Results

At first the examination was carried out on 5 healthy adult individuals to establish the technique, then 20 patients with signs and symptoms of lower limb DVT were subjected to bilateral lower limb examination that revealed that two of them had similar conditions simulating DVT shown as follows:

Similar conditions	Thrombosed superficial veins	Backer cyst
2 (-ve) cases	1 (case No 13)	1 (case No 17)

The remaining 18 (+ve) patients were 9: 9 male to female, and 13: 5 unilateral to bilateral lower limb DVT shown as follows:

No of patients having DVT	Unilateral limb affection	Bilateral limb affection
18 patients	Subacute……...10 Chronic……..1 Subacute on top of chronic……..2	Bilateral chronic 1 Bilateral subacute 2 One subacute and other chronic 2
	TOTAL……13	**TOTAL……5**

Many risk factors have been met with during detailed history taking; the frequency of each factor among the patients was as follows:

	Risk factor	**Its frequency**	**Cases**
1	Immobility or stasis	11	1,2,4,6,7,8,9,14,15,16 ,20
2	Smoking	5	2,5,6,9,19
3	Varicose vein	4	1,5,12,19
4	Diabetes millets	4	2,10,14,18
5	Obesity	4	4,9,10,15
6	Old age >55	3	9,18,19
7	Trauma or fracture	3	1,16,20
8	Operation	3	3,11,14
9	Previous DVT	3	5,8,16

10	Malignancy	2	3,11
11	Heart disease	2	8,18
12	Pregnancy	2	4,15
13	Contraceptive pills	1	10

The following demonstrates the frequency of affection for each venous segment by DVT after bilaterally examining the 18 positive cases:

Segment	Frequency	Cases
(CFV)	12	1*Lt*, 2*Rt*, 6*Rt*, 8*Lt*, 9*Rt*, 9*Lt*, 10*Lt*, 11*Lt*, 16*Lt*, 19*Rt*, 19*Lt*, 20*Lt*.
(SFV)	18	1*Lt*, 2*Rt*, 4*Lt*, 5*Lt*, 6*Rt*, 7*Lt*, 8*Lt*, 9*Rt*, 9*Lt*, 10*Lt*, 11*Rt(double)*, 11*Lt(double)*, 12*Rt*, 14*Lt*, 16*Lt*, 19*Rt*, 19*Lt*, 20*Lt*.
(DFV)	12	1*Lt*, 2Rt, 6Rt, 8Lt, 9Rt, 9Lt, 10Lt, 11Lt, 16Lt, 19*Rt*, 19Lt, 20Lt.
(POP V)	22	1*Lt*, 2Rt, 3Rt, 3Lt, 4Lt, 5Lt, 6Rt, 7Lt, 8Lt, 9Rt, 9Lt, 10*Lt*, 11*Rt*, 11*Lt*, 12*Rt*, 14*Lt*, 14*Lt*, 15*Rt*, 16*Lt*, 18*Rt*, 19*Rt*, 20*Lt*.
Calf vein	20	1*Lt*, 2Rt, 3Rt, 3Lt, 4Lt, 5Lt, 6Rt, 7Lt, 8Lt, 9Rt, 9Lt, 10*Lt*, 11Rt, 11Lt, 12Rt, 14Rt, 14Lt, 16Lt, 18*Rt*, 20Lt.
Iliac vein	9	1*Lt*, 2Rt, 6Rt, 8Lt, 9Rt, 9Lt, 10Lt, 16Lt, 20Lt.

The extension of the thrombotic process in the affected 23 lower limbs (13 unilaterally and 5 bilaterally affected) is shown as follows:

Segment	No of affected lower limbs	Cases
Femoral alone	1	19*Lt*.
Popliteal (Pop) alone	1	15*Rt*.
Femoral + Pop	1	19*Rt*.
Pop + Calf	4	3*Rt*, 3*Lt*, 14*Rt*, 18*Rt*.
Femoral + Pop + Calf	7	4*Lt*, 5*Lt*, 7*Lt*, 11*Rt*, 11*Lt*, 12*Rt*, 14*Lt*.
Femoral + Pop + Calf + iliac	9	1*Lt*, 2*Rt*, 6*Rt*, 8*Lt*, 9*Rt*, 9*Lt*, 10*Lt*, 16*Lt*, 20*Lt*.

All the limbs in which deep vein thrombosis was diagnosed were involved in the complaint, i.e. all the patients were symptomatic.

Patients 3,9,11,14,and 19 were found to have bilateral DVT, in patients 3 and 19 one limb was affected by a subacute thrombus and the other by a chronic one.

In patient 9 both lower limbs were affected by a chronic thrombus while in patients 11 and 14 both lower limbs were affected by a subacute thrombus.

Patient (11) had doubled SFV on both sides; each duplicated vein was involved bilaterally by a thrombus.

In patients 16 and 20 the thrombus was found to extend from the affected external iliac vein to common iliac vein on the same side but no extension to inferior vena cava was found in any examined case.

Only two patients were represented with clinical suspicion of having pulmonary embolic events, but unfortunately that wasn't supported by ct scanning or isotope study

All the patients who are reevaluated after 1 week (8 pts), show no change in the findings of 1st examination except for the extent of the previously depicted DVT.

After 1 month (5 pts), signs of recanalization appear especially in the femoral vein, and popliteal vein.

All patients with signs of acute DVT were treated with low molecular weight heparin, for variable periods (till symptomatic relief occurs).

Segment		CFV						SFV						DFV						POP V						CALF VS				EXT I V					
		1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	2	3	5	6	1	2	3	4	5	6
p.																																			
1	Lt.	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	+	-	-	-	-	-	+	-
2	Rt.	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	+	-	-	-	-	-	+	-
3	Rt.	+	+	+	+	-	+	+	+	+	+	-	+	+	+	+	+	-	+	↓	+	±	→	+	+	+	±	+	+	+	+	+	+	-	+
	Lt.	+	↓	+	+	-	+	+	-	+	+	-	+	+	+	+	+	-	+	-	-	-	-	+	-	-	-	+	-	+	+	+	+	-	+
4	Lt.	+	-	+	+	-	+	-	-	-	-	+	-	+	+	+	+	-	+	-	-	-	-	+	-	-	-	+	-	+	+	+	+	-	+
5	Lt.	+	↓	+	+	-	+	+	↓	±	+	+	+	+	+	+	+	-	+	↓	↓	±	→	+	+	-	-	+	-	+	+	+	+	-	+
6	Rt.	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	+	-	-	-	-	-	+	-
7	Lt.	+	↓	+	+	-	+	-	↓	-	-	+	R	+	+	+	+	-	+	-	+	-	-	+	R	+	-	+	+	+	+	+	+	-	+
8	Lt	↓	↓	±	→	+	+	↓	-	-	→	+	R	-	-	-	-	+	-	-	↓	+	→	+	R	+	±	+	+	+	+	±	→	+	+
9	Rt.	+	±	±	+	+	+	+	+	±	→	+	+	+	+	+	→	-	+	+	+	±	→	+	+	+	±	+	+	+	+	±	+	-	+
	Lt	+	±	±	+	+	+	+	+	±	→	+	+	+	+	+	→	-	+	+	+	±	→	+	+	+	±	+	+	+	+	±	+	-	+
10	Lt	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	+	-	-	+	-	→	+	R	-	-	+	-	-	-	-	-	+	-

Segment		CFV						SFV						DFV						POP V						CALF VS				EXT I V					
		1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	2	3	5	6	1	2	3	4	5	6
11	Rt	+	-	+	+	-	+	-	-	-	-	+	-	+	+	+	+	-	+	-	-	-	-	+	-	-	-	+	-	+	+	+	+	-	+
								-	-	-	-	+	-																						
	Lt	+	+	±	→	+	+	-	-	-	-	+	-	+	+	±	→	+	+	-	-	-	-	+	-	-	-	+	-	+	↓	+	+	-	+
								+	↓	+	→	-	+																						
12	Rt	+	↓	+	+	-	+	-	-	-	-	+	-	+	+	+	+	-	+	-	-	-	-	+	-	-	-	+	-	+	+	+	+	-	+
13	Lt	+	+	+	+	-	+	+	+	+	+	-	+	+	+	+	+	-	+	+	+	+	+	-	+	+	+	-	+	+	+	+	+	-	+
14	Rt	+	↓	+	+	-	+	+	↓	+	+	-	+	+	+	+	+	-	+	-	-	-	-	+	-	-	-	+	-	+	+	+	+	-	+
	Lt	+	+	+	+	-	+	-	-	-	-	+	-	+	+	+	+	-	+	-	-	-	-	+	-	-	-	+	-	+	+	+	+	-	+
15	Rt	+	+	+	+	-	+	+	+	+	+	+	-	+	+	+	+	-	+	-	-	-	-	+	-	+	+	-	+	+	+	+	+	-	+
16	Lt	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	+	-	-	-	-	-	+	-
17	Rt	+	+	+	+	-	+	+	+	+	+	-	+	+	+	+	+	-	+	+	+	+	+	-	+	+	+	-	+	+	+	+	+	-	+
18	Rt	+	+	+	+	-	+	+	↓	+	+	+	+	+	+	+	+	-	+	↓	↓	±	→	+	+	+	±	+	+	+	+	+	+	-	+
19	Rt	-	↓	-	-	+	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	+	-	+	+	-	+	+	+	+	+	-	+
	Lt	+	+	±	→	+	R	+	↓	±	→	+	R	+	↓	±	+	→	R	+	+	+	→	-	+	+	+	-	+	+	↓	+	+	-	+
20	Lt	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	+	-	-	-	-	-	+	-

+ = Present
- = Absent
↓ = reduce
→ = continuous
± = Partially compressible
R = color encoding of the areas of recanalization

1- Spontaneous flow
2- Distal augmentation.
3- Compressibility.
4- Phasic Doppler waveform.
5- Intraluminal echoes.
6- Color encoding.