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General Surgery

PATTERN OF PRESENTATION OF CHRONIC VENOUS INSUFFICIENCY IN A TERTIARY CENTRE AND CORELATION OF DISEASE SEVERITY WITH DUPLEX FINDINGS.

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ABSTRACT

OBJECTIVE: - The purpose of the study was to identify the pattern of presentation of chronic venous insufficiency in our hospital and also to correlate the clinical features with sonologically proven venous reflux.

MATERIALS AND METHODS: - Retrospective study design. All patients who underwent venous intervention in the department of general surgery of this hospital between July 2016 and 2017 were included in the study. Secondary varicose veins and recurrent varicose veins were not included in the study. Data was collected by analyzing inpatient case records.

RESULTS: - A total of 288 patients were included in the study. 214 were males and 74 were females. Of the 74 females 67 had advanced CVI (90%) compared with 55 % in males. there was a strong left sided predominance in the laterality of presentation. 178 had advanced CVI with either C4, 5 or 6 diseases at the time of intervention. The most common contributory duplex anomaly was incompetence in the SFJ with perforator incompetence (110 patients)

CONCLUSION: - Smoking in males and Multiparous status in females were always associated with associated with advanced venous insufficiency. There was strong correlation between clinical disease severity and nature of venous reflux demonstrated in duplex scan.

KEYWORDS : CHRONIC VENOUS INSUFFICIENCY, DUPLEX, VENOUS REFLUX.

INTRODUCTION:

Varicose veins cause a great deal of morbidity in our population today [1]. It is a very common problem affecting approximately 15% of men and 25% of women of general population in Western studies [2]. However, its prevalence in general Indian population is not known. Epidemiological studies show that there is a zone of great varicose occurrence (Western Europe, North America); a zone of mild occurrence (Black Africa, the Far East, the Third World in general); and zones showing discrepancies, (South America, the Mediterranean Basin, India)[3]. Although there are many studies on this topic, there are no major studies done in Indian population. Of the various diagnostic tests for detection and assessment of venous reflux, recently, color flow Doppler scanning is considered the gold standard for non-invasive anatomical and functional assessment of venous reflux [4]

MATERIALS AND METHODS: - Retrospective study design. All patients who underwent venous intervention in the department of general surgery of this hospital between July 2016 and 2017 were included in the study. Secondary varicose veins and recurrent varicose veins were not included in the study. Data was collected by analyzing inpatient case records.

RESULTS: - A total of 288 patients were included in the study. 214 were males and 74 were females. Of the 74 females 67 had advanced CVI (90%) compared with 55 % in males. 41% of the males had strong smoking history and all of them had advanced CVI. 94% of the female patients were multiparous and 99 % of them had advanced CVI .Of the 288 patients included in the study, there was a strong left sided predominance in the laterality of presentation with 123 patients having isolated left sided disease.71 had bilateral disease requiring treatment. 221 had presented within 10 years of onset of symptoms. 178 had advanced CVI with either C4, 5 or 6 disease at the time of intervention. The most common contributory duplex anomaly was incompetence in the SFJ with perforator incompetence (110 patients). 59% in this group had advanced CVI.96 patients had incompetence in both the junctions (SFJ and SPJ). Compared to the previous group, the incidence of advanced CVI in this group was remarkably high amounting to 90. 18 patients had deep vein reflux in the femoral or popliteal veins. All of them were associated with advanced disease C4, 5 or 6 .Multiple level Perforator incompetence was seen in all scanned legs. This was almost always associated with either junctional incompetence or deep vein reflux. 37 legs had isolated perforator incompetence and all of them had early CVI- C2 or 3 diseases.

Table1: Distribution of cases according to age group

Age in years at presentation	(N)
20-30	36
30-40	126
40-50	74
50-60	40
60-70	12

figure1: Distribution of cases according to age group

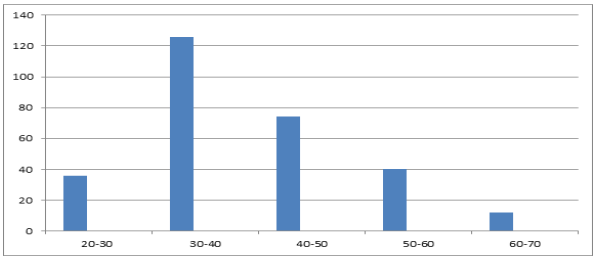


Table2: Distribution of cases according to sex

(SEX)	(N)
MALES	214
FEMALES	74

figure2: Distribution of cases according to sex

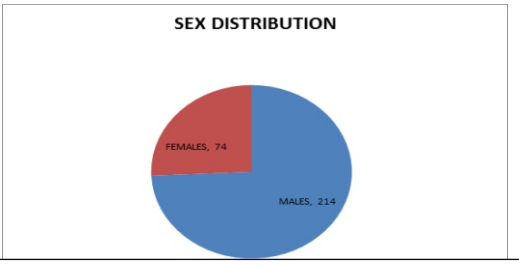


Table3: Distribution of cases according to laterality

LATERALITY	(N)
RIGHT	84
LEFT	133
BILATERAL	71

figure3: Distribution of cases according to laterality

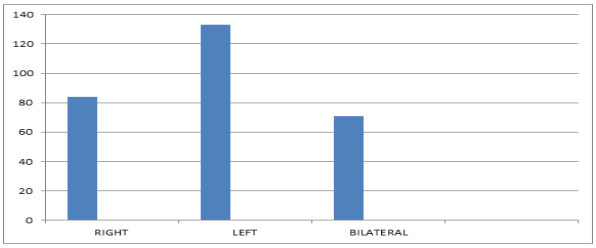


Table4: distribution of cases according to duration of disease at presentation

DURATION OF DISEASE AT PRESENTATION	
<5 YEARS	86
5-10 YEARS	141
10-15 YEARS	48
>15 YEARS	13

figure4: distribution of cases according to duration of disease at presentation

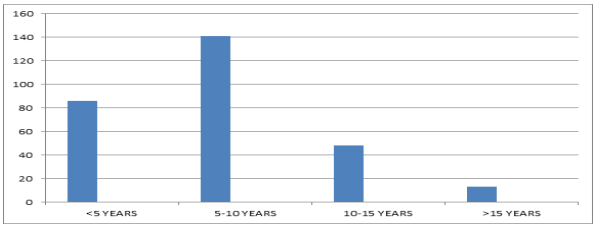


Table6: distribution of cases according to CEAP "c" class at presentation

Ceap "c" Class At Presentation	Both Sexes	Males	Females
C2	40	33	7
C3	70	62	8
C4	55	33	22
C5	95	68	27
C6	28	18	10

figure6: distribution of cases according to CEAP "c" class at presentation

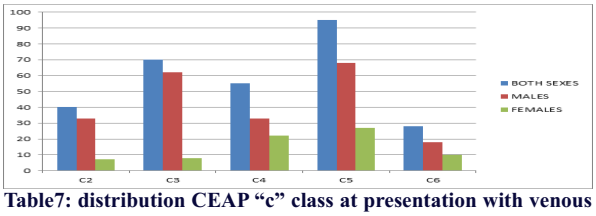
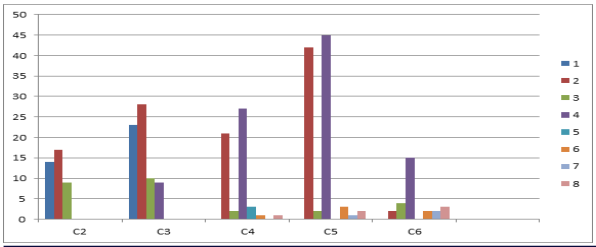


Table7: distribution CEAP "c" class at presentation with venous duplex findings

CEAP CLASS	1	2	3	4	5	6	7	8
C2	14	17	9					
C3	23	28	10	9				
C4	0	21	2	27	3	1		1
C5	0	42	2	45		3	1	2
C6	0	2	4	15		2	2	3

Figure7: distribution CEAP "c" class at presentation with venous duplex findings



D-3:- PERF I/C WITH JUNCTIONAL INCOMPETENCE IN SPJ AND NO DVR
D-4:- PERF I/C WITH BOTH JUNCTIONS INCOMPETENT AND NO DVR
D-5:- PERF I/C WITH DVR
D-6:- PERF I/C WITH SFJ I/C AND DVR
D-7:- PERF I/C WITH SPJ I/C AND DVR
D-8:- PERF I/C WITH BOTH JUNCTIONS I/C AND DVR

Table8: ASSOCIATION CEAP "C" CLASS AT PRESENTATION WITH VENOUS DUPLEX FINDINGS

	VENOUS DUPLEX FINDINGS →								
CEAP↓	**D1**	**D2**	**D3**	**D4**	**D5**	**D6**	**D7**	**D8**	TOTAL
C2	13	17	9	0	0	0	0	0	39
[n] [%]	33.3 %	43.6%	23.1 %	0.0%	0.0%	0.0%	0.0%	0.0%	100.0 %
C3	23	28	10	9	0	0	0	0	70
	32.9 %	40.0%	14.3 %	12.9%	0.0%	0.0%	0.0%	0.0%	100.0 %
C4	0	22	2	27	3	1	0	1	56
	0.0%	39.3%	3.6 %	48.2%	5.4%	1.8%	0.0%	1.8%	100.0 %
C5	0	43	2	45	0	3	1	2	96
	0.0%	44.8%	2.1%	46.9%	0.0%	3.1%	1.0%	2.1%	100.0 %
C6	0	2	4	15	0	2	2	3	28
	0.0%	7.1%	14.3 %	53.6%	0.0%	7.1%	7.1%	10.7 %	100.0 %
TOTAL	36	112	27	96	3	6	3	6	289
	12.5 %	38.8%	9.3%	33.2%	1.0%	2.1%	1.0%	2.1%	100.0 %

Table9: STATISTICAL ASSOCIATION CEAP "C" CLASS AT PRESENTATION WITH VENOUS DUPLEX FINDINGS [P value is <0.001]
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	162.911a	28	.000
Likelihood Ratio	183.169	28	.000
Linear-by-Linear Association	73.202	1	.000
N of Valid Cases	289		

DISCUSSION: Varicose veins are classically described to be commoner in females [5] and this has been attributed to hormonal factors [6]. We had a larger number of male patients (214males and 74 females). This could be due to lesser number of affected Indian women seeking medical help. The disease affects all age groups, but in males its prevalence increases sharply between 35 and 40 years, while in females it begins to become important about 5 years later. The Edinburgh vein study also quotes a higher prevalence of varicose veins in women [7].There was also a higher number of left sided limbs (59 limbs) affected than the right (41 limbs). We speculate whether this could be related to the left iliac artery crossing the left iliac vein. However, other studies in literature show equal involvement of right and left lower limbs [8]. We detected a statistically significant positive association between smoking in males and frequency of venous disease (p value<0.05). We also found a statistically significant positive association between multiparty in females and frequency of venous disease (p value<0.05).in a large study conducted by NicosLabropoulos et al[9] Saphenofemoral junction was involved in 89 limbs (84%), saphenopopliteal junction in 18 (17%), and gastropopliteal junction in 7 ,Femoral or popliteal reflux was present in 31 limbs (22%).these results vary from our study. We found about 6% prevalence of deep venous reflux contradicting to study by Aparna Irodi et al in which it is about 50% [10]. statistical association between ceap "c" class at presentation with venous duplex shows strong association with p value is <0.001.[table8,9]

CONCLUSION: - There was strong correlation between clinical disease severity and nature of venous reflux demonstrated in duplex scan. The presence of either deep vein reflux or combined incompetence in SFJ and SPJ was always associated with advanced

disease .Isolated perforator incompetence in the absence of coexistent junctional or deep vein incompetence was always found in association with milder forms of the disease. Color Doppler is very useful in identifying the distribution and extent of reflux in these patients for complete diagnosis as well as preoperative mapping of incompetent sites so that the surgery is targeted at the sites of incompetence.

REFERENCES:

1. Houghton AD, Panayiotopoulos Y, Taylor PR. Practical management of primary varicose veins. Br J Clan Pract. 1996;50(2):103–105. [PubMed]
2. Callam MJ. Epidemiology of varicose veins. Br J Surg. 1994;81(2):167–173. doi: 10.1002/bjs.1800810204. [PubMed] [Cross Ref]
3. Davy A. Epidemiology of varicose veins. Phlebologie. 1983;36(1):23–28. [PubMed]
4. Dixon PM. Doppler ultrasound in the pre-operative assessment of varicose veins. Australas Radiol. 1996;40(4):416–421. doi: 10.1111/j.1440-1673.1996.tb00438.x. [PubMed] [Cross Ref]
6. Cohen J. Venous insufficiency and oral contraception. Rev Fr Gynecol Obstet. 1991;86(2 Pt 2):187–189. [PubMed]
7. Evans CJ, Fowkes FG. Prevalence of varicose veins and chronic venous insufficiency in men and women in the general population: Edinburgh Vein Study. J Epidemiol Community Health. 1999;53(3):149–153. doi: 10.1136/jech.53.3.149. [PMC free article] [PubMed] [Cross Ref]
8. Evans CJ, Allan PL, Lee AK, et al. Prevalence of venous reflux in the general population on Doppler scanning: the edinburgh vein study. J Vasc Surg. 1998;28:767–776. doi: 10.1016/S0741-5214(98)70051-5. [PubMed] [Cross Ref]
9. Labropoulos N, Tassiopoulos AK, Kang SS, Mansour MA, Littooy FN, Baker WH. Prevalence of deep venous reflux in patients with primary superficial vein incompetence. Journal of vascular surgery. 2000 Oct 31;32(4):663-8.
10. Irodi A, Keshava SN, Agarwal S, Korah IP, Sadhu D. Ultrasound Doppler evaluation of the pattern of involvement of varicose veins in Indian patients. Indian Journal of Surgery. 2011 Apr 1;73(2):125-30.