

TOPOGRAPHICAL STRATIFICATION AND TREATMENT OF VENOUS MALFORMATIONS

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Aim: Venous malformations (VMs) are the most common type of vascular malformation. This study stratified VMs by topography and tissue-type affected. The type of treatment was also investigated over time, in relation to topography and tissue-type.

Methods: Consecutive patients were identified from the prospectively maintained national vascular anomalies database within a closed population. Demographic data of the patients, and the characteristics of their VMs were obtained from the database and supplemented by review of medical records.

Main results: Amongst 1907 vascular anomalies patients 316 (16.6%) had VMs. The ratio of F:M was approximately 20:13. The mean age of patients was 34 years (2-92y). The majority of lesions were located in the head and neck (45.5%); followed by the lower limb (24.0%), upper limb (18.2%), trunk (3.6%), lower limb girdle (3.3%), perineal (3.0%), upper limb girdle (1.8%) and intra-abdominal/pelvic/extraperitoneal (0.6%). The lesions most commonly affected skin/subcutaneous tissue (48.8%); followed by muscle (23.8%), mucosa (18.3%), orbit (3.2%), parotid gland (2.6%), joint (1.4%), bone (1.2%) and intracranial tissue (0.7%). Twelve patients (3.8%) had multiple VMs; two anatomic sites were affected in 10 patients, and three sites in six patients. Four patients (1.3%) had a family history of VMs. Management was case-based and included: observation (39%), surgery (29%), ethanol sclerotherapy (23%) and low-dose aspirin (9%). Table 1 shows these treatments stratified by topography. A small number of patients received both ES and surgery (4.3%).

Conclusion: To the best of our knowledge this is the first study to analyse the topography of VMs, specifically with regard to tissue-type affected, and the treatments administered to affected patients. The management of VMs is based on topography, tissue-type affected and individual patient factors.

Table 1: Treatments of Patients with Venous Malformation Stratified by Topographical Region.

Region Affected	Number of Patients (%)*			
	Observation	Aspirin	ES [^]	Surgery
Head and Neck (n=152)	70 (46.0)	4 (2.6)	42 (27.6)	47 (30.9)
Lower Limb (n=80)	27 (33.8)	16 (20.0)	29 (36.3)	24 (30.0)
Upper Limb (n=61)	26 (42.6)	8 (13.1)	5 (8.2)	27 (44.3)
Trunk (n=12)	8 (66.7)	4 (33.3)	0	0
Lower Limb Girdle (n=11)	3 (27.3)	4 (36.4)	5 (45.5)	1 (9.1)
Perineum (n=10)	5 (50.0)	4 (40.0)	1 (10.0)	0
Upper Limb Girdle (n=6)	2 (33.3)	1 (16.7)	0	3 (50.0)
Intraabdominal/extra-peritoneal/pelvic (n=2)	1 (50.0)	0	0	1 (50.0)
Total (n/total VM sites%)	142 (42.5)	41 (12.3)	82 (24.6)	103 (30.8)

*Some patients had multiple VMs or single VMs affecting multiple regions. Some patients received more than one type of treatment.

[^]Ethanol sclerotherapy