Transfusion in Severe Anaemia

SIR,—The problem of the severely anaemic patient with raised venous pressure and other signs of cardiac failure as discussed in your leading article of 20 March (p. 741) is a difficult one. Chronically anaemic patients who require emergency surgery are in danger of their lives unless one can improve their condition before operation. Recently I adopted a method of exchange transfusion for such a patient.

A lady of 79 with a long history of chronic indigestion but otherwise in good health had been unwell for a week with weakness, shortness of breath, and pallor, and she had noticed black motions. Her admission to hospital was precipitated by a large haematemesis. It was apparent that she had bled from a gastric ulcer that had been demonstrated two years before. Although surgery was indicated, her haemoglobin was 3.6 g./100 ml., her jugular venous pressure was raised 3 in. (7.5 cm.), and she tolerated transfusion very badly—developing pulmonary oedema soon after blood was infused. I therefore decided to do an exchange transfusion. In her right arm she was given 2 litres of whole blood from which serum had been drawn off (packed cells—total volume 1.4 litres) and from her left arm 1,200 ml. of blood was simultaneously withdrawn into three disposable collection infusion sets, being careful to match the rate of infusion with the rate of withdrawal. The blood that was withdrawn was placed in the bags in a centrifuge and spun at 1,200 r.p.m. for 20 minutes and then the serum was drawn off. The remaining packed cells were reinfused (700 ml.). She was also given digoxin and diuretics. In this way, during the space of three hours the patient's haemoglobin was raised to 9.8 g./100 ml. and her general condition greatly improved. Her venous pressure was no longer raised and she was warm and generally fit in spite of a further haematemesis. She underwent a Bilroth I partial gastrectomy for a gastric ulcer into which the left gastric artery was freely bleeding. She made an excellent recovery from the operation, but had a pulmonary embolus on the tenth day.

Serum electrolyte and calcium levels in the patient's blood taken before and after the exchange transfusion showed no significant change, and platelets were plentiful in blood films. There was no increased bleeding from the tissues at operation. A centrifuge suitable for separation of whole blood in the plastic containers is not standard equipment but Dr. K. D. Bagshawe kindly allowed us to use the machine normally used for preparing platelet-rich plasma for the patients in the chorionepithelioma unit.

I feel that this method has a larger potential application. In this case one was faced with a patient whose basic problem was that her circulating blood was so deficient in oxygen-carrying capacity that it would normally have taken many hours to restore this to a safe level with blood-transfusion. By exchange transfusion, using packed cells, a rapid restoration was possible. There may be obstetric problems similar to this.

I am grateful to Professor A. J. H. Rains for permission to describe this case report of a patient under his care.

—I am, etc.,

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P. H. POWLEY.

SIR,—I read with interest your leading article "Transfusion and Severe Anaemia" (20 March, p. 744). I have found giving diuretics, particularly Mersalyl, with the transfusion seems to prevent pulmonary

oedema and signs of cardiac embarrassment. This surely is a better method than the old practice of venesection, as a first resort.—I am, etc.,

Becles, Suffolk.

A. L. WELLS.

Arcus Senilis

SIR,—Dr. B. M. Rifkind (27 March, p. 860) has raised queries regarding the serum-cholesterol levels in post-cardiac-infarction subjects with and without an arcus senilis which we reported (13 February, p. 425). As we pointed out all six subjects with a cholesterol level over 350 mg./100 ml. had an arcus, and in four of these six it was graded as 3 or 4. Apart from this, in no age-decade did the difference between the mean cholesterol levels of the arcus-present and the arcus-absent groups reach the 5% level of significance, but only 20 subjects were in the 40–49 year decade. The patients with a grade 3 or 4 arcus did not have a significantly higher mean cholesterol than those without an arcus in the three age-decades studied, despite the inclusion of those subjects with cholesterol levels greater than 350 mg./100 ml.—We are, etc.,

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The Catarrhal Child

SIR,—Dr. D. H. Garrow's remarks about removal of tonsils and adenoids (20 March, p. 773) make irritating reading to the many E.N.T. surgeons throughout the country struggling hard to reduce over-lengthy waiting-lists.

Differences of opinion between physicians and E.N.T. surgeons on this question probably arise because we see different groups of patients. Most children requiring removal of tonsils and adenoids are referred by their general practitioners direct to an E.N.T. clinic, the operation is performed (usually late rather than early, owing to shortages of beds and time), and, successful results having been obtained, no more is heard about the matter—only the parents, school, general practitioner, and E.N.T. staff being aware of the children's relief at clearer breathing and reduction in school absence from tonsillitis.

Twenty years ago, when I was a resident at Maidstone, a colleague and I took the histories of 100 children whom we put on the waiting-list for removal of tonsils and adenoids. Approximately twelve months later (this being the length of the waiting-list) we took the histories again. In very few had there been any improvement. We then removed the tonsils and adenoids. Twelve months later we took the histories yet again. About 90% reported no more loss of schooling from pyrexial throat infections and about the same number reported clearer nasal breathing. Most cases of recurrent middle-ear infections and "eustachian" deafness were also relieved.

Independently, Macbeth¹ and Hadfield² at Oxford performed a similar investigation with like results.

Upper respiratory infections for the most part seem to be either bacterial, and responding rapidly to penicillin (preferably intra-

muscular), or viral, for which, of course, there is no curative treatment—but the severity of any of these infections is usually reduced if tonsils and adenoids have been removed. As to poliomyelitis and the tonsils, there was a spate of articles in the world's journals about this some years ago and from their authors' conclusions one could select almost any opinion one looked for—except that, admittedly, if a child contracted poliomyelitis shortly after tonsillectomy it was more likely to be the bulbar form, so one does not perform the operation in an area where there is a poliomyelitis epidemic.

In addition to the somewhat heart-breaking task of reducing the cruelly long wait that many of these unfortunate children must endure before their turn arrives, one is constantly meeting adults requiring tonsillectomy in whom all concerned realize that the tonsils should, in fact, have been removed in childhood, when (except in the very apprehensive child) it is usually a less painful and less inconvenient procedure.—I am, etc.,

London S.W.3.

NORMAN A. PUNT.

REFERENCES

- ¹ Macbeth, R. G., *Proc. roy. Soc. Med.*, 1950, **43**, 324.
- ² Hadfield, E. H., *ibid.*, 1950, **43**, 327.

SIR,—It seems a great pity that, after showing considerable and commendable insight about the management of this type of child, Dr. D. H. Garrow (20 March, p. 773) proceeds to show that he is unable to differentiate between this and one with true infection of the tonsils or real enlargement of the adenoids. Though much less common than many parents and doctors contend, the latter type does occur, and these children will suffer if Dr. Garrow's total condemnation of surgery is agreed upon.—I am, etc.,

London W.1.

IAN G. ROBIN.

Treatment of Ear Infections

SIR,—It is regrettable that E.N.T. teaching in Great Britain generally is sadly out of date. Much in your recent unsigned article, "Drugs in the Treatment of Ear Infections" (6 March, p. 637), does little to enlighten the general practitioner, for whom this publication was presumably intended. Two paragraphs cry out for comment.

Firstly, the anonymous author has failed to condemn the use of antibiotics in any form as a treatment in chronic otitis media. This point should have been emphasized chiefly because this practice so often produces a sense of false security in the mind of patient and doctor. If drops or powders can pass upstream against the flow of mucopus in tubotympanic infection, their use can be nothing more than expensive procrastination. The only curative treatment in all forms of chronic otitis media is surgical. Your author has failed to point out that modern techniques of tympanoplasty reliably eliminate infection and restore useful hearing.^{1–3} Early reference to a specialist is preferable to prolonged, useless, and costly treatment with antibiotics.

Secondly, the topical use of antibiotic drops, powders, and ointments in any case of external otitis is to be deplored because the causative organisms, if not already resistant to these substances, frequently rapidly become