tered by artificially ventilating the patient on this circuit. For this reason I chose for my example the much more widely used situation in which the vaporizer is outside the circuit. A fresh gas flow rate of 2 l/min. was selected for comparison with higher flows, as this is the lowest flow which can be used without having to make a large adjustment with the halothane vaporizer. The importance of dilution for dilution by gases already in the circuit. In addition, the commonly used Fluotec Mark 2 becomes inaccurate below flows of 2 l/min., but this particular problem has now been overcome by the development of the Fluotec Mark 3 which is stated to be accurate down to flows of 250 ml/min.

Leak-proof apparatus is important for all anaesthetics, but this importance increases as the fresh gas flow entering the circuit decreases. I therefore am quite unrepentant in asking for leak-proof circuits.

One point in Dr. J. R. J. Beddard’s letter (18 April, p. 176) needs correcting. It has been shown that 5–6 (not 10–15) l per minute is adequate to eliminate carbon dioxide from the alveoli on the Magill circuit in both the spontaneously breathing and the ventilated patient.2

Finally, I hope that this article has done something to encourage the more economic practice of anaesthesia, but fear that too much apathy exists in the profession for there to be any great impact.—I am, etc.,

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REFERENCES

Fibrinolysis and Menstrual Bleeding

SIR,—Miss Nafisa Horrobin’s (18 April, p. 177) simple theory that menstrual blood loss may be the reason for the low rate of coronary thrombosis in premenopausal women would not appear to be correct. It is, I believe, a well-documented fact that there is a dramatic statistical increase in the rate of coronary thrombosis in women whose ovaries are removed surgically before their menopause as opposed to those whose ovaries are conserved at hysterectomy.1

Since both groups of women no longer menstruate, if the theory were valid there would be a similar increase of coronary thrombosis in both groups.—I am, etc.,

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REFERENCES
1 British Medical Journal, 1966, 1, 783.

Group A Streptococci Resistant to Clindamycin

SIR,—The paper of Dr. J. Phillips and his colleagues (11 April, p. 89) prompts us to describe our recent experience with clindamycin (Dalacin C), and to report the appearance of group A streptococci resistant to this antibiotic soon after we began to use it.

In January this year we treated some patients in our burns unit with clindamycin in an attempt to eradicate group A streptococci from the burnt surfaces. Penicillin is still the most effective antibiotic for the purpose, but unfortunately it is easily inactivated by the penicillinase-producing staphylococci that frequently colonize the burns. There was no evidence of clinical sepsis due to the streptococci, and our object was to minimize the risk of cross-infection, so we decided after consultation with the manufacturers to use the standard dose of clindamycin recommended for moderate infections—for example, 150 mg. 4 times a day for 5 days.

Macrolides and lincomycin had not been used in the unit for some time, and the disk sensitivity tests showed that the group A streptococci isolated from recent cases were fully sensitive to clindamycin. The first case treated responded well and the streptococci appeared to have been eliminated. The second case, in which the streptococcus first isolated was also fully sensitive to erythromycin, lincomycin, and clindamycin, yielded after treatment a group A streptococcus resistant to all three antibiotics. The streptococcus isolated from the fifth case had the same resistance as in the first, and again the treatment was ineffective. In each case the presence of resistance was confirmed in tube-dilution tests. The use of clindamycin was discontinued after five cases had been treated.

A similar situation1 had arisen two years ago in this unit, when resistance to lincomycin and erythromycin appeared in group A streptococci soon after the treatment of burned patients with lincomycin was begun. On both occasions the streptococci belonged to type 4. The resistant culture isolated in the earlier outbreak was not available for retesting, but we obtained three other cultures of lincomycin-resistant group A streptococci from the Streptococcus Reference Laboratory at Colindale and found that they also showed cross-resistance to erythromycin, lincomycin, and clindamycin. This result was not unexpected in view of the close chemical relationship between lincomycin and clindamycin.

We wish to thank Dr. M. T. Parker, Cross Infection Laboratory, for his most helpful advice and cooperation.

—We are, etc.,

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REFERENCES

Children in Adult Intensive Therapy Units

SIR,—The only benefit which the children reported by Dr. J. R. Harper and G. Varakis (28 March, p. 810) derived from being nursed in an adult intensive therapy unit was the presence of more staff. These children, we submit, could have been better nursed in an intensive care area within a children’s ward. It is because the children’s wards are under-staffed that consideration has to be given to the critically ill child to be nursed elsewhere. Surely the emphasis should be on having adequate trained staff in the children’s ward. Intensive therapy units tend to draw off trained staff from the general wards and to incorporate within a children’s ward the nurses undertaking intensive care which would still be available to work in the main ward during non-peak periods. Any enjoyment or novelty value that these children might bring to the nursing staff untrained in paediatrics must surely be outweighed by the view of 19 out of 30 of the Northampton General Hospital children’s nurses who thought that the environment of an adult unit was basically unsuitable for children, and also by the detrimental effect on the training of junior nurses in the management of the critically ill child if these children are taken away from the children’s ward.

It has become established that the care of children in hospital requires the concentration of medical and nursing specialists, equipment, and ancillary staff in one ward architecturally designed for infants, children, and their mothers. With a critically ill child these factors increase in importance. It would be quite unwise to deny very sick children optimal comprehensive paediatric care. Moreover, Drs. Harper and Varakis accept that newborn babies with respiratory disease require the basic nursing expertise of a three-bedded children’s ward, but that there is no place for a unit requiring intensive therapy were under 2 years old. We maintain that these infants and younger children also primarily require basic paediatric specialist skills. We are, therefore, piling an intensive care area within the paediatric wards of Guy’s. It consists of two large cubicles with facilities for the care of up to four children adjacent to the three-bedded children’s ward. In the first four months 22 children, excluding burn cases, were admitted out of a total of 275 admissions to the main wards. Patients requiring intensive care included postoperative cases (including burns), children with acute respiratory disorders, 3; severe heart failure, 5; neurological disorders (including a child with peripheral neuritis on a ventilator), 2; renal failure (requiring peritoneal and/or haemodialysis), 4; and one other.

The main advantages of the unit attached to a paediatric ward are that comprehensive paediatric facilities are available; that mothers can live in; that there is constant children’s trained nursing staff; intensive care facilities are immediately available if a child deteriorates while in the main ward; progressive patient care is more easily carried out within this limited floor and continuity of care of the child is better.

A trend towards management of children in adult intensive care units run by nurses who have not had postgraduate training, and in paediatric nursing is retrogressive. Paediatric skills and expertise, both nursing and medical, are already available in the children’s wards, part of which can easily be seen without the critically ill infant or child.—We are, etc.

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