

blastopenia without giant erythroblasts in the bone-marrow. (3) The remaining cases were subchronic or chronic erythroblastopenias, mostly found in children with malnutrition.—I am, etc.,

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ganglion-blocking agents, epitomized in masterly fashion by Professor J. H. Burn (June 10, p. 1623), then the poetic aphorism quoted above can be re-read as a medical anachronism.—I am, etc.,

Grimsby, Lincs.

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REFERENCES

- ¹ Kho, L. K., and Poey, S. H., *Docum. Med. geogr. trop. (Amst.)*, 1956, **8**, 357.
- ² — Poespongoro, S. D., and Poey, S. H., *ibid.*, 1957, **9**, 69.
- ³ — *Blood*, 1957, **12**, 171.
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- ⁵ — and Tumelaka, W. A. F. J., *Ann. paediat. (Basel)*, 1960, **194**, 257.
- ⁶ — Thajeb, S., and Markum, A. H., *Blood* (in press), 1956.
- ⁷ VIIIth International Congress of Paediatrics, Copenhagen, 1956.
- ⁸ IXth International Congress of Paediatrics, Montreal, 1959.
- ⁹ VIIth European Congress of Haematology, London, 1959.
- ¹⁰ VIIIth Congress of the International Society of Haematology, Tokyo, 1960.

Electronic Recording Systems

SIR,—

"We live in deeds, not years; in thoughts, not breaths;
"In feelings, not in figures on a dial."

The evocative article by Dr. G. E. Godber, Chief Medical Officer, Ministry of Health (September 30, p. 843), on trends in specialization prompts me to write, in strong support, this plea for the more extended use in British hospitals of the new electronic devices which are now available, and in particular my advocacy is for the recording of observations by this means on the surgical-shock patient of near-irreversible severity.

Temperature, pulse, and respiration rates can be, with this method, readily visualized by the attendant, without dissipation of nurse-hours and with no disturbance of the sick subject. In effect this would largely overcome the disadvantages of the difficult supervision by the night nurse, from a centralized station, in the increasingly popular design of sectionalized wards. Advanced here, moreover, is the use of the electronic technique of recording continuous blood-pressure readings. Every traumatic surgeon of experience is familiar with, and indeed is disquieted by, the picture of the white-faced victim of injury, wincing with the pain and disturbance of the repeated bellows-pumping attendant on the employment of the standard apparatus; such intermittent resistances to cardiac output are inevitably harmful to the near-irreversible case.

If there be employed the intra-aortic method of plasma infusion, in which is used the specially "stepped" needle, designed by M. B. Conlon, inserted in the left lumbar region, as a prelude to pressurized administration, then the *vis a tergo* effect on the coronary arteries, thus perfused, restores the fluttering action of cardiac output: in addition, the increase of kidney tension, promoted through the renal arteries, obviates the risk of tubular suppression of urine. The manœuvre can be readily effected, with no postural disturbance, if the patient be semi-prone on the type of combined casualty trolley and table, with lateral support, designed by Mr. A. M. Murray. At the termination of this immediate plasma infusion by minimal force the connexions can be changed and the blood-pressure curves thus recorded through the medium of the Cardirex machine, as supplied by Siemens, in synchronization with the E.C.G.

If the use of morphine be entirely avoided, but these methods be combined with the selective employment of drugs affecting the adrenergic nerve fibres and other

Post-operative Urinary-tract Infection

SIR,—Dr. L. Iffy (September 23, p. 829) thinks that the belief of most British surgeons about the superiority of the indwelling catheter over repeated post-operative catheterization is a grave mistake. It would seem that Dr. Iffy is even more mistaken in blaming infection on the indwelling catheter without giving any consideration to the type of catheter or the method of drainage—matters which were very well summarized in your excellent leading article of August 26 (p. 571).

A large-bore rubber catheter draining into an open bottle will almost inevitably give rise to infection, but with closed drainage through a fine Gibbon catheter attached to a sterile receptacle urine may remain sterile for periods of up to six weeks. Such drainage is greatly to be preferred to the serious hazards and discomforts of intermittent catheterization, however carefully done.—I am, etc.,

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Apnoea, Hypertension, and Conjunctival Oedema

SIR,—Once again—as in the recent exchange of views on vulval states—your correspondence columns have proved invaluable for discussing the case for which Mr. E. C. Wood and Dr. T. A. Boliston (July 22, p. 217) have sought an explanation. Their patient, who to all intents and purposes was an overweight primipara, had by the 35th week gained 34 lb. (15.4 kg.), a very large amount for that period, and also showed other signs of toxæmia in the slight oedema of her ankles and her blood-pressure of 140/85.

Some further factors need to be taken into account: her section and, accompanying it, the apnoea, and a blood loss severe enough to increase her pulse rate to 140. Additionally ergometrine was injected intravenously, with its oxytocic effect in enhancing the utero-renal reflex, evidence of which had already appeared in her slight pre-eclampsia. As a result of all these stimuli, which will be shown to provoke renal ischaemia, the patient dramatically increased her blood-pressure to 210/130, showed protein and casts, with R.B.C., in her urine, and extension of oedema to the conjunctivae, and was flushed, signs all explicable by the renal ischaemic change now further augmented.

Subsequent contributors (August 12, p. 455, and August 19, p. 522) have noted that carbon-dioxide retention has provoked severe hypertension, and in one case muscular twitchings such as precede convulsions and a reduction of these signs by the use of "apresoline" (hydrallazine), a therapeutic agent shown by Gaunt and Renzi¹ to overcome renal ischaemia and to relieve eclampsia produced experimentally thereby.

The *dramatic elevation* of B.P. and the twitchings may be explained on the basis of Byrom's² researches. He has shown that these sudden changes in B.P., followed by convulsions, occur in the rat made hypertensive by the Goldblatt clamp on the kidney—signs that equally dramatically abate on removing the clamp and which are simultaneously correlated to the spasm in the cerebral vessels observed through "perspex"-covered trephine openings. Franklin *et al.*³ have