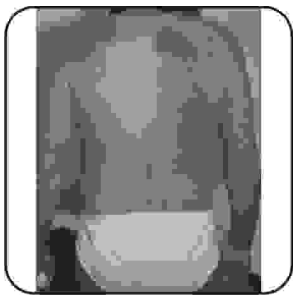
ORIGINAL PROF-1368

CUTANEOUS VASCULAR ANOMALIES;
PATTERN IN NEONATES AND INFANTS



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ABSTRACT... buttsahib100@yahoo.com. **Objectives:** To analyze the patterns of cutaneous vascular anomalies in neonates and infants. To identify the complications arising in various vascular lesions. **Design:** A descriptive hospital based observational study.**Setting:** Dermatology and pediatric department of DHQ and Allied Hospital PMC, Faisalabad **Period:** From 1st Feb 2005 to 31st January 2006. **Material and Methods:** 72 consecutive newborns and infants of either sex having any vascular anomaly on cutaneous areas were included in the study. The information regarding size, site, type of lesions, sex of patients, with family history and any complication were recorded on a proforma prepared for this study. **Results:** Out of 72 infants 25 were male (35%) and 47(65%) were females. Family history was present in 12 cases (17%). The commonly involved sites were head and neck 45 (62.5%), trunk 18(25%) and upper limb 9(12.5%). In 59 children (82%) it was single and in 13(18%) the lesions were multiple. The complications observed were ulceration in 13(18%), infection in 8(11%), haemorrhage in 3(4%) and visual impairment in 4(5%), while 56(78%) had no complications.

Key words: Infants, Vascular anomalies, complications.

INTRODUCTION

Developmental vascular anomalies of skin in neonates and infants are commonly observed by dermatologists and paediatricians. They are classified into hemangiomas and vascular malformation. Infantile hemagiomas are classically considered irthmarks but unlike most birthmarks, they are uniquely dynamic. At birth, many are barely evident, but proliferate in the first few weeks to months of life, followed by an involution phase over several months to years. Most infantile hemangiomas are

uncomplicated, but a significant minority develops complications, including ulceration, threat to vision, airway obstruction and congestive heart failure. Hemangiomas can also leave residual scarring or permanent distortion of facial anatomical landmarks, which can be truly life altering[1].

Vascular malformations in contrast are not neoplasms but permanent morphological abnormalities of capillaries, veins, arteries or lymphatic vessels. Flat lesions (vascular malformation) tend to persist while raised (hemangiomas) tend to regress with time.

Most of the studies on vascular anomalies originate from western world and data in Pakistan about these is scanty. It is aimed to get the data in our unit to make this reference figure in Pakistan.

MATERIAL AND METHODS

This is a descriptive observational study. 72 consecutive newborns and infants of either sex who had any type of vascular anomaly on any cutaneous area were included from 1st February 2005 to 31st January 2006 at the outdoor clinics of Dermatology and Paediatrics Departments of Allied and DHQ Hospitals, Faisalabad, affiliated with Punjab Medical College, Faisalabad. The informations were gathered from the parents and the detail was enrolled on a specially prepared proforma covering the history as well as clinical examination. These patients were evaluated for age of presentation, type , size and site of lesion. The family history and complication if any were also noted and registered on the proforma.

Inclusion criteria

All neonates and infants of either sex having any vascular anomaly were included in the study.

Exclusion criteria

1. Children more than one year of age.
2. Neonates and infants having naevi of other types.

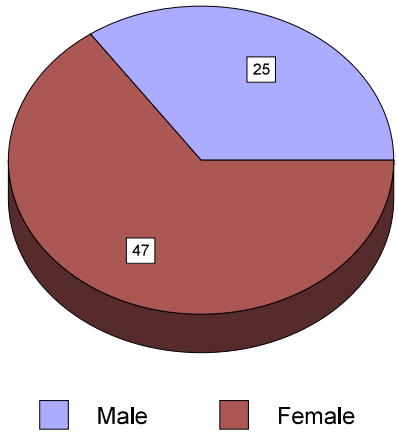
Data analysis

All collected data was processed in a database computer program and represented in the form of frequency distribution for further analysis. The percentages, mean and standard deviations were calculated and the results were statistically analysed taking the help of statistician. These results were represented graphically.

RESULTS

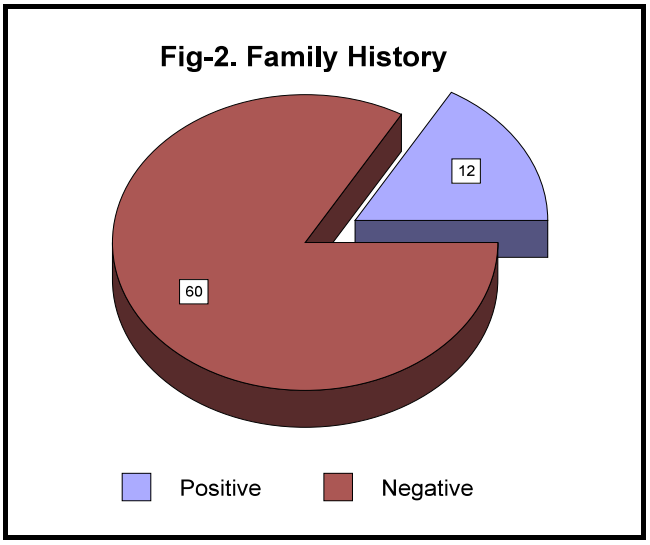
Out of 72 infants, the age range was from 27 days to 11 months with mean age 5.4 months. The mean age for female patients was 5.12 (standard deviation 3.27) and the mean age for male children was 6.18. 25 were male (34.72%) and females were 47(65.28%), with male to female ratio 1:1.9 (Fig.I).

Fig-1. Sex distribution



The family history was positive in 12 cases (16.7%) (Fig. 2). Sites commonly involved were head and neck in 45 cases (62.5%) trunk in 18 cases (25%) and upper limb in 9 cases (12.5%) (Table I). The size of the lesions was < 3cm in15 (20.83%) 3-4.9cm in 11(15.28%), 5-8cm in 35 (48.61%) and > 8cm in 4 children (5.56%) (Fig.3). In 55 children (76.39%), it was single and in 17 children (23.61%), the lesions were multiple (Fig. 4). The hemangiomas were superficial in 59 (81.94%) deep in 5(6.94%) mixed in 3 (4.16%) and malformations were seen in 5 cases (6.94%) (Table.II). The complications were ulceration in 9(12.5%) infection in 5(6.94%) hemorrhage in 1(1.4%) and visual impairment was seen in 1 patient (1.4%) and no complication in 56 cases

(77.78%) (Table III).



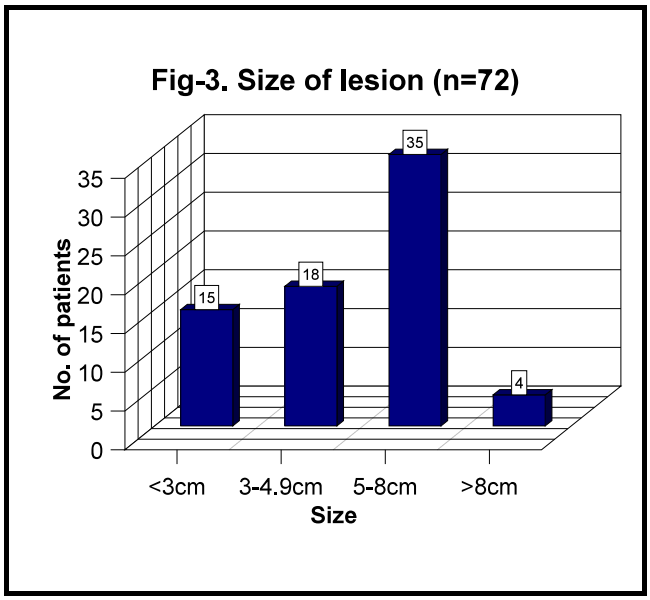


Table-I. Sites of involvement (n = 72)		
Site	**No of pts**	**%age**
Head and neck	45	62.5%
Trunk	18	25%
Upper limb	9	12.5%
Lower limb	-	-

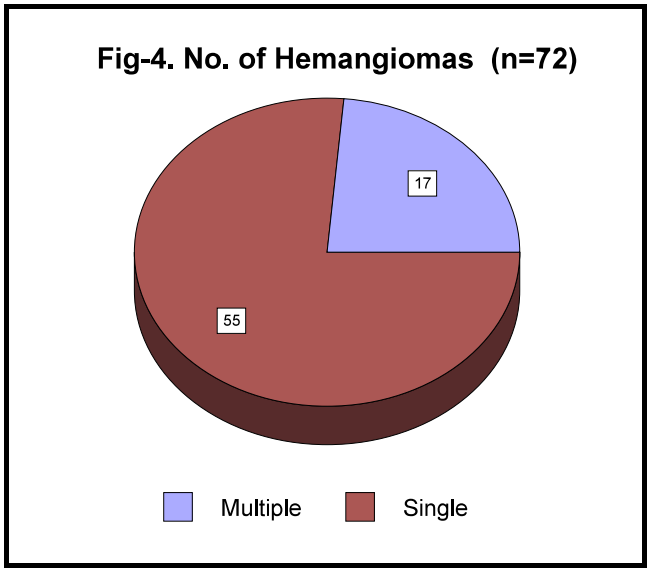


Table-II. Type of vascular lesion (n = 72)		
Type	**No of pts**	**%age**
Hemangiomas	67	93.06%
Superficial	59	81.94%
Deep	4	5.55%
Miixed	3	4.17%
Malformations	5	6.94%

Table-III. Complications (n = 16)		
Complications	**No of pts**	**%age**
Ulceration	9	56.25%
Infection	5	31.25%
Haemorrhage	1	6.25%
Visual impairment	1	6.25%
Airway obstruction	-	-
Kasabach Merritt Syndrome	-	-
Bone deformation	-	-
Malignancy	-	-
Associated syndrome	-	-

DISCUSSION

The vascular anomalies of skin whether hemangioma or malformation are commonly observed by dermatologists and pediatricians. Although most of these do not require active treatment, but it is of great concern for the parents either due to cosmetic reasons or due to complications arising from them.

The male to female ratio in this study was 1:1.9 matching to many other studies. Fishman SJ et al reported this ratio as 1:3. The fact may be that people are worried more about the cosmetic problems of their female children and bring them for treatment of vascular birth marks.

The family history is present in 12 cases (16.67%), possibly some genetic background playing its role in the genesis of vascular abnormalites. Blei et al[3] has stressed an autosomal dominant trait of the disease in his study.

The sites involved in this study were head and neck in 45 infants while trunk and upper limb were involved in 18 and 9 cases respectively. This possibly could be because of rich vascular supply in the head and neck area. The study of Bruckner AL et al[4] supports the frequency distribution of sites in our study. No case of lower limb involvement was seen.

The sizes of lesions in infants in this study varied from less than 3cm to 8cm, most were around 5cm. Atherton DJ[5] described the size of lesions ranging from a few millimeters to enormous size. As the sample size in this study is limited and time duration is also limited, it is difficult to compare the lesions size with other established studies. So a clear-cut opinion about the size of the vascular malformations cannot be ascertained from this study and a Cohort population requiring a vast community based study or multicentre studies are required to reach a final conclusion.

In the vast majority of patients i.e. 55 children (76.39%) the hemangiomas were single. Drolet BA et al[6] described findings similar to our study. Regarding the type of lesions, most of the hemangiomas in this study were superficial i.e. 59 infants (81.94%), deep in 4 cases (5.56%), mixed in 3 cases (4.17%). Vascular malformations were found in 5 cases (6.94%), four salmon patches and one was port-wine stain. The studies by Fishman SJ et al[2] and and Van Aalst JA[7] provide slightly variable patterns. The small study in short period of time may be limiting factor. So a multicentre study involving the large number of children with vascular malformations may be needed.

Most of the infants in the study did not have any complication. In the rest of the cases i.e. 12.5%, 9 had ulceration, 5 had infection, while hemorrhage and visual impairment was observed in one case each. So ulceration was the most common complication and this was also described in Kim JH et al[8] study. The data produced by Esterly NB[9] is also comparable with the present study.

Though our study gives an idea about the epidemiological pattern of vascular anomalies in our population yet multicentre studies are needed to have more knowledge about the pattern of vascular anomalies in our children.

CONCLUSIONS

1. Most of the cutaneous vascular anomalies were hemangiomas being more common in females.

2. They were mainly superficial and present mostly on head and neck area followed by trunk.

3. Majority the lesions were between 5-8 cm and mostly uncomplicated, however, the ulceration and infections were observed in some cases.

4. This area needs an additional large scale studies at multiple centre to know about our own figures and their prospects of treatment.

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NEVER GIVE UP. IT IS GREAT FUN TO STRUGGLE

Shuja Tahir