TREATMENT OF VARICOSE ULCERS.

BY

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VARICOSE ulcer is the commonest, and one of the most important, complications of varicosity of the veins. Of all the cases of varicose veins or of their sequelae presenting themselves at the Royal Waterloo Hospital it occurs in about 22 per cent., but this figure is much higher than the true incidence of ulceration, as a large number of patients do not seek treatment until ulceration occurs. It seems commonest in the working classes, and for this reason ambulatory treatment—if suitable to the particular case—is to be preferred to all others.

In the treatment of the condition it is useful to distinguish five types; these will be dealt with in order below.

Ulcers with Visible Varicose Veins Unaccompanied by Deep Thrombosis.

Local treatment to the ulcerated area will generally result in healing of a temporary nature, as unless the actual cause is dealt with there will always be a tendency for the area to break down again, or for fresh ulceration to ensue elsewhere in the leg. In order to obtain a permanent cure the varicose veins, which impede the return of blood and lead to congestion, impaired nutrition, and ulceration, should be sclerosed. It is not proposed to discuss the several solutions which may be used for the purpose, but at the Royal Waterloo Hospital the routine is to inject 5 c.cm. of a solution of lithium salicylate 30 per cent., with tutocaine 1 per cent., into the largest veins, and a similar amount of solution of sodium chloride 20 per cent., with tutocaine 1 per cent., into the small veins, at weekly intervals, until sclerosis is complete. In the very large veins the double injection of 2 c.cm. of quinine and urethane solution and of the lithium salicylate as above, each injection being given at points about two inches apart, gives satisfactory results. Before any injection is given, we should ascertain that no contraindications exist, such as recent phlebitis, deep thrombosis, etc.

The ulcer itself is, in the large majority of cases, secondarily infected, and should first be carefully cleaned. It is important that injections—especially those close to the ulcer—should only be commenced once the ulcerated area is as free from sepsis as possible. Dressings of hydrogen peroxide, in an equal amount of water, or of eusol, are applied twice daily, and this usually suffices to give the affected area a healthy appearance in a few days. Pasta zinci co. (Lassar's paste) is then applied twice a day to the ulcer itself and to the congested, discoloured surrounding skin, and the whole covered with a thin sheet of gauze. Scarlet red 1 per cent. may be added to the paste, on account of its stimulating properties. A crêpe bandage should be worn at first until healing is advanced; it should be applied before the patient arises in the morning, and should extend from the roots of the toes to below the knee. After a few weeks the ulcer should be completely healed, and it only remains for the complete sclerosis of the veins to achieve a permanent cure.

Where the ulcers are large, very indurated, or recalcitrant to treatment advocated above, we inject the veins with sclerosing solution at fortnightly intervals, and immediately after the injection apply elastoplast bandages firmly and evenly from the toes to the knees. The bandages are applied directly to the skin and ulcers, and no other dressings are advised. The elastoplast bandages in many respects are better than Unna's paste bandages.

Ulcers with no Visible Varicose Veins and with no Deep Thrombosis.

In these cases the ulcer tends to be larger than in the previous group. The leg is usually hard, oedematous, and discoloured. No veins are visible, but one here and there may be made out by palpation, and these should be injected, if possible, observing the cautions above.

The treatment consists in supporting the tissues and aiding the return of blood by the application of suitable bandages. Either an Unna's leg bandage or an elastoplast may be used. The ulcer is first cleaned with hydrogen peroxide, then dried, and any palpable vein injected. If it is decided to use Unna's paste, then the margins of the ulcers and the surrounding skin for about three inches are painted with Unna's paste, using an ordinary flat brush, the ulcerated area itself not being touched. An ordinary crinoline bandage 3 or 4 inches wide and 6 yards long, rolled up from each end, so that the two rolled ends meet at the middle of the bandage, is soaked in hot water for a few minutes, and then squeezed as dry as possible. With the patient's leg raised and supported by an assistant, the bandage is applied firmly from the toes to the knees, one roll being in each hand. The whole surface of the bandage is then covered with one or two coats of Unna's paste, and allowed to dry; an ordinary bandage may then be rolled round the leg to prevent the stocking from coming into contact with the paste. This Unna's leg bandage should be left on a week or ten days, and then renewed until healing is complete.

The composition of the Unna's paste used is: zinc oxide 9 parts, glycerin 20 parts, gelatin 9 parts, water 20 parts.

The elastoplast bandage may be used instead of Unna leg bandage. These bandages are applied with the patient lying down on a couch, the affected leg being raised as high as possible by an assistant. Beginning the first turn round the roots of the toes, the bandage should extend to just below the knee; it must be applied evenly and tightly, and must directly cover the ulcer, which has previously been cleaned. Badly applied, it causes uneven pressure and discomfort to the wearer. Any discharge from the ulcer will soak through the bandage, and can be cleaned off with some boracic lotion. The elastoplast is left on five or seven days at first, according to the amount of discharge coming through, and in the later stages it may be only renewed every fortnight. As the oedema subsides, veins not previously palpable may be found and injected. This is the method of choice, as healing is rapid, application easy, and no preparation needed as the bandage is bought ready for use. The following are typical cases:

Mrs. H. B., 53 years. Varicose ulcers for nine years. Treatment with elastoplast began on May 15th. Seven weeks later the ulcers were completely healed.

Mrs. A. S., 48 years. Large ulcer encircling half the leg. Treatment with elastoplast began on August 11th. When last seen, in September, the ulcer was practically healed.

Ulcers with Deep Thrombosis of the Veins.

In these cases injection is contraindicated, as the superficial veins are the only channels of return for the blood usually carried by the deep veins. Sclerosis of the veins would therefore only aggravate the existing condition and lead to disastrous consequences. If, in a patient with varicose veins, a rubber tourniquet is applied round the thigh and the muscles made to contract by walking, a suction is exerted on the superficial venous circulations by the deep veins, and consequently the superficial veins collapse. In deep thrombosis this, however, cannot take place, and the superficial veins do not collapse, but become more distended (Delbet and Mocquet's sign). Treatment consists in aiding the circulation by rest, with the limb raised whenever possible and the application of a supporting bandage, such as the Unna's leg bandage or elastoplast bandage already described. All standing is avoided, and in severe cases rest in the recumbent position, with the affected leg raised, is necessary. Healing is generally slow. Quinine and urethane 3 to 6 minims may be injected into the base of the ulcer in two or three places, at weekly or fortnightly intervals. Once healing is obtained, the scar is dusted with pulv. zinci amyli and a crêpe bandage worn. Care should be taken to avoid all trauma to the limb, as the scar is very apt to break down again. In cases with recent superficial phlebitis the same treatment is required, but after an interval of six months injections into the veins may be begun, proceeding cautiously with small doses and longer intervals between each injection.

Ulcer with Periostitis of Tibia.

In all cases where the ulcer is large, and lies over the tibia, an x ray examination should be made for periostitis. Deep thrombosis may or may not be present. These ulcers are, as a rule, more painful and more resistant to treatment. Rest, the injection of quinine or urethane into the base of the ulcer, the sclerosis of the veins, and the application of an elastoplast are the main lines of treatment, and give good results where deep thrombosis is not present. Scarification of the edges, scraping of the floor of the ulcer, Leriche's sympathectomy, and shin grafts have been recommended. Ultra-violet light, from a mercury arc lamp, on alternate days, directly to the ulcer, does not seem to be of great value. Finally, in severe and extensive cases, with deep thrombosis, when all other treatment has failed, amputation should be performed.

Multiple Ulcers.

In a case of varicose veins with multiple ulcers the Wassermann reaction should be investigated, and, indeed, the ideal to aim at is the carrying out of this test in every case presenting ulcers on the leg. It is well to bear in mind that, although the typical varicose and syphilitic ulcer have fairly well defined characteristics, there occur cases which clinically seem to belong to the varicose group, yet are resistant to the treatment for the latter, have a positive Wassermann reaction, and clear up remarkably quickly when antisyphilitic treatment is instituted.

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Memoranda:**MEDICAL, SURGICAL, OBSTETRICAL.****DIFFERENTIAL DIAGNOSIS OF ENCEPHALITIS EPIDEMICA IN NIGERIA.**

IN view of the observations of Pfister on the prevalence of encephalitis epidemica in China (*British Medical Journal*, June 29th, 1929, p. 1156), the following notes may be of interest.

A powerfully built Pagan man, aged about 32, presented himself for treatment on July 20th, 1929, complaining of shaking of the limbs for nine years. He had an upright carriage, and stood like a statue, with the knees slightly flexed. His face was expressionless, but the eyes looked intelligent. The speech was slurring and almost unintelligible, while the lips remained motionless. He had difficulty with mastication and deglutition, and traces of food soiled the chin and chest. His intelligence was above the average, as was evident during the subsequent examination. All his movements were slow and deliberate. The elbow-joints were slightly flexed, the right more than the left, and the hands were held in front of him. The upper limbs showed small, involuntary, myoclonic movements at the elbow-joints, the left greater than the right. These movements were absent during rest, but when he was agitated they were augmented, and involved both knee-joints also. The hands were in the interosseal position, but there was no involuntary movement of the fingers. The history began nine years ago with headache, fever, and shaking of the limbs, together with transient diplopia and lethargy; the shaking of the limbs continued up to the time of examination.

Tests of the facial muscles showed a slight but definite and slow response. There was a faint tremor of the tongue, which was protruded a little to the right. The eyesight appeared normal, and both pupils reacted to light. The fundus and media were healthy in both eyes; the eye movements were normal, and there was no nystagmus. There was no wasting. The knee-jerks were brisk; the test for Romberg's sign was negative, and co-ordination of the limbs was unimpaired. The carriage was upright, but the gait was slow, with short, careful steps. There was always some degree of flexion of the knee-joints, and the feet were lifted well clear of the ground. No areas anaesthetic to pin-pricks were discovered. The lungs and heart were normal, and the blood pressure was 128/88, which is customary for a hill Pagan. There was no albumin in the urine, and micturition and defaecation were normal. The temperature on admission was 96.8° F., and the pulse rate 60.

A fresh blood film showed a very slight degree of auto-agglutination of the red blood corpuscles. The serum-formalin reaction was negative after twenty-four hours. The cerebro-spinal fluid was under normal pressure, and an average of three counts with the Fuchs-Rosenthal counting chamber gave three white cells per cubic millimetre. The acetic-anhydride reaction of the cerebro-spinal fluid was negative.

Differential Diagnosis.—The following points are against a diagnosis of trypanosomiasis, which is prevalent in many parts of Nigeria. (1) The patient's home was in country free from the tsetse fly, and he had never travelled out of his district, owing to head-hunting traditions. (2) The absence of palpable cervical and other glands. (3) The length of history, high degree of intelligence, normal white cell count in the cerebro-spinal fluid, and the serum-formalin reaction negative after twenty-four hours, are all unusual in an advanced case of sleeping sickness. (4) In the only three cases of advanced trypanosomiasis in which the acetic-anhydride test was applied by me to the cerebro-spinal fluid the reaction was positive; I have also found that auto-agglutination of the red cells in trypanosomiasis is usually marked. (5) True somnolence has not been observed.

The white count and negative acetic-anhydride reaction in the cerebro-spinal fluid are against cerebral syphilis. In this connexion Melkersson (*Acta Medica Scandinavica*, 1928) found that this reaction gave 100 per cent. positive results in general paralysis of the insane, and the great majority positive in other syphilitic lesions of the central nervous system.

Against paralysis agitans are the age at onset, the absence of pill-rolling movements of the fingers, the upright carriage, and the slow, careful gait.

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CARCINOMA OF THE LARGE INTESTINE IN EARLY LIFE.

CARCINOMA of the large intestine, fairly common between 20 and 30 years of age, not infrequently occurs in much younger patients. Ewing¹ refers to records of cases at 12 years (caecum), 12 years (sigmoid), 11 to 17 years (rectum), and 3 years of age (colon). Phifer (1923) collected twenty-three cases of carcinoma of the sigmoid or rectum in children under 16 years, and Wainwright (1927) seven cases above the sigmoid. In the practice of an individual, however, and even of a hospital, the disease at such an early age is sufficiently rare to be noteworthy.

The case recorded here, that of a girl aged 15 years, was seen on August 25th, 1930, with acute intestinal obstruction, the culmination of a chronic obstruction of about three months' duration, and of unknown origin. Exploration undertaken immediately showed the cause to be a hard, ring-like infiltration of the descending colon. The tumour was not adherent, and there were no signs of secondary deposit. In spite of a caecostomy, the patient died eight days later.

A post-mortem examination was made by Dr. G. D. Dawson, pathologist to the hospital, who reported as follows:

"Below the splenic flexure the canal is much narrowed by a greyish, raised, ulcerated, firm annular growth, gelatinous-looking on section. Microscopically the muscular wall is honey-combed with spaces containing epithelial cells in an advanced state of mucous degeneration. Deeper, in newly formed scar tissue, is a diffuse carcinomatous infiltration."

No evidence of metastasis was found. Apart from the statement that the maternal grandfather died of a cancer of the kidney, there were no points of interest in either the previous medical or the family history.

I have to thank Dr. G. D. Dawson for the pathological details, and the medical superintendent, Dr. J. D'Ewart, for permission to record the case.

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¹Ewing: *Neoplastic Diseases*, third edition, 1928, p. 710.