PRACTICAL DEEP VEIN PHLEBOGRAPHY OF LOWER LIMB

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Abstract:

The author has described a simple technique to visualize the deep veins of the lower extremity for the diagnosis of the possibility of having deep vein thrombosis. The technique does not need a fluoroscopy or an experienced radiologist. It needs only a radiographer and may be used in the provincial or district hospital where sophisticated equipments or experienced radiologist is not available.

Key words: Simple technique for deep vein phlebography of lower limb.

There are various technics of phlebography of deep vein of lower limb, including positioning of patient either in upright or supine, and the amount of opaque media used,[1,2,3] but there is no definite guideline for timing of exposure. Spot films under fluoroscopy need radiologist to operate on and hence are not practical. We, at the Priest's Hospital, develop a simple and practical technic that requires only a well trained radiological technician.

TECHNIC

With the patient in supine position and the feet internally rotated, a no. 21 scalp vein needle is cannulated into a superficial vein on the medial aspect of the distal half of the foot, while a tourniquet is being placed above the ankle. Then 40 ml of diatrizoate meglumine 60% are injected continuously by hand.

After the first 20 ml, the second and the last 10 ml of the opaque media have been injected, the overhead 14 × 17 films are made from the foot to below-the-knee, from below- to above-the-knee and from above-the-knee to the iliac crest levels respectively (see Fig. 1-4). The successive exposure is repeated immediately at this region. Either heparin or NSS is infused right after the last ml of the opaque media has been injected, for the purpose of reducing the possibility of phlebitis.[3,5]

RESULTS

35 lower extremity venograms were performed in a total number of 35 patients over a period of 2 months.

Our patients were requested for IVP study but instead of upper limb venous injection, lower limb phlebography was performed.

The adequacy of venous opacification in the leg, the thigh and the pelvic veins were judged into 3 categores : 2^+, when the dense contrast was seen : 1^+, when the opacification was not dense enough but was adequate to exclude the disease; and O, when there was no contrast material filling the vein or the density was so poor that an adequate interpretation was not possible.

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DISCUSSION

As far as we know, no definite guideline has been mentioned in any literatures regarding the timing of exposure in deep vein phlebography of lower limb.

The author believes that the technic, that has been described in this literature, is the easiest and simplest one that can be performed in any hospitals in our country no matter what the radiologist or the sophisticated x-rays equipment is available or not.

The timing of exposure of various part of the leg can be done with the help of the amount of radiopaque media used, which is small and can be safely repeated. The inadequacy of the opacification of the pelvic vein can be overcome by using the technic of femoral vein compression.[6]

The procedure is quite convenient for both of the patient and the technician as it does need rotating of the table or the sport films which are not practical in the small hospitals in our country.

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Table shows the number of patients with ratings of venous opacification in the leg, the thigh and the pelvic veins

35 cases of venous opacification	2^+ (dense opacification)	1^+ (adequate opacification)	0 (inadequate opacification)
in the leg vein	34	1	-
in the popliteal vein	35	-	-
in the thigh vein	31	3	1
in the pelvic vein	6	13	16

Fig.1 After the first 20 ml injection of the opaque media

Fig.2 After the second 10 ml injection of the opaque media

Fig.3 After the last 10 ml injection of the opaque media

Fig.4 Immediately after the Fig.3