Twenty-eight isolates of *Enterobacteriaceae* were obtained from inpatients and outpatients with significant urinary tract infections. The effect of co-trimoxazole or its separate components was then determined upon shake cultures of these organisms in urine obtained from healthy subjects. Co-trimoxazole did not have a significant bactericidal effect upon any of the organisms. Trimethoprim alone had a bactericidal effect upon about one quarter of the organisms. Sulphamethoxazole thus appears to antagonize the bactericidal effect of trimethoprim in urine.

Volunteers were given therapeutic doses of either co-trimoxazole or equivalent amounts of its individual components. Urine from these individuals was found to have a similar effect upon the test organisms as synthetic mixtures of these various antimicrobials in normal urine.

There appears therefore to be a good case for further clinical trials to compare trimethoprim and co-trimoxazole in the treatment of urinary tract infections.

Benign Tumours of the Kidney in Infancy

A. H. CAMERON (*The Children's Hospital, Birmingham*) The salient features of six apparently benign tumours of the kidney are present. All occurred in infancy and were detected by abdominal palpation. All were large and one was initially considered to be an inoperable nephroblastoma. Some were solid and some were cystic. The histological appearances vary. Some have a well differentiated fibromatous pattern and others consist of simple cysts lined by inactive epithelium. More cellular areas are seen and dysplastic features may be encountered. The literature is briefly reviewed with particular reference to the confusing terminology in current use. The relationship of these tumours to renal dysplasia and nephroblastoma is briefly discussed.

References

- Bolande, R. P., Brough, A. J., and Iant, R. J. (1967). Congenital mesoblastic nephroma of infancy. *Pediatrics*, 40, 272.
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The Effect of Vitamin C on the Blood Vessels

CONSTANCE R. SPITTLE (*Pinderfields General Hospital, Wakefield*) Following a chance observation that I could reduce my serum cholesterol with vitamin C, a study was done on other healthy people, and a group

of patients who had had a coronary thrombosis. It was found that while the serum cholesterol of young healthy people went down after vitamin C, in patients with coronary artery disease it tended to rise. This was attributed to mobilization of arterial cholesterol, and previous experimental evidence supported this. Vitamin C acts on the other fat fractions also: the lipoproteins, lipoprotein lipase activity, and the triglycerides. It also provides the ground substance for the arterial walls. Thus, a balance exists between vitamin C and fat. If the balance permanently favours vitamin C, the cholesterol will always be delivered to the liver, the β -lipoproteins will remain low, the lipoprotein lipase activity will be high, so the triglycerides will be low, and the arteries will be well supplied with ground substance, so they will remain clean. If the balance favours the fats, there will be a gradual accumulation of cholesterol in the arteries, the other fat fractions will gradually become abnormal, and the arteries will lose their ground substance, so atherosclerosis will result.

Direct proof of this hypothesis is impossible, but it is possible to show the powerful protective action of vitamin C against thrombosis in the veins. The results of a double-blind study are shown. Clinical deep vein thrombosis has now disappeared from our surgical wards.

Investigation of Cutaneous Inflammatory Response in Polycythaemia Vera

M. L. GHOSH, G. HUDSON, AND E. K. BLACKBURN (*Department of Haematology, University of Sheffield*) Changes in the inflammatory response to a simple skin abrasion, made under aseptic conditions, may be of value in studying haematological disorders such as malignant lymphoma (Ghosh, Hudson, and Blackburn, *Brit. J. Haemat.*, 25, 293, 1973). In the present investigation, patients with established polycythaemia rubra vera, together with control subjects, have been studied by this technique.

The number of cells present in the exudate at 48 hr was a prominent feature in untreated polycythaemia. As compared with the control (10%), there was a significantly higher percentage of granulocytes (23%) and a correspondingly reduced percentage of macrophages. In the peripheral blood of these patients, the total white cell and neutrophil counts were significantly higher than in normal controls. Statistical analysis showed that

there was a relationship between the blood and skin window cell counts in respect of both neutrophils and eosinophils. In polycythaemic patients in remission, the skin window results were generally similar to the controls except in that basophils were increased.

The results provide no evidence of a quantitative defect in the cutaneous inflammatory reaction in polycythaemia vera, but suggest that the mechanisms underlying the basophilia may be worth investigating further.

The Influence of Oral Contraceptives on the Ratio of Factor VIII Activity to Factor VIII Related Protein

PENELOPE STABLEFORTH, MARGARET A. HOWARD, DANIELLE C. MONTGOMERY, MARY REAVLEY, ELAINE WILSON, WENDY L. CHURCHILL, KATHERINE M. DORMANDY, AND R. M. HARDISTY (*Hospital for Sick Children, London, and Royal Free Hospital, London*) Determination of the ratio of factor VIII activity to factor VIII related antigen (factor VIII RA) has proven to be a useful means of detecting carriers of haemophilia A.

Bouma *et al*¹ and Van Royen *et al*² have shown that during the last trimester of pregnancy the ratio of VIII activity to VIII RA is lowered due to an excessive increase in the level of VIII RA.

Oral contraceptives, like pregnancy, cause an increase in VIII activity but as the effect of oral contraceptives on VIII RA levels was not known, the present investigation was initiated between the Hospital for Sick Children and the Royal Free Hospital, London.

Twenty-four normal women taking oral contraceptives, age matched with normal women not taking the 'pill', were bled on three occasions at seven-day intervals.

The PT, PTT, and factor VIII activity were measured on fresh blood, and the VIII RA was measured by the Laurell technique using two different rabbit antibodies.

Early results indicate no appreciable difference between these two groups.

This suggests that, unlike pregnancy, oral contraceptives do not alter the ratio of VIII activity to VIII RA making it possible to diagnose haemophilia carriers taking oral contraceptives.

References

- ¹Bouma B. N., Sixma J. J., Van Mourik, J. A., and Mochtar, I. A. (1973). *Neth. J. Med.*, 16, 54.