

## BOOK REVIEW

**Ulcus Cruris in Venous Circulatory Disturbances.** Investigations of the Etiology, Pathogenesis and Therapy of Leg Ulcers. By OSCAR GILJE. *Acta Dermato-Venereologica*, Vol. 29, Supplement 22, Oslo, 1949, 328 pp.

This excellent monograph, from the Dermatological Department of the University Hospital in Oslo, is a contribution to the knowledge of some of the special factors which are assumed to comprise the central problems in the etiology, pathogenesis and therapy of leg ulcers. From a review of theories concerning the so-called "varicose ulcers" or "stasis ulcers" it appears that there is still considerable uncertainty and disagreement on these matters. An effective therapy of leg ulcers, the author feels, should be based on a correct etiologico-pathogenetic diagnosis, determined by a number of examinations. Some of the many methods of examination employed may be omitted in ordinary clinical practice, while others are absolutely necessary for the determination of the cause or type of the ulcer.

The 626 cases involved in the author's personal investigations comprised the following types of ulcers: (1) ulcers resulting from disturbances of the venous circulation; (2) ulcers resulting from disturbances in the arterial circulation; (3) infectious ulcers, including those of leprosy; (4) nonspecific ulcers, mycotic, traumatic, and malignant; (5) ulcers associated with endocrine affections; (6) ulcers in blood diseases, as leukemia and anemia; (7) medicamentous ulcers, as those due to bromides; (8) neurotrophic ulcers, including beri-beri; and (9) others less common, as those associated with undernourishment or pediculosis.

Discussing the bacterial flora of ulcers, the author points out that there is disagreement as to the significance of the bacteria which are found in the etiology and pathogenesis of these lesions. Those found most frequently, both on the surface and in the depth, regardless of treatment, were primarily yellow and white staphylococci; hemolytic streptococci, proteus and others were found less frequently.

Considering experimental technique, the tests and examinations required to determine the condition of the venous circulation in the legs are Perthe's and Trendelenburg's tests and venography. The methods employed in the investigation of the local circulation around the leg ulcers include skin temperature measurements, capillary microscopy, and histamine and adrenalin prick tests.

In a chapter on thermo-electric measurements the author discusses the sources of error involved in this method. It is especially emphasized that the pressure with which the testing junction is applied to the skin affects the results. In his own investigations the temperature was usually found to be higher around the ulcers than elsewhere, the difference tending to decrease while the ulcer is healing. This finding indicates that the circulation is at least no poorer in the affected leg than in the healthy one.

Capillary microscopy around the ulcers has shown that the capillaries are markedly dilated and often abnormal in form. The dilation decreases peripherally to about 3 to 4 cm. from the ulcer.

The histamine prick reveals a refractory condition around the ulcers. The "triple response" reaction is usually abolished or very weak at the ulcer margin, increasing in strength peripherally to about 3 to 4 cm. from the margin, where it is usually normal. This weakened reaction may indicate some insufficiency which might have pathogenetic significance, and this matter is discussed at length. The assumption is that there is a constant liberation of histamine, and the refractory condition may be ascribed to that fact. Histamine prick tests made in a number of conditions in which histamine is supposed to be released showed that the response in these conditions was exactly the same as in *ulcus cruris*. In an attempt to demonstrate that histamine or an H-substance is released in the ulcers, quantitative determinations of histamine in the blood from a vein just above the ulcers were made in 46 cases, but no conclusions could be drawn from that effort or certain others. Other possible explanations of the weakened histamine reaction in leg ulcers are considered.

The results of these various investigations do not indicate that disturbances of local arterial circulation are responsible for the development of the ulcers.

Accurate case histories are required to determine whether an ulcer is of varicose or post-thrombotic origin. On that basis it was found that 33.8 per cent of the author's cases had had deep thrombophlebitis, while 52.2 per cent are assumed to be due to varices and 13.9 per cent to other causes. With Perthe's test or venography it was found that only about 90 per cent of the ulcer patients who had had deep thrombophlebitis have occlusion of the deep veins. Perthe's test is a good method of ascertaining the functioning of the deep veins, but when it fails venographic examination is necessary.

The sex distribution of the 626 patients was 66.4 per cent women and 33.5 per cent men, this distribution being evidently influenced by the frequency of thrombosis, which factor is also involved in the fact that in women the majority of the ulcers are on the left leg. Ulcers are most common from the age of 40 years and upward. Adiposity plays a contributory role.

With regard to therapy, the author differentiates between the treatment of the venous circulatory disturbance, the etiological-pathological treatment, and the local ulcer therapy. Rest in bed is not indicated in most cases, and is not rational. Treatment should not be instituted until it has been determined whether or not the deep veins are occluded. Varix injection, vein ligation, and the principles of conservative treatment with compressive bandage are discussed. The compressive bandage employed by the author consists of adhesive plaster and a rubber sponge which is applied over the ulcer and the surrounding region, and a large elastic bandage. The various kinds of local ulcer therapy are described, namely: disinfective treatment, treatments which aim to increase the arterial circulation, treatment with medicaments which have a stimulating effect on healing, and operative therapy.

The method which the author recommends is the so-called "adhesive tape therapy," which deserves to be revived. Strips of adhesive tape about 2½ cm. wide are applied across the leg, directly on the ulcer, so that they cover about one-half the circumference of the leg, and a sterile bandage is applied. This dressing should be changed 2 or 3 times a week or less often, depending on the amount of secretion. This treatment is usually

employed together with the above-described sponge and elastic bandage. The excellent effect of the adhesive tape may be due to the following factors: (1) a compressive effect on edema; (2) a mechanical pressure effect on the ulcer; (3) protection from extraneous injury; (4) a "moist chamber" effect; (5) a chemical effect of the plaster substance; (6) an antiseptic or bacteriostatic effect.

This monograph contains numerous tables, diagrams and photographs, and covers the subject very thoroughly. —F. A. JOHANSEN

✕ **Leprosy, Facts & Fiction.** By D. N. MUKERJI. Privately printed, 1950. Pp. 46, 16 figs, Rs 1/101—or 3 shillings.

The writer of this booklet has been Leprosy Specialist in Madhya Pradesh, Raipur, M. P., and superintendent of the government Leprosy Home & Hospital at Raipur, for a number of years. The purpose of the booklet, which has a foreword by Dr. E. Muir, is to present essential facts about leprosy in simple language for the lay public. It will be of value in educating the public with a view to banishing wrong notions current about the disease, and arousing interest in the much needed antileprosy campaign in the country.

Conspicuous is the fact that chaulmoogra is spoken of as the "only" medicine which has stood the test of time, while only a passing reference is made to the recent outstanding development in this field, namely, the introduction of the sulfone drugs in treatment. One would have expected to find some information about this important matter in a publication of 1950. In a personal communication, however, the author says that the booklet was written in 1946, and that when he attempted to add a note on the subject the printing was too far along to permit its inclusion. This omission will be corrected in a second edition to be printed shortly.

A minor point is the perpetuation of a much-used map of distribution which among other things shows British Columbia and Greenland as endemic foci while Peru, Ecuador and Bolivia appear as free from the disease. The idea that China has as many cases as India has, to say the least, an insecure foundation.

Home isolation is advocated as a control measure, and on that point the author writes (personal communication) that he is not as pessimistic about its value as others appear to be. Considering the great numbers of cases in the country and its limited financial resources he regards it as the only practicable solution of the problem, or at least as one not to be discarded until after it has been given a fair trial. —DHARMENDRA