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### Multiple capillary haemangiomas in 4 month old-Glare at the rare.

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#### ABSTRACT

Haemangiomas are the most common tumors of infancy and are characterized by a proliferating and involuting phase. Haemangiomas occupy a gray zone between hamartomatous malformations and true neoplasm. Despite their self-limited course, infantile capillary hemangiomas can impair vital or sensory functions and cause cosmetic deformity. They are seen more commonly in whites than in blacks, more in females than in males in a ratio of 3: 1. The present article is a case report of clinical diagnosis of multiple capillary haemangiomas in four month old baby girl . The article also discusses about the brief review about the history, diagnosis, classification and treatment plan of multiple capillary haemangiomas.

Key words :Haemangiomas , Tumors, Infancy.

## INTRODUCTION

Vascular lesions are among the most common congenital and neonatal abnormalities. Haemangioma is a benign, localized tumor of the blood vessels. Most of the benign vascular lesions occurring in the head and neck region have a malformational, hamartomatous basis<sup>1</sup>. They are frequently designated and regarded as tumors because of their usually localized nature and mass effect. The fact that they consistently lack chromosomal alterations, speaks against a true neoplastic nature<sup>2</sup>. Although clearly benign, over half of these cases are in head and neck region. They can also occur in the trunk or extremities.

Most hemangiomas are solitary; when multiple (with or without associated lesions in internal organs) or affecting a large segment of the body, the condition is known as multifocal angiogenesis. This occurs more commonly in whites than in blacks. They are characterized by a proliferating and involuting phase. Growth in early infancy, during the proliferative phase, is embodied by rapidly dividing endothelial cells forming syncytial masses; thickened, multilaminated basement membranes; and elevated mast cell concentrations. Proliferating-phase hemangiomas display a ten-fold increase in mast cell concentration. In the present

article we are discussing a case report of multiple haemangiomas on extremities, head and neck region and oral cavity. While this birthmark may be alarming in appearance, physicians generally counsel that it be left to disappear on its own, unless it is in the way of vision or blocking the nostrils<sup>3</sup>.

A **capillary hemangioma** (also known as an "Infantile hemangioma," "Strawberry hemangioma", and "Strawberry nevus") is the most common variant of hemangioma which appears as a raised, red, lumpy area of flesh anywhere on the body, though 83% occur on the head or neck area<sup>4</sup>. Capillary hemangioma is a hamartoma—an abnormal, localized proliferation of vascular endothelial cells. One of the most common benign orbital tumors in children, capillary hemangioma affects up to 2 percent of all infants, with a female predilection (3:2 ratio). The incidence of eyelid and orbital hemangiomas is about one tenth that of systemic infantile hemangiomas, which occur in about 10 percent of all children by 1 year of age. Approximately one-third of capillary hemangiomas are apparent at birth, while the remaining two-thirds manifest by 6 months of age<sup>5</sup>.

## CASE REPORT:

The present case is of a four month old baby girl with multiple capillary haemangiomas all over her body including oral cavity .The lesions were circumscribed, painless , red in color, raised with thin overlying skin and had spongy consistency. (FIGURE NO.1)

**Figure 1 : Showing Multiple Haemangiomas on Face.**



There was no gross abnormality detected. The first suspicion was of any internal malignancy or systemic vascular malformations . Investigations advised to the patient was : ultrasound , CT scan , MRI , Chest X-Ray and ophthalmic examination . .Ultrasound abdomen did not reveal any vascular malformations, chest x-ray was normal and there was no abnormal vascularisation, Ophthalmic examination was normal too. There was no bruits heard . MRI is obtained to determine the extent of the lesions and it

did not showed ant systemic involvement The natural history of capillary hemangioma is an initial rapid growth phase, usually within the first six to nine months of life, followed by stabilization at around 12 to 15 months of life and then protracted involution over many years. As the lesion was Involuting&nonproliferative , so it was managed by observation and patient recall after 6 months.

## DISCUSSION:

First case of hemangioma was documented by Liston(1843) .

Theory that hemangiomas are neoplasms was strongly supported by the study of Mulliken and Giowacki (1982).

Later Douglas Marchuk (2001) in their study defined hemangioma as a benign tumor that exhibits an early and rapid proliferation phase during the first year of life, and is characterized by endothelial and pericytic hyperplasia, followed by a slower but steady involution phase that may last for years.

## Age:

The first intradermal hemangioma was identified by Edgerton M T, Heibert J M (1978) and they stated that it is frequently present at birth<sup>6</sup>.

Walter, John Brahn (1979) reported that hemangiomas are usually present at birth or else appear soon afterwards. Thomas. Fitzpatrick (1987) reported that capillary hemangiomas are first noted shortly after birth<sup>7,8</sup>.

Douglas Marchuk (2001) reported that hemangiomas are the most common tumors of any kind seen in infancy<sup>9</sup>.

#### **Sex:**

Lister WA et al (1938) found that capillary hemangioma affected females slightly more than males<sup>10,11</sup>.

#### **Site**

Kasabach, Merrit (1940) found that hemangiomas are benign vascular tumors that may occur in any tissue of the body. They said that skin is the structure, which is most commonly affected. Johnson WC<sup>12</sup> stated that cherry angiomas are very common and present as red papules on the trunk and upper limbs of middle aged and elderly adults. Jerome B Taxy et al (1979) found that hemangiomas of the soft tissues in infants and children are rapidly growing, particularly in the head and neck area.<sup>(11)</sup> Infantile hemangiomas occur anywhere on the skin, but the head and neck is the most commonly affected, followed by the trunk and limbs. Hemangiomas may involve

mucous membranes of the oral and genital regions.

#### **Clinical Features<sup>13</sup>**

Clinically, capillary hemangioma may present as a cutaneous, subcutaneous or deep orbital lesion or a combination of the three. The superficial cutaneous lesion, or “strawberry nevus,” is initially evident as a confluence of telangiectasias, which later progresses to a red, raised nodular lesion that blanches with pressure. The subcutaneous lesion typically has a bluepurple hue and a spongy consistency. The deeper orbital lesion may present with proptosis and globe displacement. On palpation oral mucosal hemangiomas are typically soft, moderately well circumscribed, painless masses that are red or blue in color. However about one-third or more of the hemangiomas manifest in the new born nursery, as a premonitory vascular “birthmark” - either as a tiny red papule, telangiectasia, pale nodule or pseudoecchymosis. Enzinger, Weiss (2001) were of the opinion that capillary hemangioma during the early stage resembles a common birth mark and is seen as a flat red lesion that intensifies in color when the infant cries or strains.. Capillary hemangioma appears as a red-blue multinodular mass with a thin overlying skin<sup>14</sup>.

Table 1: Clinical Features of Haemangioma

- Most common benign tumor in childhood.
- Affects ~1:10 children
- Increased in following populations:
  - Premies
  - Multiple gestational babies
  - In vitro fertilization
  - Caucasians
  - Females
- GLUT-1 positive
- Responds to Propranolol
- Rapid proliferation followed by involution

### Imaging techniques<sup>15</sup>

- ❖ CT scans are useful in the investigations of hemangioma.
- ❖ MRI (magnetic resonance imaging)<sup>16</sup>
- ❖ Angiography
- ❖ Panoramic Radiograph
- ❖ Ultrasonography with color Doppler<sup>17</sup>

### Conclusion:

Hemangiomas are tumors identified by rapid endothelial cell proliferation in early infancy, followed by involution over time. All other abnormalities are malformations resulting from anomalous development of vascular plexuses. The malformations have

a normal endothelial cell growth cycle that affects the veins, the capillaries, or the lymphatics and they do not involute.<sup>20</sup> A number of growth factors including vascular endothelial growth factor [VEGF], basic fibroblast growth factor [bFGF], transforming growth factor-beta [TGF-beta] and interleukin 6 [IL6] have been demonstrated as regulators of angiogenesis. A number of cellular markers have been outlined such as TIMP-1, b FGF, proliferating cell nuclear antigen, type IV collagenase and urokinase.<sup>13</sup> Hemangiomas of the oral cavity are not common pathologic entities, but, among hemangiomas, the head and neck are common sites. Most hemangiomas involute with time, but a certain small percentage do not, which may present with complications that require treatment.

To conclude hemangiomas pose perplexing questions that will only be answered as the events that initiate hemangiogenesis are elucidated. These are

some of the questions that have to be addressed in the future.

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