

sensitive organisms are the same as those found in a similar larger series in our area three years ago.

The coliforms and *Proteus* spp. isolated from patients with conditions such as bladder dysfunction, obstructive lesions of the urinary tract, or who have been catheterized, are much more frequently resistant. For example, in a genitourinary surgical unit only 12% of the coliforms isolated were sensitive to sulphonamides. We feel that the difference between organisms causing infections of this type (where a large proportion are not *Esch. coli*) and those causing acute infections outside hospital needs emphasizing. The essential points in the technique of testing for sulphonamide sensitivity have been clearly restated by Dr. P. C. C. Brown and his colleagues (19 October, p. 190). Sulphonamide sensitivities cannot be performed satisfactorily unless the medium is free of sulphonamide inhibitors and attention is paid to the size of the inoculum. On these grounds it is difficult to assess the significance of the results obtained by Dr. M. H. Robertson (12 October, p. 121).¹

From our experience of patients seen in north and south Manchester there is no evidence of the development of drug resistance to a degree that should discourage general practitioners in this area from the initial use of sulphonamides for treating acute urinary tract infections.—We are, etc.,

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REFERENCE

- ¹ Robertson, M. H., *Brit. J. clin. Pract.*, 1968, 22, 63.

Deep Vein Thrombosis

SIR,—We would like to make the following comments in reply to the criticisms of Mr. A. Singer (9 November, p. 386) of our recent papers (21 September, p. 717, and 9 December 1967, p. 596).

We do not underestimate the risk of pulmonary embolus, consequently almost all our clinical research has been directed towards preventing second and recurrent emboli.

The paper on streptokinase was a preliminary communication pointing out that it does dissolve fresh thrombus. It does not give our views of its place in the overall treatment of deep vein thrombosis and pulmonary embolism. Indeed, it states "we did not feel justified in using it in those with large iliofemoral thrombi because of the hazard of embolism during treatment."

We believe that phlebography can clearly define the nature and extent of deep vein thrombosis and that subsequent treatment should be based on the phlebogram. Plicating the vena cava is often unnecessary and is as illogical a form of treatment as relying solely on anticoagulants. The results of the approach that we suggested in our preliminary communication (9 December 1967, p. 596) will be published within the next six months, but we can state at this time that they are far superior to any other regimen we have followed, and equal to the 97–98% guarantee that Mr. Singer claims for caval plication.—I am, etc.,

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Through-knee Amputations

SIR,—May I write in strong support of the through-knee amputation in the elderly patient as advocated by Mr. P. F. Early in his recent article (16 November, p. 418). On the vascular surgical service at the Central Middlesex Hospital this has now become the procedure of choice for the severely ischaemic limb in which restoration of arterial flow is not possible.

I should particularly like to emphasize the enormous advantage that this operation has in permitting early rehabilitation in the older age groups. Two factors are responsible for this. First, the patients can be measured for a pylon before amputation is carried out. And, secondly, muscular control and proprioception in the stump are so well retained that patients learn to walk on the pylon very rapidly.

Working in close collaboration with the Limb Fitting Centre at Roehampton, we have now reduced the total inpatient stay after amputation in uncomplicated cases to between 21 and 28 days. Before discharge the patients must be able to walk independently, usually with only one stick, and negotiate stairs without help. The effect of a rapid rehabilitation policy on the morale of both patients and nursing staff has been quite dramatic. To the patient, the knowledge that even before he loses his leg a prosthesis is being made for him on which he is expected to walk is a source of the greatest encouragement. Moreover, the sense of urgency to have the stump ready for the prosthesis greatly assists the work of the physiotherapist in the immediate postoperative period. Such a programme contrasts sharply with the average delay of 12 weeks between amputation and measurement quoted by Mr. Early, even where primary healing had been achieved, and 21 weeks when healing was retarded. Figures of this kind are unfortunately all too common, and there is no doubt that a strong case exists for all amputations to be performed in a limited number of centres, each linked to a limb-fitting centre.

One further point. Although it is true that delayed healing due to necrosis in the anterior flap is a hazard of the through-knee amputation, the incidence of this complication diminishes with experience of the technique. Even when it occurs it is not a contra-indication to the wearing of a prosthesis. The area of skin loss is never on the weight-bearing surface and healing will take place satisfactorily with the pylon in full use. Indeed in several of our cases the rate of healing appears to have been accelerated when walking was encouraged.—I am, etc.,

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JOHN NEWCOMBE.

SIR,—I have read with considerable interest Mr. P. F. Early's excellent article on the results of through-knee amputations (16 November, p. 418). I was disappointed, however, to find no mention of the old-fashioned Stokes–Grritti amputation.

All the amputations I perform are for vascular disease, and where the ischaemia extends only a little above the foot disarticu-

lation of the knee is doubtless the procedure of choice. Where, however, the ischaemia is approaching the knee, the long anterior flap required in this amputation all too often results in failure. In these cases I have for many years been using the Stokes–Grritti amputation even in cases where many surgeons would go above the knee. Healing may sometimes be delayed, but in a condition which is almost certainly bilateral a delay of even three months is, in my opinion, a cheap price to pay for an extra six inches of leg. I sometimes wonder, in fact, whether a little too much emphasis is placed these days on the speed of rehabilitation as against ultimate function.

My results with this amputation have been most gratifying. The two to three in. (5–7.5 cm.) which the Stokes–Grritti allows can make all the difference, and I am assured by the limb fitters that the weight-bearing stump so produced has great advantages over the above-knee stump. May I, therefore, make this plea for the Stokes–Grritti amputation to remain in every surgeon's repertory?—I am, etc.,

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Tuberculin Test in Children with Malnutrition

SIR,—I read with great interest Dr. Anne V. C. Lloyd's observations on the tuberculin test in children with malnutrition (31 August, p. 529). Her results have been very similar to some of ours.¹

About 18% of malnourished children treated at our unit show radiological signs suggestive of pulmonary tuberculosis,² and we also observed a negative tuberculin response in the presence of active lesions. In a preliminary study¹ the intradermal tuberculin testing was performed with one tuberculin unit of purified protein derivative (this being the only standard tuberculin available) and read at 72 hours at the B.C.G. clinic of the school in 12 children (kwashiorkor/marasmus 7 and pre-kwashiorkor 5) and three adults (nutritional oedema) having suggestive radiological signs (tubercle bacilli in sputum or gastric washings could not be found), and in 20 children (kwashiorkor/marasmus 15, pre-kwashiorkor 5) and two adults with normal chest radiographs. Only two (one each of kwashiorkor and pre-kwashiorkor) of the x-ray positive children were tuberculin positive. Negative chest x-ray was associated with negative tuberculin response in all children except one. The adult patients irrespective of their lung signs showed positive reactions. Four radiologically positive children were kept under observation in the hospital for about six weeks. In them, the fever responded to specific treatment, serial chest radiographs showed regression of the lesions, and one of them turned tuberculin-positive. Subsequently we have confirmed these observations in a larger series of cases.

The observations of Dr. Lloyd, like our own, show that false negative tuberculin reactions can occur in kwashiorkor and marasmus. Dr. Lloyd has further shown that the difficulty in diagnosis can be overcome to a considerable extent using stronger doses of tuberculin. However, other aspects of the