of subject coverage, the thought-provoking individual assignments of problems, the superb organization, the provision of reading material, the small group-oriented discussions." At the conclusion of the course each disciple was presented with a Doctor of Lymphology degree and honorary membership in the Greater St. Louis Lymph Club.

References

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TECHNICAL NOTE

Improvement of Surgical Procedures in Lymphography by Using a Tissue Adhesive

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Lymphology 1 (1970), 61—62

A method to secure the needle in the lymphatics by using a tissue adhesive instead of ligatures or clamps is being described in this publication.

The technique is carried out as follows: The skin is incised; a lymph vessel is identified and isolated. The vessel caliber is increased by compressing on the proximal end of the visualized vessel. After haemostasis and absorption of the blood by tampons, N-butyl-alphacyanoacrylate (Histoacryl N®) is applied to the punctured vessel so that it covers

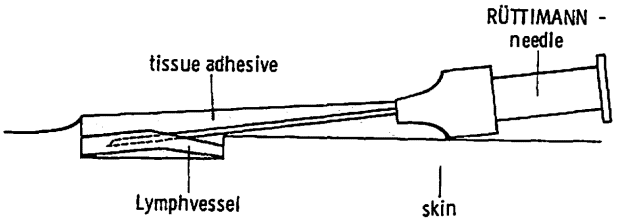

Fig. 1 Schematic drawing of cannulated lymph vessel surrounded by tissue adhesive.

part of the needle. This substance polymerizes within 10 seconds and forms a strong adhesive which binds together lymph vessel, needle and the distal border of the wound (Fig. 1). No further attachment is needed. The needle is then connected to a polyethelene tube and to the injector. It is important that the blood and tissue fluid are absorbed prior to the use of the tissue adhesive. If this is not done, the oily contrast medium will extravasate. Repositioning of the needle can be done by cleansing of the wound and adding a drop of tissue adhesive to a point where oil is extravasated. The infusion can then be continued.

At the end of injection the needle and the scab of polymerized adhesive are removed. The vessel is undamaged and can be preserved for further studies. The wound is then closed in routine fashion.

The bacteriocidal cyano-acrylate monomer may be used for binding of the wound edges. An untied ligature is placed through the border of the wound and a thin layer of tissue adhesive is applied to one edge of the dry wound. The wound should be compressed from both sides for approximately one minute. The ligature is then tied. The adhesive will be resorbed completely.

This method has been used in 16 patients with succes and no complications.

Summary

The surgical procedure of lymphography may be carried out under more favorable conditions by using a tissue adhesive (Histoacryl N®). The method is described.

References

Gottlob, R., G. Blumel: Anastomoses of small arteries and veins by means of bushings and adhesives. J. Cardiovasc. Surg. 9 (1968), 337

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ABSTRACTS

Basic Science

GAUGAS, J. M., F. P. WHARTON (Nat. Inst. for Med. Res., Mill Hill, London, N.W. 7, England): **Increased Lipid in Thymic Macrophages Parasitized by Mycobacterium Lepraemurium.** Experientia 25 (1969), 736–738

Adult female P strain mice were infected by i.v. inoculation of a suspension of viable *Mycobacteria lepraemurium*, an obligate intracellular parasite (number of organisms not given). Death resulted 5–6 months later. Particular attention was directed towards the demonstration of bacteria-carrying macrophages in the thymus. Entry of bacteria into the thymus was delayed by several weeks as compared to overt bacillary multiplication in other lymphoid tissues. At about 2 months after the inoculation macrophages loaded with organisms and lipid granules appeared in the thymic cortex. Macrophages in other parts of the lymphoreticular system never contained as many mycobacteria or lipid material as did those located in the thymic cortex. The authors emphasize the fact that *M. lepraemurium* ultimately penetrates the somewhat mystical "thymic barrier" to antigen. The speculation that the lipid material, most probably produced by macrophages in close contact with thymus or lymph node cortical lymphocytes, may be important in unknown defence mechanisms is only alluded to.

M. W. HESS

MAHAUX, J. E., J. CHAMLA-SOUMENKOFF, M. NAGEL, L. DELCOURT, S. LEVIN (Lab. of Endocr., Med. Serv., Univ. Libre de Bruxelles): **Thyroid Gland and Lymphatic System.** (Nouveauté en pathologie thyroidienne.) Vie méd. 50 (1969), 1965–2004

This is a series of articles reviewing the relationship between the thyroid gland and the lymphatic system. A hyperplasia of lymph nodes and lymphocytosis in Graves'disease had been noted almost a century ago. The discovery in this disease of an immunoglobulin which stimulates the thyroid gland (long-acting thyroid stimulator, "LATS") has greatly revived the interest in these earlier observations. Clinicians had often noted swelling