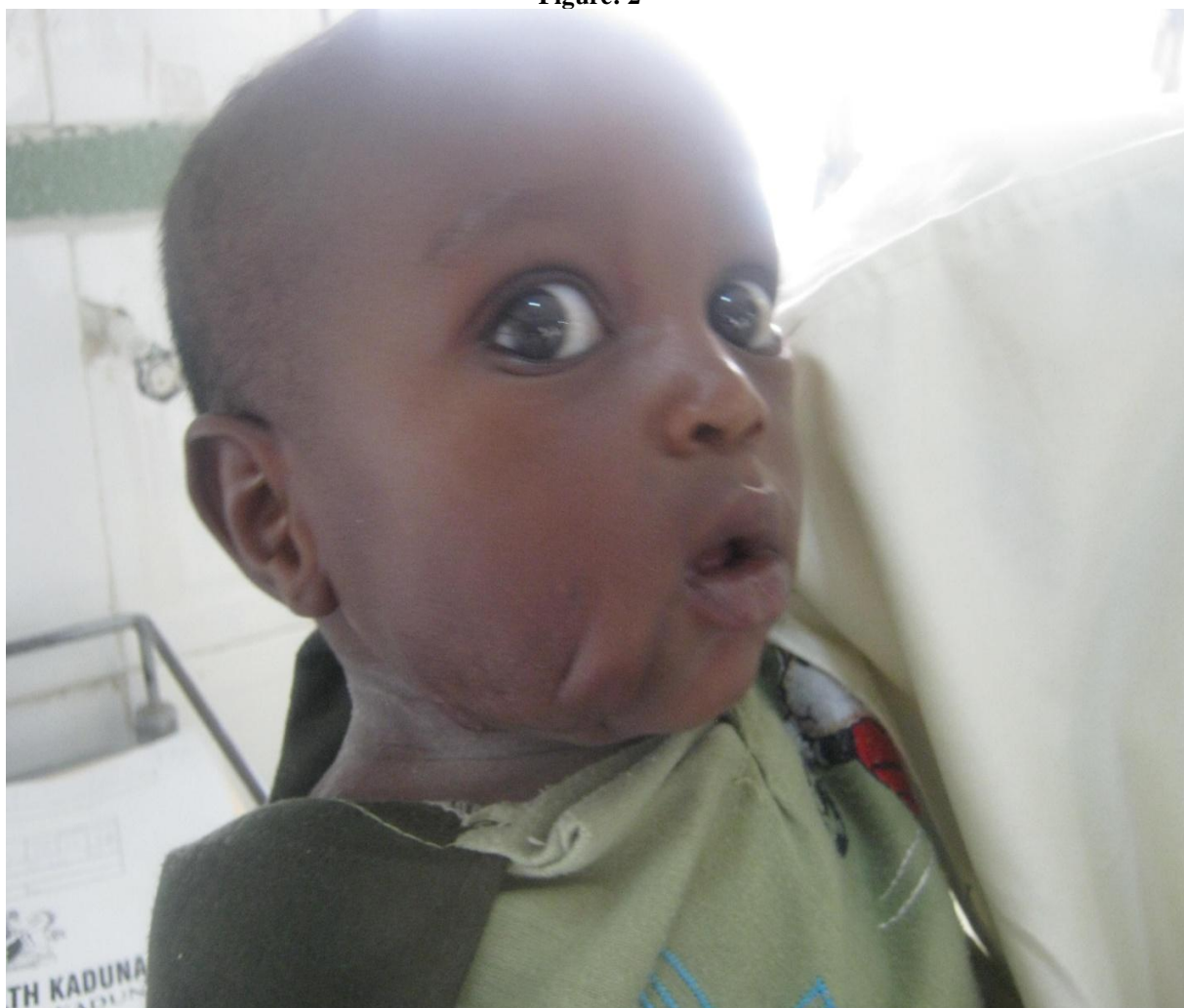
On palpation the swelling was non-tender, soft to firm in consistency, not blanching on pressure. Aspiration biopsy yield frank blood which did not clot. A diagnosis of capillary haemangioma was made. Blood investigations shows haemoglobin concentration of 12g/dl and blood chemistry shows: potassium 3.8mmol, sodium 134mmol, creatinine 126mmol. The boy had two courses of injection with sclerosant (hot normal saline). This was done under general anaesthesia, 20mls of blood was aspirated at the first course and 30mls of sclerosant was injected into the tumour site. The second course was done at 3weeks interval, 10mls of blood was aspirated and 20mls of sclerosant injected into the tumour. The third surgery yielded 3ml of blood and the tumour was fibrotic in nature. Through the extra oral approach the fibrotic tissue was excised under general anaesthesia [Fig. 2] . The excised tissue was sent for histology and the report shows proliferation of endothelial lining of the blood vessels and unencapsulated aggregates of closely packed, thin walled capillaries with endothelial linings and perivascular fibrosis [Fig.3]. The patient was reviewed after 6months of surgery and there was no recurrence.

Figure 1



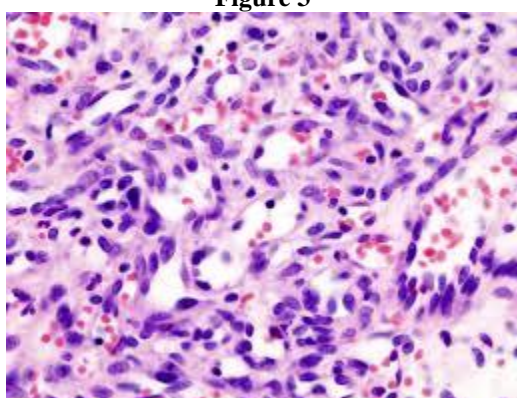
Tumour Of Right Cheek At Presentatiion

Figure: 2



Post Operative Picture After Excision Of The Tumour

Figure 3



Picture Shows Proliferations Of Endothelial Cells

III. Discussions

A capillary haemangioma is a benign tumour of infancy. It is a benign tumour consisting of an abnormal overgrowth of tiny blood vessels, common in premature infants and girls are most affected.¹ The index patient falls into this age group.

Haemangiomas are endothelial cell neoplasms, that are typically absent at birth and characteristically have rapid growth in infancy with spontaneous involution later in life.² The case reported under went rapid

growth in three months. They are now thought to be of placental origin due to a unique microvascular phenotype shared by Juvenile haemangiomas and human placenta.⁶

Hemangiomas generally exhibit two phases of growth, a proliferative phase and an involution phase. The proliferative phase of rapid growth typically occurs from 8-18 months. Endothelial cell proliferation returns to normal following the proliferative phase. The involution phase is characterized by slow regression of the hemangiomas. One half of all lesions will involute by age 5 years, and 75% will involute by age 7 years. During this stage the mast cell numbers decrease to normal and there is decrease in endothelial and mast cell activity.⁴ Epidemiology shows that as many as 50 percent of systemic capillary haemangiomas occur in the head and neck region. The case reported occurred in the cheek. Of all the patients who eventually develop capillary haemangioma, about 30% of them have evidence of their presence at birth, while 100% have manifest them by age of 6 months.⁴ The case reported was first noticed when the child was two weeks old.

It is the most common orbital tumour of infancy. It is rather a neoplasm than a vascular malformation. Systemic involvement with haemangiomas can be a significant source of morbidity and mortality. The case reported did not have any systemic involvement, with the full blood count of the patient within normal limit. The ratio of sex predominance is female to male, 3:1. The case reported is a six month old male child.

Radiology is usually only required when the diagnosis is unclear, and this is most frequent in lesion with a deep component. Histology of haemangiomas shows proliferations of endothelial cells of small blood vessels.⁷ Ultrasonography of capillary haemangioma is characteristic of hyperechoic and compressible lesion with high peak intra-tumoural on arterial shift.⁸ Ultrasound is most useful for smaller, limited lesion. Ultrasound of the case reported shows hyperechoic and compressible lesion.

Computerized tomography appearance is that of a strongly enhancing lobulated mass. The enhancement is typically homogenous.⁹ Magnetic Resonance Imaging is usually hypointense in T1, iso to hyperintense on T2 with multiple serpiginous flow voids. Enhancement is homogenous with gadolinium with marked enhancement of intratumoural vessels. Its lobulated appearance with thin septa is characteristic.¹⁰ Indications for treatment of haemangioma include functional impairment such as visual or feeding compromise, bleeding, potentially life threatening complication and risk of long term permanent disfigurement. Facial disfigurement and undue pressure on contiguous tissue prompted the treatment of the index case.

Treatment of haemangiomas consist of injection of corticosteroids, intratumoural laser therapy has been used for larger lesion and recalcitrant cases, interferon or vincristine can be considered. Sclerotherapy, embolization and surgery have been found useful.¹¹ The case reported had sclerotherapy with injection of hot normal saline and excision of fibrotic tissue under general anaesthesia. Review of the patient after six months shows no evidence of recurrence.

IV. Conclusion:

Haemangioma in the head and neck region need urgent attention to avert long term permanent disfigurement.

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