before, though such high values are seen in cases of myeloproliferative diseases (Bases, 1962).

The prostate was normal clinically and at post-mortem examination. Another cause of raised serum acid phosphatase is an extremely high level of alkaline phosphatase activity in the serum (Woodard, 1959), some of which persists even at an acid pH. The alkaline phosphatase, however, was never found to be raised in our patient.

There are reports of high levels of serum acid phosphatase in patients with thrombocytopenia due to thrombolysis and of abnormally low levels of serum acid phosphatase in patients with thrombocytopenia due to defective production of platelets (Oski *et al.*, 1963; Cooley and Cohen, 1967). In our patient the high serum acid phosphatase levels were seen when megakaryocytes were absent from the bone marrow and platelets were deficient in the blood. Since high values of serum acid phosphatase were concomitant with the presence of splenomegaly, the enzyme activity may have originated in the spleen (Bases, 1962). On phenylphosphate substrate the acid phosphatase of this organ is strongly inhibited by L-tartrate (Abul-Fadl and King, 1949). Another possible origin of the serum acid phosphatase values during the periods of active leukaemia proliferation in this case is the leukaemic cell itself (Fishman *et al.*, 1968). This possibility is hypothetical, but in view of its interest it should be kept in mind and tested by histochemical methods in the future.

We are indebted to Dr. W. C. Moloney, of the Peter Bent Brigham Hospital, Boston, Mass., for helpful criticism.

J. KLASTERSKY, M.D.
A. COUNE, M.D.
Department of Medecine, Institut Jules Bordet, Université Libre de Bruxelles, Brussels, Belgium.

REFERENCES

Abul-Fadl, M. A. M., and King, E. J. (1949). *Biochemical Journal*, **45**, 51.
Bases, R. (1962). *New England Journal of Medicine*, **266**, 538.
Cooley, M. H., and Cohen, P. (1967). *Archives of Internal Medicine*, **119**, 345.
Fishman, W. H., *et al.* (1968). *Nature*, **219**, 697.
Oski, F. A., Naiman, J. L., and Diamond, L. K. (1963). *New England Journal of Medicine*, **268**, 1423.
Woodard, H. Q. (1959). *American Journal of Medicine*, 27, 902.

Southey's Tubes and Vulval Oedema

British Medical Journal, 1970, **4**, 538

A case is described in which Southey's tubes were used to relieve local vulval oedema in order to achieve vaginal delivery. The patient had had a caesarean section three years previously for the same condition. It is suggested that the use of Southey's tubes be more extensively considered when the rapid relief of oedema is required. Research into the literature has failed to reveal any previous reference to the use of Southey's tubes in vulval oedema of pregnancy.

CASE REPORT

A 17-year-old primigravida in her 37th week was admitted to hospital on 5 May 1967 with pre-eclampsia—B.P. 135/95, ankle oedema+, albuminuria+. Despite conventional treatment, on 22 May her B.P. was still unsettled and she developed some oedema of the vulva. The bed was raised, she was given diuretic therapy, and hydrocortisone was locally applied. The oedema progressed, however, until the labia on each side were about the size of an orange. At no stage was there evidence of vaginal infection. On 2 June the oedema was so gross and painful that neither vaginal examination nor delivery was possible. Caesarean section was therefore performed. By the time of her discharge on 21 June the B.P. was normal and the oedema had subsided.

On 28 March 1970 she was admitted to hospital again in her second pregnancy. By her dates, which were by no means certain, she was one week postmature, though the height of the fundus indicated maturity of about 36 weeks. She had presented once more with pre-eclampsia—B.P. 150/100, trace of albuminuria. At this stage there was no evidence of oedema.

On 30 March she was assessed vaginally for induction. The cervix was "unripe," and as the baby was "small" and she was uncertain of her dates it was decided to leave her for the time being. At this stage it was noticed that she had begun to develop some vulval oedema. Initially she was treated with bed rest and sedation. As there was no response, mild diuretics and local dressings of magnesium sulphate were tried, again to no avail. By 13 April the oedema was comparable to that present in 1967.

At 7 a.m. on 13 April her membranes ruptured spontaneously and she went into labour. Vaginal examination was impossible in view of the oedema. As labour was progressing normally, at 1 p.m. I inserted Southey's tubes into the vulva in the hope of obtaining vaginal delivery. The vulva drained well and at 5.40 p.m. the cervix was fully dilated. She delivered a live female infant vaginally at 6.20 p.m. weighing 7 lb. 6 oz. (3,345 g.) with the aid of a small episiotomy.

Her B.P. and vulval oedema settled well postpartum, and she was discharged with no residual signs or symptoms on 21 April.

COMMENT

The causes of vulval oedema, from a practical point of view, are the same as the causes of bilateral ankle oedema (Jeffcoate, 1962a)—namely, congestive heart failure, renal failure, abdominal tumours, ascites, anaemia, and malnutrition. In the pregnant woman by far the commonest cause is pre-eclampsia, and this may be so gross as to cause ballooning (Jeffcoate, 1962b). In the case described here the oedema was, I believe, due to pre-eclampsia. It is interesting that in her second pregnancy the oedema was totally confined to the vulva.

White and Monks (1933) described the use of Southey's tubes for the relief of scrotal dropsy, but I failed to find reference to their use in the relief of oedema in the female genitalia. Reginald Southey (1877) first described to the Clinical Society of London the use of cannulas inserted into the legs of a patient with chronic nephritis and anasarca for the relief of her oedema. This was in effect a modification of the method of Celsus (1528) described in A.D. 30 for the relief of dropsy by incision of the skin above the ankle. The use of Southey's tubes was limited in the preantibiotic era by the danger of infection but was still quite popular in London, particularly good results being obtained by Sir Thomas Lewis in the 'twenties.

The method of drainage used in the present case was the modification of the Southey tube recommended by McLaren (1943). A series of short-bevel, sterile 18-gauge hypodermic needles were used. Four were inserted into the left side of the vulva and three into the right side. Drainage was effected direct into sterile Gamgee pads, hence the amount of fluid drained was not measured. Antibiotic cover was given with ampicillin. The tubes remained in situ for five and a quarter hours.

In 1950 Fiese and Thayer published a full appraisal of Southey's tubes and the indications for their use. I suggest that Southey's tubes should hold a position of respect in the minds of all obstetricians faced with the problem of gross vulval oedema obstructing labour.

I am grateful to Mr. J. R. Saunders, consultant obstetrician and gynaecologist, for permission to publish this report of a patient under his care.

DAVID J. RAINFORD, M.B., B.S.,
Department of Obstetrics and Gynaecology, Bedford General Hospital.

REFERENCES

Celsus, A. C. (1528). *De Re Medica Libri Octo*, book 3, Chapt. 21. Haganoae, J. Secerium.
Fiese, M. J., and Thayer, J. M. (1950). *Archives of Internal Medicine*, **85**, 132.
Jeffcoate, T. N. A. (1962a). *Principles of Gynaecology*, 2nd edn., p. 417. London, Butterworths.
Jeffcoate, T. N. A. (1962b). *Principles of Gynaecology*, 2nd edn. Fig. 304. London, Butterworths.
McLaren, J. A. (1943). *Canadian Medical Association Journal*, **49**, 209.
Southey, R. (1877). *Transactions of the Clinical Society of London*, **10**, 152.
White, P. D., and Monks, J. P. (1933). *Journal of the American Medical Association*, **101**, 1632.