Lymphology 18 (1985) 22-23

LYMPHOGRAPHIA

LYMPHANGIOMA CIRCUMSCRIPTUM

J J Wasenko, M.D., E M Levinsohn, M.D.

Department of Radiology, State University of New York, Upstate Medical Center, Syracuse, New York

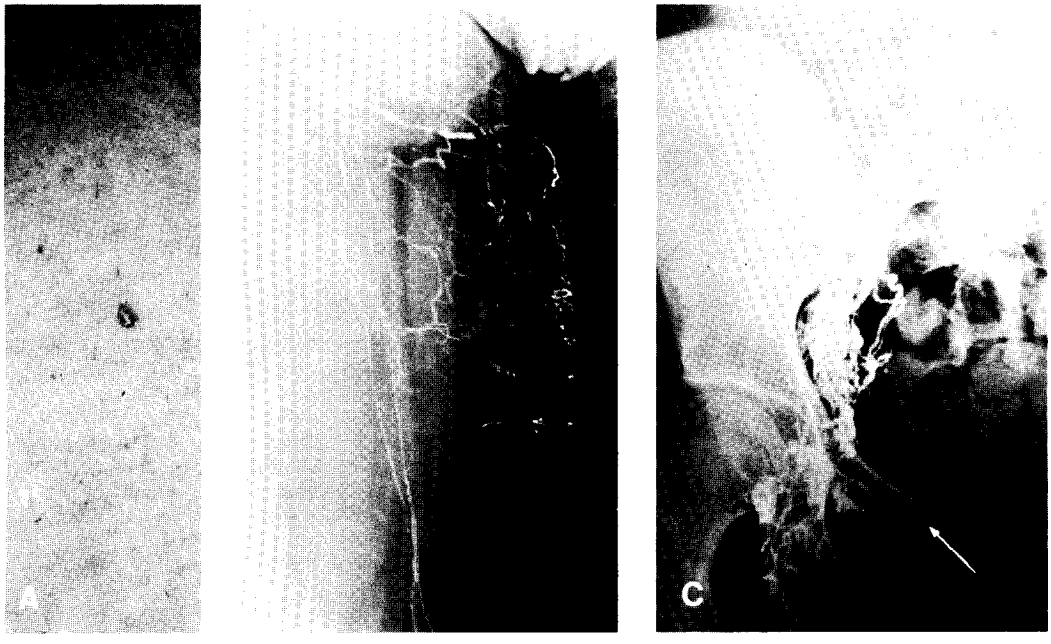

Fig. 1: (A) 2mm vesicle on the inner surface of the right thigh. After patent blue injection between the toes, this vesicle became slightly blue tinged. There also was a faint appearance of blue within serpiginous intradermal lymphatics in adjacent skin.

B: Radiograph of the medial aspect of the right upper thigh during the vascular phase of a dorsal pedal lymphangiogram. Note normal femoral lymphatic channels with diffuse cutaneous lymphangioma superficially.

C: Opacified cluster of pelvic lymphatics with a solitary collateral vessel directed toward the lower mid pelvis (arrow).

CASE REPORT

An 18-year-old white female had recurrent clear fluid oozing from a vesicle along the inner aspect of the upper right thigh. Her health was otherwise good. She denied previous injury to the thigh or abdomen and she detected no other similar vesicles. Physical examination confirmed a 2mm vesicle at the proximal medial aspect of the

right thigh. The surrounding skin was unremarkable.

A lower extremity lymphangiogram was performed. Several minutes after injection of patent blue dye between the toes of the right foot, a serpiginous network of blue colored dermal channels was seen within 5cm of the vesicle. At that time the vesicle assumed a faint bluish coloration (Fig. 1A). A lymphatic on the dorsum of the foot was cannulated and 7ml of Ethiodol was instilled. Lymphatics in the lower leg were normal. In the proximal portion of the thigh, however, numerous lymph channels originating from the main femoral lymphatics diffusely permeated the skin medially in the region of the superficial vesicle (Fig. 1B). The deep femoral lymphatic vessels were otherwise unremarkable. With the exception of a single collateral channel originating in the pelvis just above the level of the inguinal ligament, the deep lymphatics were normal in the pelvis and abdomen (Fig. 1C).

The patient received no operative treatment and has been followed for six years. During this period, she experienced occasional oozing of tiny amounts of fluid from the thigh vesicle. Otherwise she remains asymptomatic.

COMMENT

Lymphangiomas are usually considered hamartomatous labyrinths of lymphatic vessels which permeate the skin and subcutaneous tissues (1) and derive from localized sequestration of embryonic mesenchymal slits (2). They are differentiated from lymphoceles and lymphocutaneous fistulas which result from surgical lymphatic interruption (3,4). Three congenital varieties are recognized: simple, cavernous, and cystic (2,5,6). Our patient represents the "simple" variety characterized by small interconnecting intradermal lymph channels. The cavernous variety typically shows dilated lymph spaces which rarely communicate with underlying truncal lymphatics (2). The cystic variety tends to be an endothelial lined multilocular cavity (6).

When a lymphangioma fails to drain adequately into adjacent lymphatics, vesicular formation on the skin surface may develop (1,6). Intravesicular injection shows adjacent subcutaneous spaces without direct communication with normal lymphatics (1). Such vesicles when confined to an area less than 7cm in diameter are referred to as lymphangioma circumscriptum. When greater in size it is termed lymphangioma diffusum (1). The labyrinth of underlying lymph vessels is usually considerably more extensive than suspected from its superficial appearance alone (1).

REFERENCES

1. Kinmonth, JB: The Lymphatics. Edward Arnold Ltd., London, 1982, pp. 157-158.
2. Godart, S: Embryological significance of lymphangioma. Arch. Dis. Childhood 41 (1966), 204. Abstract: Am. J. Roentg. 99 (1967), 273.
3. Stolzenberg, J: Detection of lymphaticocutaneous fistula by radionuclide lymphangiography. Arch. Surg. 113:306 (1978).
4. Jackson, FI, BC Lentle, MR Higgens, RC Boake, L Jackson: Lymphocutaneous fistula following renal transplantation. Clin. Nucl. Med. 5:19 (1980).
5. Castellino, RA, S Finkelstein: Lymphographic demonstration of a retroperitoneal lymphangioma. Radiology 115:355 (1975).
6. Kittredge, RD, N Fimby: The many facets of lymphangioma. Am. J. Roentg. 95:56 (1965).