**Current Practice**

**TODAY'S DRUGS**

*With the help of expert contributors, we print in this section notes on drugs in common use.*

**Venous Leg Ulcers**

Drugs, used locally or internally, play only a secondary part in the treatment of venous leg ulcers. Elimination of the oedema that is always present is of paramount importance. Unless this is done the ulcer will never heal, whatever drugs may be employed. Compression of the oedematous leg is therefore essential if the patient is not put to bed, which is rarely necessary or desirable.

**Compression**

Firm, elastic support is beneficial because it relieves the oedema, assists the pumping and massaging effects of muscular contraction, and compresses dilated veins.

The adhesive elastic bandage is effective because it can be applied by a skilled person, remains in position, gives good support, prevents interference with the healing ulcer, and relies not at all on the intelligence of the patient. Longitudinal strips of the adhesive bandage are applied along each side of the leg from the sole to just below the knee. The strips should cover the ulcer or ulcers. They will prevent the formation of ridges round the leg from the pressure of the edge of the bandage. No other dressing is usually required, unless it be a pad of mace, or foam rubber. The pressure from such a pad seems to stimulate healing, and is especially useful for ulcers in the malleolar hollow.

The bandage should be applied evenly from the base of the toes to just below the knee with no creases or folds. It should be tighter round the foot and ankle than round the calf, the pressure being gradually reduced as one works up the leg. If the skin is irritable an ichthyol paste bandage may be applied under the adhesive bandage, or if the ulcer is infected a bandage impregnated with an oxyquinoline antiseptic (Quinaband) may be used in a similar way. Such a bandage is also useful when the ulceration is associated with exudative infected eczema of the leg. With more chronic, lichenified eczema a bandage impregnated with tar paste is better (Coltapaste). As with the other bandages, it is applied directly to the skin and then covered by the adhesive bandage.

If the ulcerated leg is very oedematous it is best to apply these occlusive bandages early in the morning, after the patient has slept the night in a bed with the foot-end raised. If this is not possible postural drainage should be used. The patient should lie for three-quarters of an hour flat on her back with the lower limbs raised on supports at an angle of 45°. After this the bandages are applied.

The period between bandaging and rebandaging is variable and depends on the degree of initial oedema and the amount of infection in the ulcer. Under the worst conditions rebandaging will be required half to one week later, but when the quantity of discharge becomes reduced, as usually happens within a few weeks, the bandage may be left undisturbed for three or four weeks before replacement.

If the patient is intelligent and can be taught to apply a bandage, and if daily dressing is required on account of gross infection, an elastic webbing bandage provides excellent support. It is preferable that such a bandage stretches only in the longitudinal direction, as “two-way stretch” bandages tend to exert more pressure along their edges than over the central part and cause ridging of the oedematous leg. A bandage which gives almost as much support as the webbing bandage and is more comfortable to wear is the Elastoweb bandage. It is softer and stays in position more readily. Elastic crepe bandages do not usually provide sufficient compression to abolish the oedema of patients with chronic ulceration. Elastic stockings are not usually satisfactory for these patients until the ulcer has firmly healed and the scarred area has become smooth. Whatever the method of compression the patient should be encouraged to walk and when sitting or standing should form the habit of repeatedly contracting and relaxing the calf muscles.

**Local treatment**

In the treatment of leg ulcers attention is all too often concentrated on local applications while the essential consideration, that of eradicating the oedema, is neglected. Local treatment is of importance in a few patients with leg ulcers—namely, those whose ulcers are heavily infected with signs of local inflammation. Many foul ulcers quickly become dry and begin to heal as soon as the oedema has disappeared. The local application should be non-irritant and unlikely to cause allergic sensitization. For this reason sulphonamides, penicillin, streptomycin, chloramphenicol, and nitrofurazone should never be used for this purpose. Neomycin and framycetin sometimes cause sensitization.

For ulcers infected with Gram-negative organisms pads soaked in eusol may be applied. They should be changed every few hours, but this treatment, which is time-consuming, is usually required for only a few days. Polymyxin B in a powder or ointment and gentamicin are also useful for Gram-negative infections, and so is phenoxethanol (Phenoxetol) in a cream or in Lassar's paste (2%). Ulcers heavily infected with Gram-positive organisms may be treated with chlorquinaldol (Steroxin) or a powder containing neomycin, bacitracin, cystine, and glycine (Cicatin), which is easy to apply. Gentian violet, in solution, cream, or paste (1%), is still useful at times, though messy.

The presence of a slough is uncommon with venous ulcers unless an arterial factor is also present. However, if there is a sloughing base fibrinolysin (Elase) or malic acid ester (Aserbine) may be useful, though the latter may cause pain.

The application of a steroid cream, either alone or with an anti-infective agent, is not usually indicated and sometimes causes the ulcer to increase rapidly in size. Occasionally old, chronic, sclerosed ulcers seem to be stimulated by such a preparation. Eczema around an ulcer can usefully be treated with steroid creams.

Whatever local treatment is chosen, non-adherent dressings such as Carbonet (but not paraffin gauze containing balsam of Peru or framycetin tulle which are liable to cause sensitization) are useful and are essential when a powder or paint is applied. Several ointments advertised to the public contain resorcinol, which if used for long periods may cause myxoedema.

In brief: local treatment is often not required; drugs known to cause sensitization should not be applied; and it may be necessary to try a number of preparations before the one that suits a particular patient is found.
Oral therapy

Drugs play only a subsidiary part in the treatment of venous ulcers. If a painful ulcer shows acute inflammatory changes around its margin and if the responsible organism and its sensitivity to antibiotics can be determined the appropriate one may be given for five days. An extension of this period is usually pointless. It is claimed that clindamycin indicated in infections with Gram-positive organisms, gives better tissue penetration than some other antibiotics. If this is so it might be important in regard to the indurated tissue around many venous leg ulcers.

When the affected leg is grossly oedematous diuretic therapy for a few weeks may be helpful, but it is not as important as compressive bandaging. Patients with chronic ulcers, unhealed for years and unresponsive to the usual methods of treatment, may be helped if, in addition to a diuretic, an anabolic steroid is given daily for a month or six weeks. Liver disease is a contraindication to the use of anabolic agents.

Many patients with chronic venous leg ulcers are anaemic and deficient in vitamin C. Attention to these points often stimulates healing. A slight degree of myxoedema may also be present. In such patients the use of thyroxine will greatly help the healing process.

For reasons not understood, cramp in the leg at night is sometimes a troublesome symptom associated with venous leg ulcers. It usually responds to quinine bisulphate 0·6 g. each night for several weeks.

ANY QUESTIONS?

We publish below a selection of questions and answers of general interest.

Oral T.A.B. Vaccine

Q. — Are there any oral T.A.B. vaccines, and are they effective?

A. — Oral typhoid-paratyphoid vaccines (Taboral and Typhoral) made from killed organisms are marketed on the continent of Europe. Cvjetanovic et al. report that laboratory studies on small experimental animals and serological studies in man have indicated that killed oral vaccines stimulate antibody production and may possibly give some protection, but that a field trial and a clinical trial on human volunteers, undertaken in India and the U.S.A. respectively, had cast serious doubts on their efficacy.

Controlled field trials in man are also being made under the auspices of the World Health Organization, and the results, which are to be published shortly, suggest that oral vaccine is not nearly so good as vaccine given parenterally.

REFERENCES
3 Cvjetanovic, B., unpublished data.

Genetics and Patterns of Menstruation

Q. — Is there any evidence to suggest that menstrual problems around adolescence and later in life which seem to be genetically determined, in that daughters sometimes follow a pattern similar to that of their mother, may be inherited through the male, with girls showing similar characteristics to those of a paternal grandmother or of their father’s sisters?

A. — There is no direct evidence on which to base an answer to this question. There is evidence for genetic effects on the age of the menarche in that identical twins have their first periods on average about two months apart, whereas non-identical twins vary on average by about ten months. Mothers and daughters have a correlation coefficient between their ages at the menarche of 0·4, which is a little less than the correlation coefficient between their heights.

It is probable that the age of the menarche and the pattern of the menstrual periods are genetically and environmentally multifactorial, and therefore it would be expected that the paternal genes would have an influence on the menarche and menstruation. Determining the exact contribution of the father’s genes is at present almost impossible, since the menarche is dependent upon the brain, hypothalamus, pituitary gland, ovary, and endometrium as well as normal endocrine function of the thyroid, adrenal glands, and the pancreas.

The age of the menarche is falling by about 4 months in every 10 years and the age of the menopause is rising. The reasons for this are not fully known. The age of the menarche has been correlated to some extent with the season of the year, with the height above sea level at which girls live, with residence in the country or in a city, and with the level of nutrition. Social and psychological factors are recognized as affecting menstrual patterns.

With such a welter of environmental factors genetic factors are easily obscured. Moreover, though a daughter’s history of the menarche and menstrual abnormalities may be reasonably accurate the memory of the mother has to be relied on as the basis of comparison. Anyone who has tried to take a menstrual history will realize how inaccurate even recent memories of menstruation may be. Across the passage of years very little reliance can be placed on the average mother’s testimony, especially if she tends to identify with her daughter.

REFERENCE

Drinking-water and Rheumatism

Q. — Is there any evidence to suggest that hard or soft drinking-water plays any part in the aetiology or aggravation of “rheumatism” or rheumatoid or osteoarthritis?

A. — Though there is very little known about the effects of drinking hard water compared with drinking soft water over a prolonged period, casual observation suggests that the spectrum of rheumatic diseases seen in hard water areas is not very different from that in soft water areas.

A population survey with particular reference to the rheumatic diseases was carried out in Watford (1) where the water is hard and compared with the results of one done in Leigh where the water is soft. Rheumatoid arthritis, assessed clinically, showed no significant difference in prevalence, nor was there any significant difference in x-ray changes. Rheumatoid factor was less frequently increased in Watford. There was no difference in the prevalence of ankylosing spondylitis, gout, osteoarthritis, or disc degeneration, though complaints of “rheumatic pain,” unspecified, seemed to be less common in Watford.

REFERENCES

"Streptomycinease"

Q. — Is any enzyme analogous to penicillinase known in relation to streptomycin?

A. — A "streptomycinease" has been described as being formed by Pseudomonas aeruginosa. This substance was studied by Lightbown, who hoped to find in it a means of inactivating streptomycin in sterilization tests of pharmaceutical preparations. It does in fact neutralize the action of many times its weight of streptomycin on B. subtilis, but almost or entirely fails to prevent action on E. coli, which is evidence enough that its action is not on the antibiotic itself. What it apparently does is to prevent the access of streptomycin to the interior of the bacterial cell. No other such enzyme has been described and presumably none exists.

REFERENCES