

intramuscularly. If, however, in a similar situation rupture of the membranes has revealed scanty liquor heavily stained with meconium, it is probably unwise to administer oxytocin. Evidence of disproportion also contraindicates this treatment.

Each case must be judged separately in the knowledge that the potential danger of oxytocin is the induction of uterine contractions so violent as to embarrass an already inefficient placenta and thus cause foetal asphyxia. This risk is slight if the concentration of oxytocin in the solution is small, if the rate of drip is kept slow, and if the effect is continually observed by an expert. Closing the tap of the infusion apparatus results in almost instantaneous cessation of the effect of treatment, because any oxytocin remaining in the blood stream is quickly destroyed. Nevertheless, in a case of postmaturity, the margin of safety is narrow and the obstetrician must himself be prepared to stay with the patient constantly, observing the behaviour of the foetal heart after each contraction, and not delegate this responsibility to someone less experienced.

Operative or Post-operative Thrombosis ?

Q.—(1) *Do venous thrombosis and embolism occur as operative complications of pelvic and abdominal operations (as distinct from post-operative)? A patient who died very shortly after the removal of an ovarian cyst was found at necropsy to have an embolus in the inferior vena cava. (2) Is there any blood investigation which will indicate whether a particular patient is especially liable to venous thrombosis? If so, should such patients receive post-operative prophylactic anticoagulant therapy?*

A.—(1) It is not precisely known at what time the post-operative thrombotic process starts, but most people believe that the whole process is nearly always, if not always, post-operative. Some authorities consider, nevertheless, that the process begins by compression damage to the calf veins as the result of the pressure of the operating table on the calf. The inquirer does not state how soon after removal of the ovarian cyst death occurred, but certainly an embolus can grow very rapidly. There is one case on record of pulmonary embolism occurring during the course of lumbar sympathectomy done for thrombo-angiitis obliterans; in that case there was pre-existent thrombus in the vena cava.

(2) A wide variety of minor changes in the physical properties and the chemical constituents of the blood have been described in cases of post-operative thrombosis, but none of these is sufficiently constant or sufficiently notable to serve as an index of liability to thrombosis. Perhaps the circumstances most likely to raise suspicion of the risk of thrombosis is a history of previous thrombosis—puerperal, post-operative, or spontaneous—and in a patient giving such a history post-operative prophylactic anticoagulant therapy would seem to be logical.

Pseudo-cholinesterase and Transaminase Estimations in Liver Disorders

Q.—*What is the purpose of the estimation of pseudo-cholinesterase and transaminase following a porto-caval anastomosis for cirrhosis of the liver? What are the normal ranges for these tests and the significance of deviations from normal?*

A.—Serum cholinesterase is an enzyme which hydrolyses acetylcholine and many other esters. Because of its non-specificity this enzyme is commonly called serum pseudo-cholinesterase or simply serum esterase. It is a protein manufactured by the liver in parallel with albumin. Normal levels are 0.94 (range 0.58–1.37) units. Low values in cirrhosis represent failure of the liver to manufacture protein and also reflect the nutrition of the patient.¹ Serial determinations are useful in following the progress of a patient with cirrhosis as regards both his liver-cell function and nutrition, although changes in serum albumin levels give equivalent information. Porto-caval anastomosis or any surgical pro-

cedure may temporarily depress liver function in a patient with cirrhosis, and such serial liver function tests are useful in following the course.

Enzymes facilitating the transfer of amino groups from an alpha amino-acid to an alpha keto-acid are called transaminases. Glutamic oxaloacetic transaminase and glutamic pyruvic transaminase are present in high concentration in the liver and increase in the serum when liver cells become necrotic. The normal level for serum glutamic pyruvic acid transaminase is 22.1 (range 5–40) units. The method is of most value in the diagnosis of acute hepatitis in which condition levels rise to 20–500 times normal.² Values in cirrhosis are very variable and the test is not usually used in this condition. It has no particular relation to porto-caval anastomosis.

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- 1 Vorhaus, L. J., and Kark, R. M., *Amer. J. Med.*, 1953, **14**, 707.
- 2 Wróblewski, F., Jervis, G., and La Due, J. S., *Ann. int. Med.*, 1956, **45**, 782.

Aetiology of Kienböck's Disease

Q.—*Is Kienböck's disease of the semilunar bone due to trauma, and can an industrial accident cause it? If not, what is its aetiology?*

A.—Kienböck's disease is not due to an injury, and it cannot be caused by an industrial accident. The condition is due to avascular necrosis of the carpal semilunar bone, and, though the cause of this necrosis is not known, it certainly does not appear to be traumatic in origin. The most popular suggestion so far is that it is due to a congenital abnormality of the anatomy of the proximal bones of the carpus.

NOTES AND COMMENTS

Do Corpses Sink or Float?—Dr. R. EDGLEY (Australian Migration Mission, Vienna) writes: Further to Mr. Ellul's comment ("Notes and Comments," September 28, p. 776) I would like to add that full expiration before diving is the usual method used by New Guinea and North Australian pearl divers. They first hyperventilate to the point of dizziness, then fully expire and dive. During the war in the Pacific many members of my unit including myself practised this and found that we sank "like a stone" immediately to depths of up to 30 ft. (9.2 m.), that the hyperventilation sustained us for well over 90 seconds (the pearl divers can stay down for alarmingly longer periods), and that return to the surface required a most active jump from the bottom and active upward swimming. The only ill effect was of pressure on the ear-drums. Those pearl divers who are caught at the bottom do not rise until the gases of decomposition form some days later.

Correction.—In the list of authors of the original article on "Endocrine Activity in Psychiatric Patients with Menstrual Disorders" (*Journal*, October 12, p. 843), Miss U. Nicholson-Lailey's name was misspelt as U. Nicholson-Bailey.

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