

Infantile Haemangioma – An unusual location

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ABSTRACT

Infantile haemangiomas (IH) are benign vascular neoplasms that have a characteristic clinical course marked by early proliferation and followed by spontaneous involution. Haemangiomas are the most common tumours of infancy and usually are medically insignificant. Cutaneous haemangiomas at particular sites is more common at Head and neck followed by Trunk and Extremities. Extra cutaneous haemangiomas were more common in Liver, Gastrointestinal tract, Larynx, Central nervous system, Pancreas and Lungs. We represent an 8-month-old boy presented with a small but growing, strawberry-colour tumour over the right groin since birth.

Key words: Cutaneous vasculature; Groin; Haemangiomas; Vascular malformations

INTRODUCTION

A “haemangioma” (Greek for blood-vessel-growth) of Infancy is a benign overgrowth of blood vessel cells in the skin. It is also known as proliferative haemangioma because it is due to proliferating endothelial cells; these are the cells that line blood vessels. The incidence ranges from 1% in neonates to 12% [1]. These are known to appear soon after birth, proliferate for 8-18 months, and then slowly regress over the next 5-8 years, leaving behind normal or slightly blemished skin [2,3].

Haemangiomas are common birthmarks which are usually red or purple. They mostly occur on the head and neck areas and develop shortly after birth. One in 10 babies will develop a haemangioma and it is more common in girls. In literature of Dermatology, groin has been cited unusual site of occurrence.

CASE REPORT

An 8-month-old boy presented with a small but growing, strawberry-colour tumor over the right side of the groin. The mass had been present since birth, now measuring approximately 4 × 3 cm of Circular in shape. The parents were concerned about the tumours growth and appearance.

The boy had been born prematurely at 34 weeks' gestation after premature contractions and prolonged rupture of membranes. No maternal fever, tachycardia, chorioamnionitis, or other complications had occurred. The boy had stayed in neonatal intensive care for 4 weeks because of feeding issues, and he had been transiently on nasal continuous positive airway pressure therapy, from which he was weaned to room air after 3 days of life. He was discharged at 38 weeks' gestation. When the child had reached approximately 6 months of age, he had begun to scratch the haemangioma and rub it against toys and other items, resulting in severe ulceration of the lesion. The parents were anxious about the tumour's rapid growth, and bleeding from minor trauma.

On admission, a thorough physical examination showed tumours growth of oval to circular in shape with diameter of 4 × 3 cm with red in colour over the right side of groin (Figs 1 and 2). Single linear ulcer with well defined borders of size 1cm was seen over tumourous growth. No other areas of body affected.

The possible differential diagnoses are

1. Cherry Haemangioma
2. Cobb Syndrome
3. Lipomas
4. Capillary Malformation

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5. Lymphangiomas
6. Lobular Capillary Haemangioma)

Routine Laboratory investigations followed by electrocardiogram, chest x-ray and local ultrasonography of the lesion using a high frequency probe. Laboratory investigations were within normal limits.

After discussing with parents and with their consent, Punch biopsy was performed.

Histopathological examination of the specimen showed the Para keratinised stratified Squamous epithelium of varying thickness and the fibrous connective tissue with numerous endothelial lined capillaries of varied size and few blood vessels, which were yet to be lumenized (Figs 3-5). Tumour of the blood vessels of capillary calibre (no elastic fibres nor smooth muscle within the wall, size is variable) and undifferentiated endothelia. Diagnosis of capillary haemangioma was confirmed.

After evaluating the boy and noting the haemangioma location and because of parent's anxiety and apprehension the boy was referred to paediatric surgery.

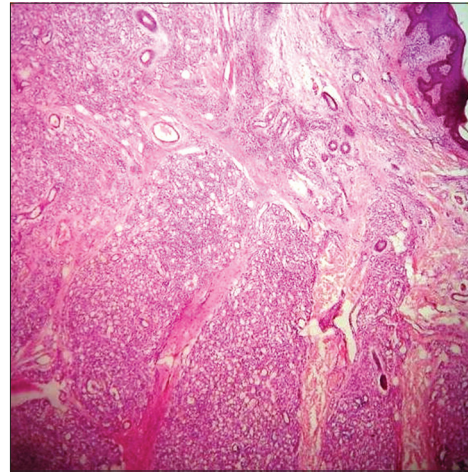


Figure 3: Para keratinised stratified Squamous epithelium of varying thickness and the fibrous connective tissue with numerous endothelial lined capillaries of varied size.



Figure 1: Multiple tumorous growth over right side of groin

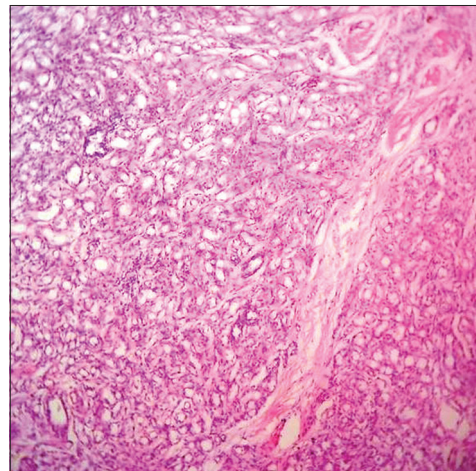


Figure 4: Fibrous tissue in between capillaries.



Figure 2: Linear ulcer with well-defined border over tumorous growth.

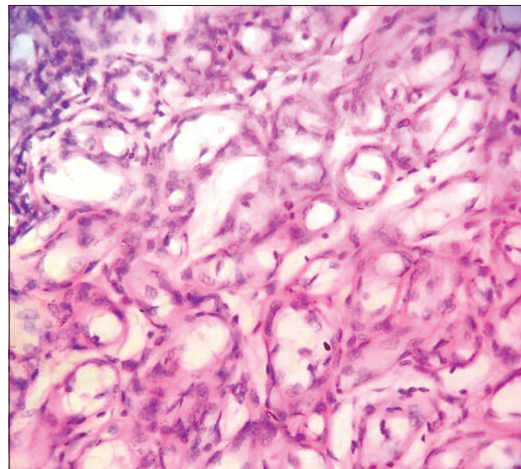


Figure 5: Endothelial cells lining capillaries.

Prior to the study, patient gave written consent to the examination and biopsy after having been informed about the procedure.

DISCUSSION

IH is a benign, self-involuting tumour of endothelial cells that usually appears during the first weeks to months of life [4]. It is one of the most common birthmarks among newborns. Most infantile haemangiomas reach a maximum size of 0.5-5 cm, but they can range from the size of a pinhead to greater than 20cm in diameter. Most infantile haemangiomas remain well circumscribed and focal. Haemangiomas are found in up to 10% of children by the age of 1 year and are more common in girls and premature infants. Their cause is unknown. In very rare instances, they may run in families, but they generally are not inherited.

Infantile haemangiomas are classified as superficial, deep or mixed lesions.

- The superficial infantile haemangiomas is also called capillary haemangioma, capillary naevus, strawberry haemangioma, strawberry naevus, and haemangioma simplex. The blood vessels in uppermost layers of the skin are dilated.
- Deep infantile haemangiomas are also called cavernous haemangiomas and are more deeply set in the dermis and sub cutis. They appear as a bluish soft to firm swelling.
- Both types of haemangiomas may occur together in mixed angiomatous naevi. A strawberry naevus overlies a bluish swelling.

Another variant is the infantile haemangioma with minimal or arrested growth (IH-MAG). These have been previously referred to as abortive, reticular, or telangiectatic IH. This variant has been seen in association with underlying vascular and other extracutaneous congenital anomalies PHACE and PELVIS syndromes [5].

Regulators of haemangioma growth and involution are poorly understood. During the growth phase, two major proangiogenic factors are involved: basic fibroblast growth factor (bFGF) and vascular endothelial growth factor (VEGF) [6]. Potential explanations for the therapeutic effect of propranolol (a non-selective beta-blocker) on IH include: vasoconstriction, which is immediately visible as a change in colour, associated with

a palpable softening of the haemangioma; decreased expression of VEGF and bFGF genes through the down regulation of the RAF-mitogen-activated protein kinase pathway [7]. The response of IH to propranolol has been reported by Léauté-Labrèze et al [8].

IH usually involutes over time: 30% resolve by 3 years of age, 50% by 5 years of age, and 80% to 90% by 9 years of age. More than half of haemangiomas heal with excellent cosmetic results without treatment. Nevertheless, some haemangiomas require treatment, such as when a vital organ (e.g. eye, ear, trachea) is involved; when bleeding, ulceration, crusting, or infection is present; or when their rapid growth leads to deformity of surrounding tissues. IH in certain areas, particularly the face (especially the nose and lips), body folds, and groin, have a higher risk of complications.

The vast majority of IH do not require any medical or surgical intervention. Medical care of clinically significant IH has been limited to a few medications, including glucocorticosteroids (topical, intralesional and oral), interferon alfa [9] and, rarely, vincristine and topical Imiquimod [10]. Beta-blockers, most specifically propranolol, [11] have serendipitously been shown to induce involution of IH [8,12] Pulse dyed laser surgery, [13] other lasers frequency-doubled ND: YAG, and KTP lasers.

Certain benefits to early surgical excision include saving a life or preserving vision if it is near to eye and decreasing the negative psychosocial effects associated with a cosmetically disfiguring lesion during early childhood.

CONCLUSION

To our best of knowledge, this is the first reported case of a capillary haemangioma occurring in this location. We describe case of capillary haemangiomas, concluding that despite the rarity of these lesions, they should be considered in the differential diagnosis of lesions in the groin region.

CONSENT

Written informed consent was obtained from the patient guardian for publication of this case report and any accompanying images. The examination of patients is conducted according to the Declaration of Helsinki principles.

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