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Case Report

A Case Report on Infantile Hemangioma

Mohammed Muneeb Mubashir[1], Arun Kumar[2], Neera Ohri[3], Nikita Gupta[4]

[1]Ex. Resident, OHSC PGIMER Chandigarh
[2]Senior Resident, OHSC PGIMER Chandigarh.
[3]Senior Resident, RPGMC Tanda Himachal Pradesh
[4]Ex. Resident, GDCRI Bangalore

Corresponding Author: Arun Kumar

ABSTRACT

Infantile hemangiomas are vascular tumors of infancy and early childhood age with approximately 5-10% prevalence rate among infants. Hemangiomas are formed by overly proliferated capillaries which are packed densely, which contains high density of cells in which open lumens are absent. The tumor is highly proliferative by nature during infancy. Hemangiomas stabilizes subsequently with time and tumor undergo slow and spontaneous involution, most of which regresses completely by 5 years of age. In females patients its prevalence is 3 times more in comparison to male patient. So, we have reported and presenting a case report of a female child of 4 months old reported to us with swelling on left side of face. No birth mark was present at her birth but with passage of time swelling appeared and increased in size progressively, with a tendency of easy bleed even with minor injuries and the regression of the lesion suggests a case of infantile hemangioma.

Key words: Infantile hemangioma, vascular tumors, infancy.

INTRODUCTION

Infantile haemangioma (IH) are formed by overly proliferated capillaries which are packed densely, which contains high density of cells in which open lumens are absent. Benign haemangio-endotheliomas, Haemangioblastoma, Strawberry Navi, capillary Haemangioma, Hypertrophic Haemangioma are the other names of IH. In neonates its prevalence is 2 percent, in up to age of 1 year its prevalence is 10 percent and in preterm babies its prevalence is 22-30 percent which are weighing < 1000 grams. [1,2] Most common location of IH in body is head and neck approximately around 60 percent followed by 25 percent in the trunk region and least in the extremities around 15 percent. [3] Hemangiomas can cause various complications based on their location like obstruction of airway and visual disturbances. Pain, bleeding resulted from ulceration, infection, difficulty in feeding and residual scarring are among the most common complications. Etiology of Hemangioma is unknown.

CASE REPORT

A female child of 4 months old reported to us with swelling and large area of discoloration on left side of face after 1 month of birth without functional impairment. Patient's growth and development was not affected and the milestones were achieved normally. On examination there was a dispersed large area of discoloration and swelling was noticed on left side of face extending from cheek region to left commissure (corner of mouth) region and distal to nasolabial fold. The swelling was 2x2.5cms in size, Reddish brown in color with areas of erythema and

necrosis at places (Fig.1). Skin over the tumor had lost its texture and was not normal in appearance. Intraorally there was no evidence of lesion and no other significant changes were seen. As per history provided by the parents, such swelling was not present at the time of birth (Fig.2). Later swelling appeared, massive bleeding was also noted even with minor injuries at the age of one month. At Present patient is under observation and regular follow up to assess the prognosis of disease, as parents of the child are apprehensive and are not agreed for any kind of intervention. The changes in size and skin texture can be seen at the age of 8 months (fig.3).

Fig.1. A 2x2.5cms in size, soft in consistency with erythema.

Fig.2.No such swelling noticed at the time of birth.

Fig.3. follow up at the age of 8 months

DIFFERENTIAL DIAGNOSIS

Port wine stains, congenital haemangiomas, venous and arterial malformations are the vascular malformation other than infantile hemangioma in infant, which can be present in infants. However on the basis of history and clinical examination diagnosis of infantile hemangioma can be made.

DISCUSSION

Infantile hemangiomas are vascular tumors of infancy and early childhood age which are benign in nature. The hemangioma term describes or signifies any vascular tumor like structure, which can be either present by birth or appears in later stages of life. Hemangiomas comprises of two groups. First group includes, growing lesions that eventually disappear (self involuting tumor) and second group includes malformations, enlarged or abnormal vessels present at birth and essentially permanent and are not self involuting. In neonates its prevalence is 2 percent, in up to one year of age its prevalence is 10 percent and in preterm babies its prevalence is 22-30 percent which are weighing < 1000 grams. [1,2] In females patients its prevalence is 3 times more in comparison to male patient. [3,4] Premature delivery, female gender, advanced maternal age; multiple pregnancies, low birth weight and in vitro fertilization are among the risk factors. [1] The pathogenesis of IH is not clear and however various theories has been implicated such as, a response to hypoxia, somatic mutation, angiogenic peptides, placental embolization and seeding (Jinnin et al., 2008; Mihm & Nelson, 2010; Walter et al., 2002). The theory which is most accepted involves proliferation of endothelial progenitor cells (stem cells) that migrates to relative hypoxic areas in the newborn, such as embryonic fusion plates (Chen, Eichenfield, & Friedlander, 2013). [5,6]

Most common location of IH in body is head and neck approximately around 60 percent followed by 25 percent in

the trunk region and least in the extremities around 15 percent. [3] The natural course of Hemangioma is divided in to three phases: rapid proliferating phase (0-1 yr), involuting phase (1-5 yr) and the involuted phase (5-10 yr). [6] The involution of IH is usually preceded by a change in appearance/color with passage of time, from bright red to dull purple and in to a spotted pigment at last. [4]

Mostly the diagnosis of hemangiomas is based on history and physical examination. diagnostic aids such as MRI (Magnetic resonance imaging) and Color Doppler ultrasonography may be used for the diagnosis. [6] Infants having large segmental hemangiomas on the face have tendency for other associated anomalies like SACRAL and PELVIS syndrome, PHACES syndrome. Lesions with unusual appearance, unclear etiology and with atypical features are indications of biopsy. [7] Medical management of IH involves, application of topical corticosteroids, oral medications like propranolol, ,corticosteroids, alpha-interferon, anti-cancer drugs, imiquimod etc. [4,10] topical application of steroids on the surface may cause ulcerations and If ulceration is deep can lead to significant bleeding. For the infantile hemangiomas propranolol and Systemic steroids are time tested medical therapies. Prior to implementation of systemic steroid therapy pretreatment workup (such as complete blood count with differential leucocyte count, serum biochemistry, chest x-ray and urine and stool microscopy) is mandatory to rule out any change in baseline values, any active infection or primary immunodeficiency disease and a baseline anthropometric examination (height, weight) and blood pressure, should be monitored serially. [7] For propranolol therapy, the child should be assessed for allergy to propranolol, bronchial asthma, hypoglycaemia, hypotension, sinus bradycardia, heart block and heart failure. During the early proliferative phase application of steroid is most effective. An inhibitory effect of steroids on the production of vascular endothelial growth factor A (VEGFA) by proliferating or stem cells in haemangiomas is assumed to be mechanism of action of steroids. The common side effects of systemic corticosteroids therapy includes disturbance of growth, polyuria, loss of appetite, susceptibility to infection, pilosity, Cushingoid face, thrush and gastrointestinal discomfort and behavioral changes. Oral steroids at a dose of 2- 3 mg/kg/day result in 75% response, >3 mg/kg/day show 94% response but with greater side effects while a lesser dose of <2 mg/kg/day results in poor response and a rebound phenomenon in 70% of the cases. The choice of treatment of hemangiomas is dependent on the various stages of growth and should be considered cautiously and with consultation of the child's parents. [8,9] Ulceration on the deeper area can be painful and problematic. Most of the hemangiomas involute completely without any intervention or treatment, with minimal or no visible marks. It might take many years to disappear. Large hemangiomas can leave visible skin changes, secondary to severe stretching of the skin or damage to surface texture.

CONCLUSION

Infantile hemangiomas (IH) are common benign vascular tumor of infancy and early childhood. In pediatric population oral corticosteroids are safe and effective treatment modality with minimal significant complications. They are a cause of parenteral discomfort and anxiety so should be evaluated and counselled properly.

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