

RESULTS

HISTOGRAM OF AGE RANGE

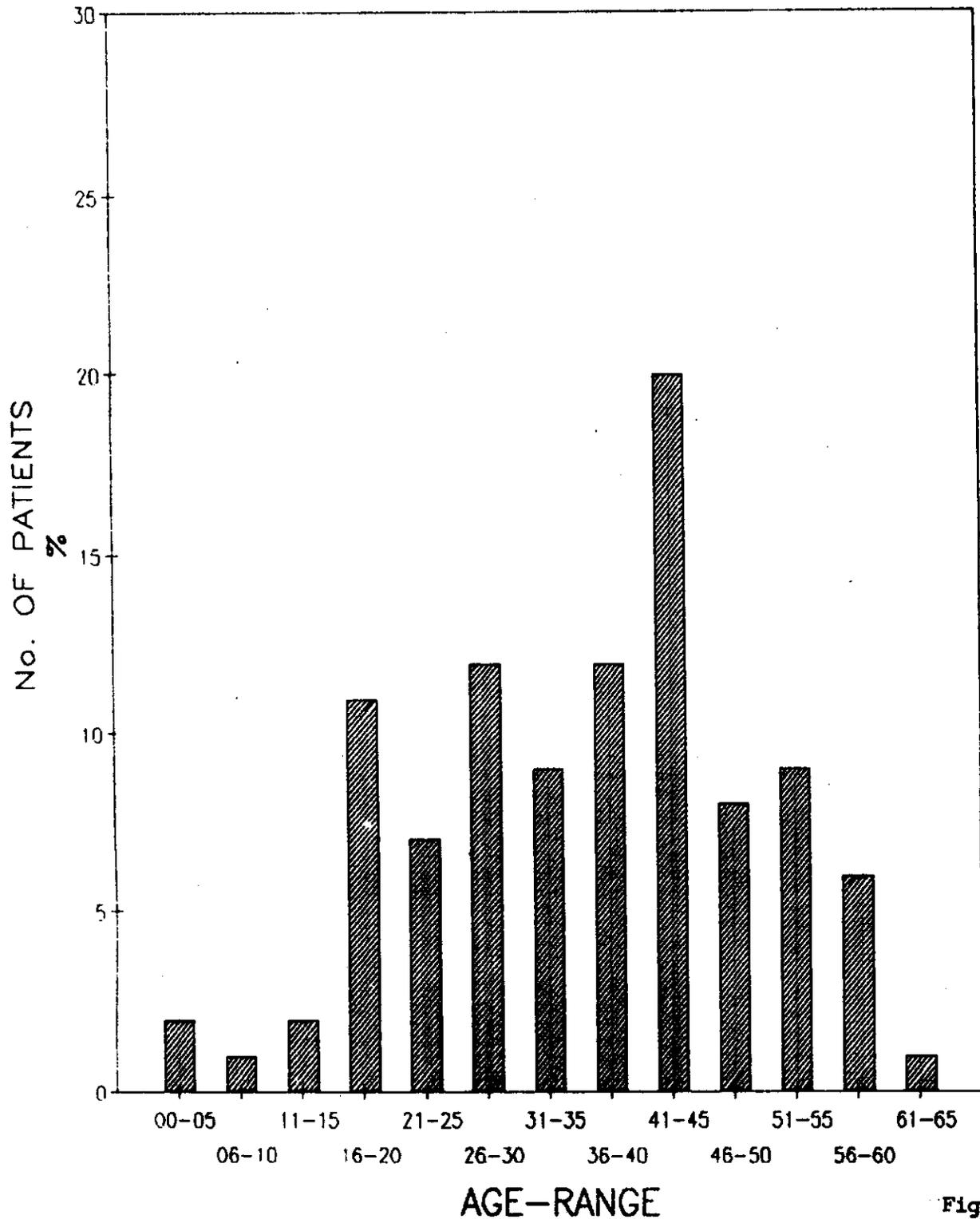


Fig. 24

RESULTS

In 100 performed phlebograms, the age range is given in (Table 1 and Fig. 24), with the highest age range from 41 to 45 years old.

Table (1)

Age range	No. of patients examined
0 - 5	2
6 - 10	1
11 - 15	2
16 - 20	11
21 - 25	7
26 - 30	12
31 - 35	9
36 - 40	12
41 - 45	20
46 - 50	8
51 - 55	9
56 - 60	6
61 - 65	1
Total	100

100 PERFORMED PHLEBOGRAMS

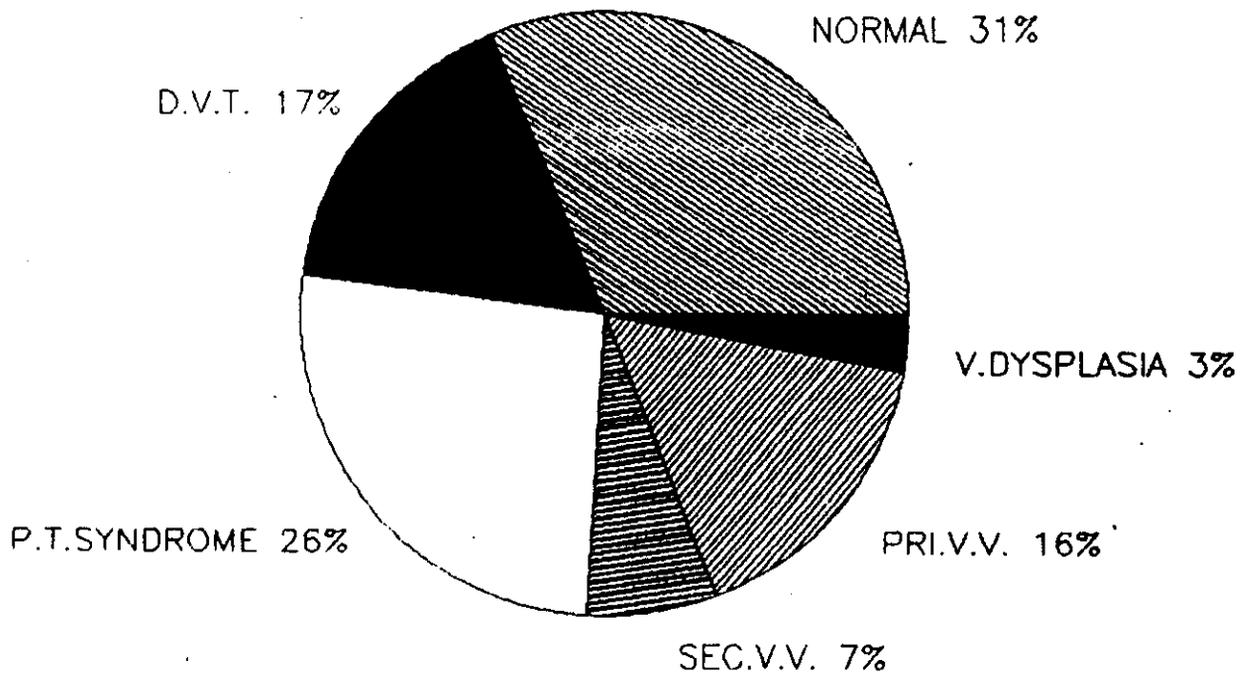


Fig. 25

CHART OF 31 NORMAL CASES

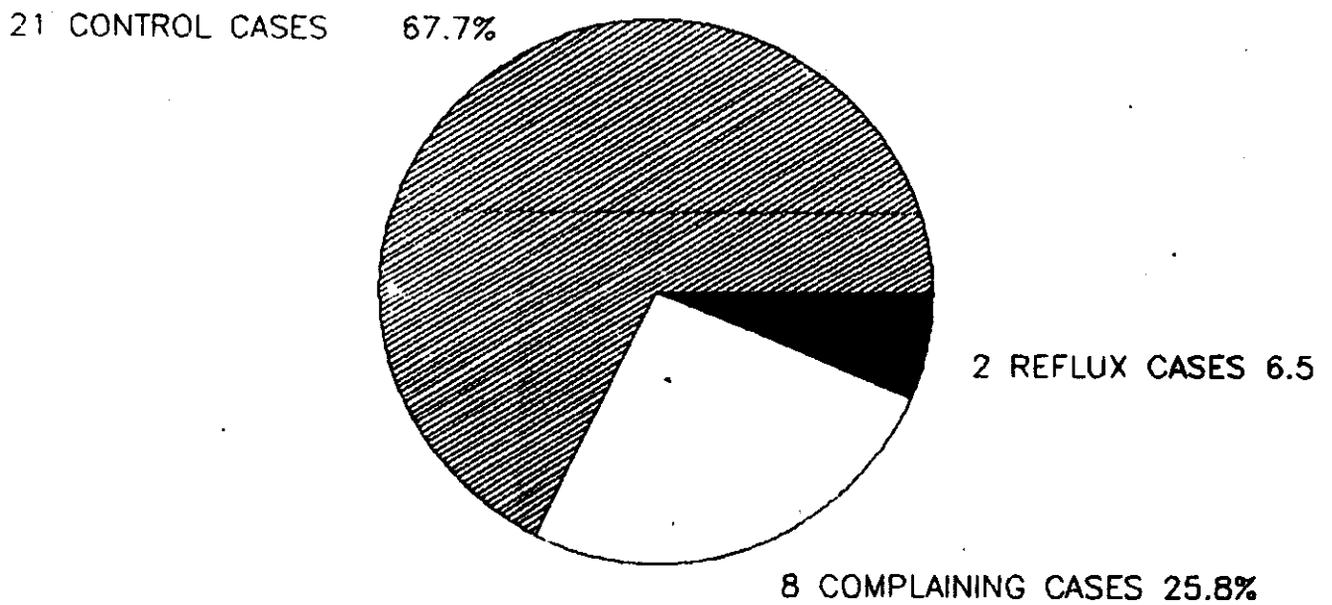


Fig 26

With the standard technique used and its modifications when indicated, 17 cases were diagnosed as D.V.T., 16 cases as primary varicose veins, 7 cases as secondary varicose veins, 26 cases as post thrombotic syndrome and only 3 cases as venous dysplasia. The results of our study is given in (Table 2, Fig. 25 & 26).

Table (2)

No. of cases	Diagnosis
31	Normal
17	D.V.T.
16	Primary V.V.
7	Secondary V.V.
26	Post thrombotic sy.
3	Venous dysplasia
100	Total

21 cases out of 31 normal phlebograms participated in this work as control cases. The other 8 normal cases were different complaining cases. In the remaining 2 normal cases, descending venography was performed as control cases.

HISTOGRAM SHOWING VISUALISATION OF INDIVIDUAL CALF VAINS IN TWO PROJECTIONS P.A. & LAT. VIEWS IN NORMAL CASES

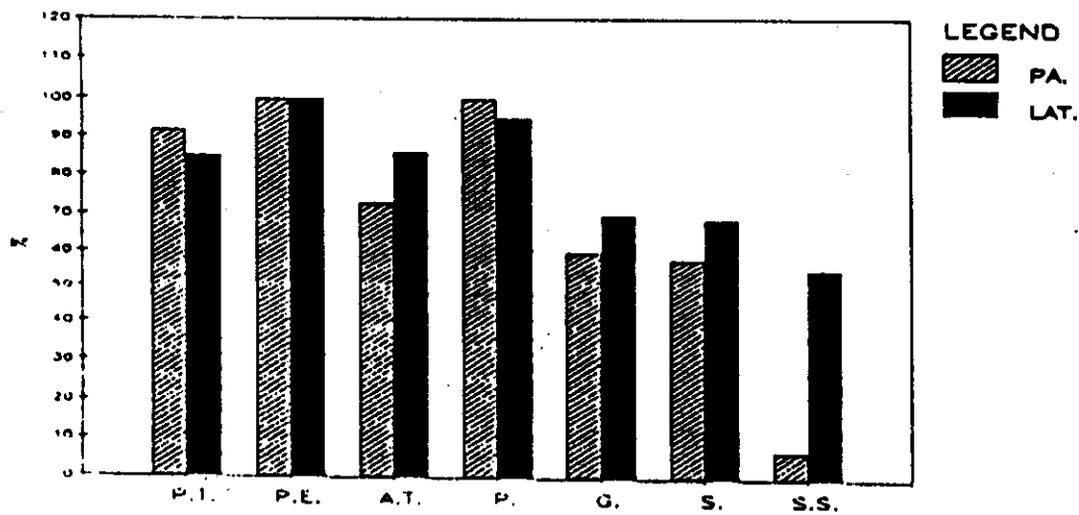


Fig 27

HISTOGRAMME VISUALISING ACUTE THROMBOSIS IN 17 CASES

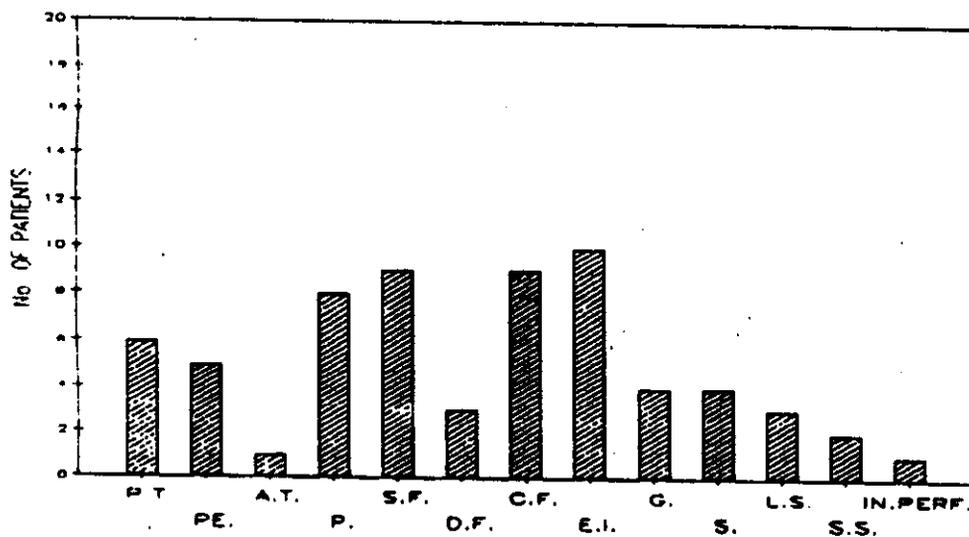


Fig 28

The anatomical visualisation of individual calf veins in two projections P.A. and lateral views in normal cases is displayed in Fig. 27. For example, the popliteal vein is shown in the P.A. in 100% of examinations and in the lateral in 95%. Similarly, the frequency of filling of other calf veins is shown.

The clinically diagnosed D.V.T. cases & proved radiologically by phlebography are given in table 3 and Fig. 28. 13 cases were males & the other 4 were females. The left lower limbs were affected in 12 cases and the right lower limbs in 5 cases. The mean age was 41 years old.

Table (3): Location of acute thrombosis on phlebograms, in 17 cases.

Case No.	Deep veins								Muscle v.		Sup. veins		Inco. perforator
	P.T	P.E	A.T	P.	S.F	D.F	C.F	E.I	G.	S.	L.S	S.S	
22	A	A	B	A	C	B	C	C	B	B	C	B	-
23	A	A	A	A	C	B	C	C	B	B	A	B	-
24	E	A	B	E	A	A	A	A	B	B	A	E	-
25	C	C	B	E	E	E	E	E	E	E	C	C	-
20	A	A	-	-	-	-	-	-	-	-	C	B	-
27	C	C	B	E	E	B	E	E	B	B	F	B	-
28	B	C	B	A	A	B	A	B	B	C	B	B	-
29	C	A	A	C	A	B	A	B	C	A	A	A	-
30	C	C	A	C	A	B	A	C	C	C	A	B	-
32	A	A	A	A	C	B	C	C	A	A	B	B	-
33	D	A	B	A	A	B	A	A	A	B	F	A	C
73	E	C	B	E	D	B	D	B	E	E	F	F	-
74	A	A	A	A	E/C	B	E	E	B	B	F	B	-
88	A	A	C	C	C	C	C	C	B	B	A	B	-
89	A	A	A	C	C	C	C	C	B	B	A	B	-
93	A	A	A	A	E/C	B	E	B	B	B	F	B	-
98	-	-	-	D	D	-	D	C	-	-	F/D	-	-
Tot. 17	6	5	1	8	9	3	9	10	4	4	3	2	1

Abbreviations of table 3 & Fig.28:

P.T.= Posterior tibial vs.

P.E.= Peroneal vs.

A.T.= Anterior tibial vs.

P. = Popliteal v.

S.F.= Superficial femoral v.

D.F.= Deep femoral v.

E.I.= External iliac v.

C.F.= Common femoral v.

G. = Gastrocnemius vs.

S. = Soleal vs.

L.S.= Long saphenous vs.

S.S.= Short saphenous vs.

A = Normally filled

B = Not filled

C = Vein filled, thrombus present

D = Recanalisation

F = Dilated & varicose

E = Vein not filled, thrombus present

NUMBER & LOCATION OF INCOMPETENT PERFORATORS
IN 50 CASES WITH DIFFERENT VENOUS PATHOLOGY

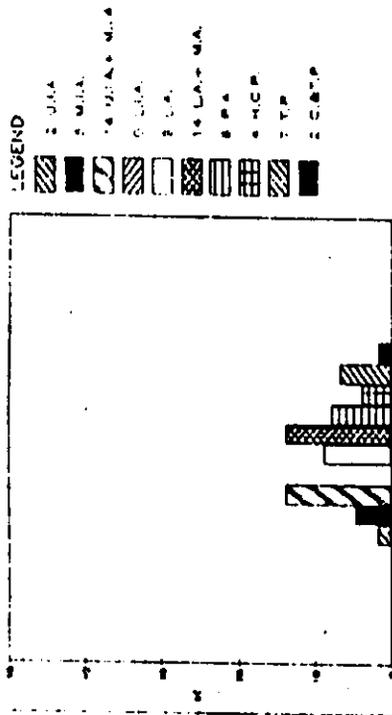
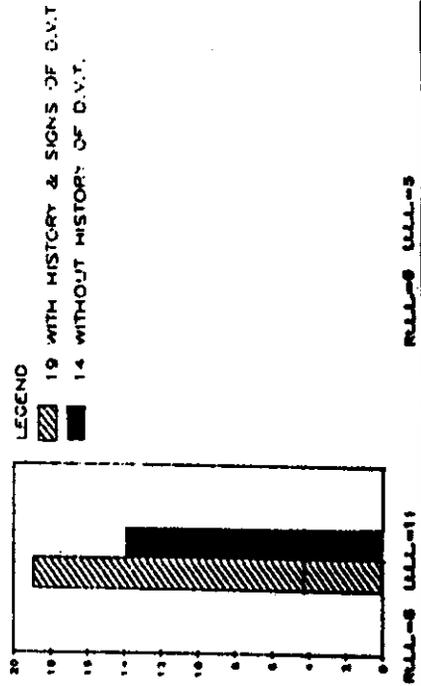


Fig 29

CHART OF 33 MALE CASES WITH POST
THROMBOTIC SYNDROME & SEC. V.V.



R.L.L.=8 U.L.L.=11

R.L.L.=9 U.L.L.=5

Fig 31

NUMBER & LOCATION OF INCOMPETENT PERFORATORS
IN 50 CASES WITH DIFFERENT VENOUS PATHOLOGY

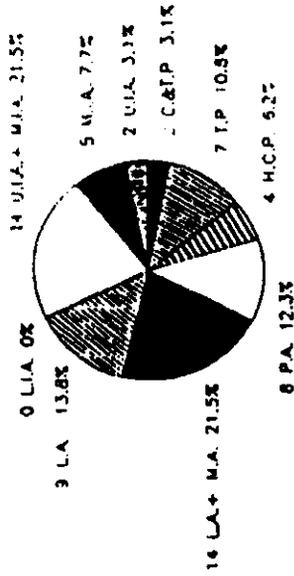


Fig 30

CHART OF 33 MALE CASES WITH POST
THROMBOTIC SYNDROME & SEC. V.V.



R.L.L.=8 U.L.L.=11

R.L.L.=9 U.L.L.=5

Fig 32

Abbreviations of Fig. 29 & 30:-

- 1) U.I.A. = Upper internal ankle perforator.
- 2) M.I.A. = Middle internal ankle perforator.
- 3) U.I.A. & M.I.A = Both internal ankle perforators.
- 4) L.I.A. = Lower internal ankle perforator.
- 5) L.A. = Lateral ankle perforator.
- 6) L.A. & M.A. = Multiple lateral & medial perforators.
- 7) P.A. = Posterior ankle perforator.
- 8) H.P. = Hunter's canal perforators.
- 9) T.P. = Thigh perforators.
- 10) C.& T.P. = Multiple calf & thigh perforators.

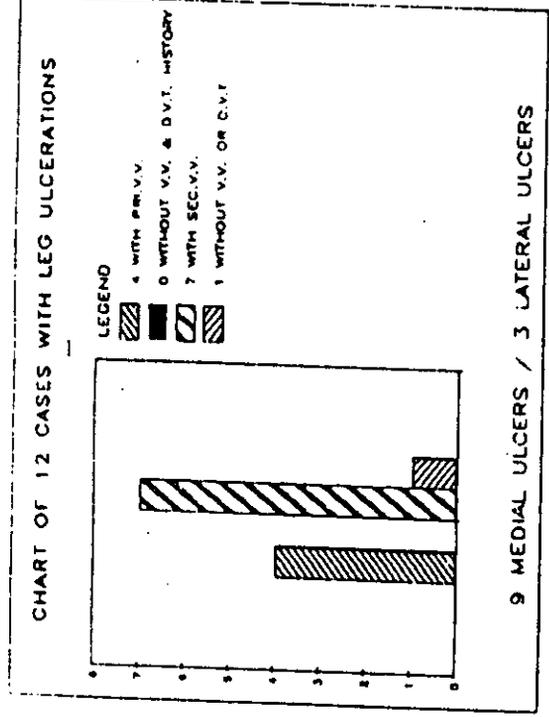


Fig. 34

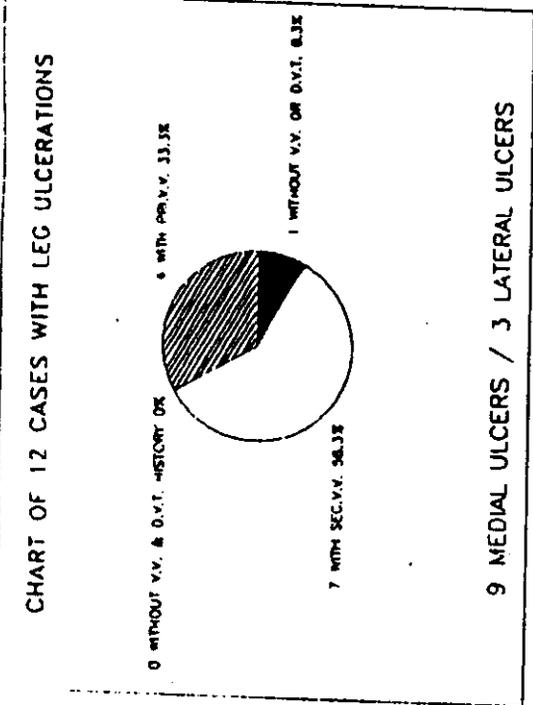


Fig. 33

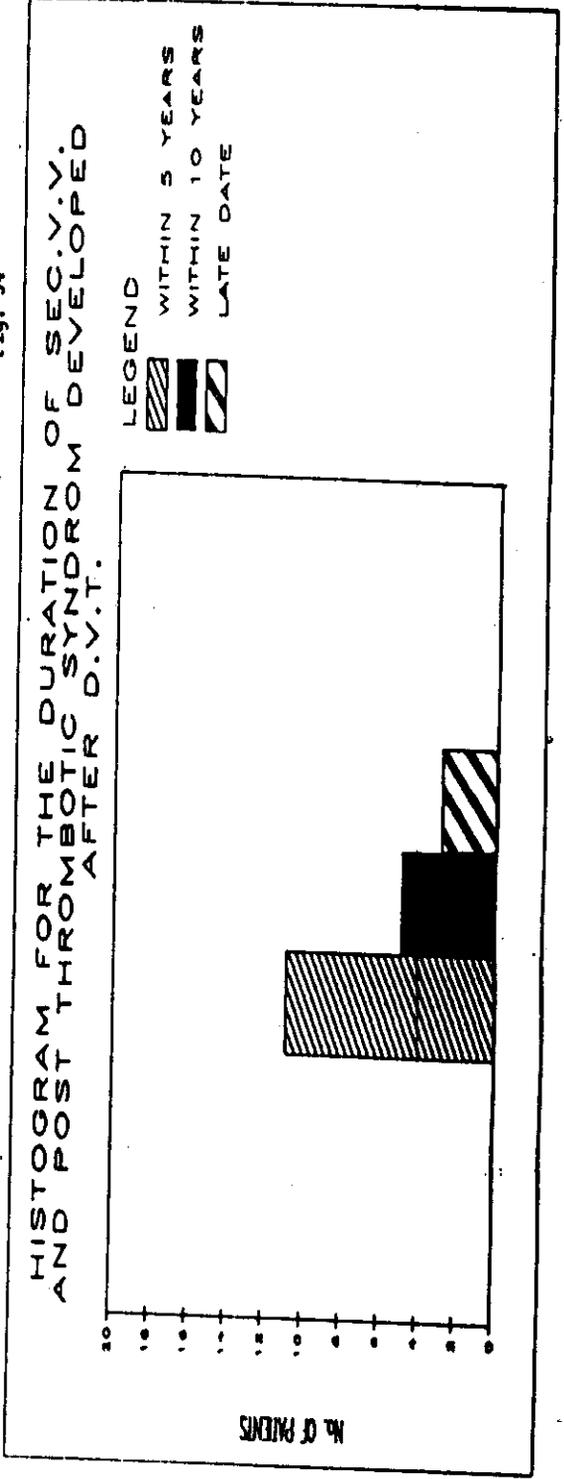


Fig. 35

An analysis of the number and location of incompetent perforators in 50 cases with different venous pathology is given in (Fig. 29 & 30).

33 patients were diagnosed as secondary varicose veins and post thrombotic syndrome, 19 cases with history and signs of D.V.T. & the other 14 without history of D.V.T.. All cases were males, with mean age 44 years in the first group and 47 years in the other group (Fig. 31 & 32).

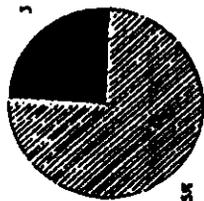
Chart of 12 cases with leg ulcerations is given in (Fig. 33 & 34). 3 cases with lateral ulcers & other 9 with medial ulcers.

Concerning patients with clinical diagnosis of varicose veins, 16 cases proved to be primary varicose veins & the other 33 cases diagnosed as secondary varicose veins.

Histogram for the duration of secondary varicose veins and post thrombotic syndrome developed after D.V.T. history, is given in (Fig. 35). 11 cases were manifested within 5 years, 5 cases within 10 years and 3 cases at late date.

Only 9 cases developed sapheno-femoral reflux. 3 of them suffered from leg ulceration and the remaining 6 without leg ulceration (Fig. 36 & 37).

CHART OF 9 CASES WITH SAPHENO-FEMORAL REFLUX

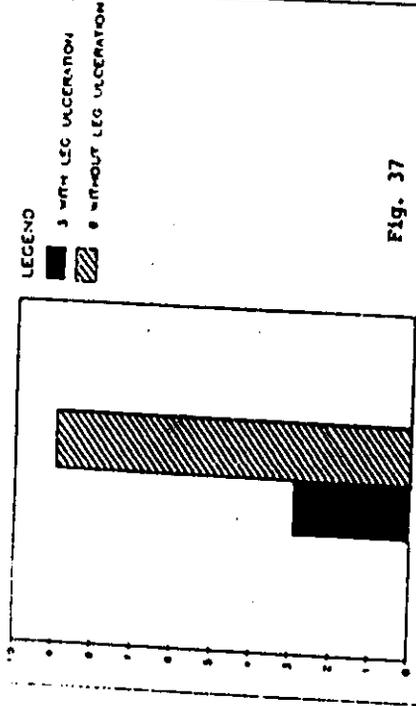


9 WITHOUT LEG ULCERATION 75%

3 WITH LEG ULCERATION 25%

Fig. 36

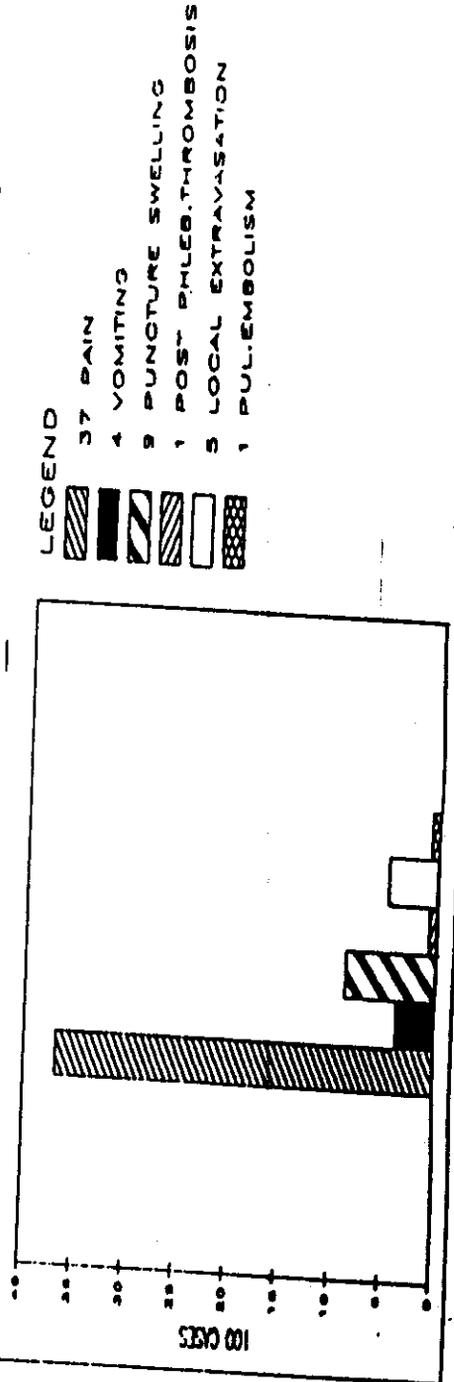
CHART OF 9 CASES WITH SAPHENO-FEMORAL REFLUX



LEGEND
 3 WITH LEG ULCERATION
 6 WITHOUT LEG ULCERATION

Fig. 37

HISTOGRAM OF DIFFERENT COMPLICATIONS IN 100 PERFORMED PHLEBOGRAMS



LEGEND
 37 PAIN
 4 VOMITING
 9 PUNCTURE SWELLING
 1 POST PHELB. THROMBOSIS
 5 LOCAL EXTRAVASATION
 1 PUL. EMBOLISM

Fig. 38

All the 3 cases (with incompetent great saphenous and lower leg ulceration) showed upper or middle incompetent ankle perforators.

The incidence of complication in our study, is given in (Fig.38). 37 cases experienced pain as follows:

- a) Moderate to marked local pain 13 cases.
- b) Moderate to marked calf pain 7 cases.
- c) Minimal to non local pain 12 cases.
- d) Minimal to non calf pain 5 cases.

Correlation of PVP with venography

The study was initially tabulated according to the pressures & the phlebographic findings (Table 4). Phlebograms were diagnosed normal in 17 patients and abnormal in 38. Pressure measurements ranged from a low of 10 cm. of saline to a high of 55.

Only two of 17 extremities with normal venograms had a PVP higher than 35 cm saline, compared to 20 of the 38 extremities with abnormal venograms.

27 of 55 extremities (49%) had a PVP of 35 cm. saline or more. In 7 of the 27, an intraluminal thrombus was demonstrated. Non of the other 20 with an elevated PVP of 35 cm. saline or more (74%) had deep venous thrombosis (constant filling defect). Three showed a normal phlebogram. Three showed radiographic evidence of D.V.T. (Non-visualised deep veins). 14 showed radiographic evidence of varices and recanalization.

One of the 28 extremities with PVP below 35 cm. saline showed radiographic evidence of D.V.T., 14 had a normal phlebogram & 13 showed radiographic evidence of varices and recanalization.

Subsequently, the major categories were tabulated according to the mean pressures by venographic diagnosis (Table 5). The mean normal PVP was 24 cm of saline. The mean pressure in those patients with varices or recanalized deep veins was, 33 cm of saline. In those patients with radiographic evidence of thrombosis within the deep system the mean pressure was higher, 39 cm of saline. In non visualized veins the mean pressure was 35 cm of saline.

Table (4): Correlation of PVP with venograph

PVP (cm saline)	No. of L.L. studied	Normal	Non fill. veins	Visual. thrombi	Vrices or recanal.
10- 20	9	5	0	0	4
21- 25	9	4	0	0	5
26- 30	10	5	1	0	4
31- 35	5	1	0	2	2
36- 40	15	2	3	2	8
41- 45	5	0	0	2	3
46- 50	1	0	0	1	0
51- 55	1	0	0	0	1
Total	55	17	4	7	27

Table 5: Correlation of Mean PVP with diagnosis

Diagnosis	No. of Patients	Mean PVP
Normal	17	24.0
Non.visualizd v.	4	35.0
Visualized thrombi	7	39.5
Varices & recanal	27	33.0