abdominal wounds dehiscence, should have previously had a caesarean section. May I endorse the author's views on the strength of the transverse incision (Pfannensteil incision), and depart from tradition by suggesting that this incision be employed particularly in instances where there has been a previous vertical scar. Although this has the demerits of an occasional difficult dissection in freeing the rectus sheath from the underlying muscles and in separating any adhesions between bowel or omentum and the anterior abdominal wall, it will heal far better and the resultant scar (in the form of an inverted T), should have a barely visible transverse element.

It would be very interesting to survey the patients in this series five years after their sections. I feel sure there would also be a significant number of ventral hernias in association with the vertical incision, while the Pfannensteil incision would remain intact.—I am, etc.,

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Acid-base Balance and Bleeding

SIR.—Dr. T. C. Northfield and his colleagues (1 May, p. 242) have again demonstrated the recognized fact that haemorrhage is accompanied by the development of a metabolic acidosis, the degree of which roughly correlates with the severity of the blood loss. They report the finding, an unspecified time after the cessation of blood transfusion in patients who were not clinically shocked, of raised lactic acid and lowered plasma bicarbonate levels. They attribute this state to the quantity of lactic acid that has been infused with the blood.

This explanation does not accord with previous studies. Schweizer and Howland¹ demonstrated in man that metabolic acidosis failed to develop with rapid massive blood transfusion unless shock was a complicating factor, and observed that where metabolic acidosis did exist in shocked patients it responded promptly to the treatment of the hypovolaemia with additional quantities of acid bank blood. Indeed, four to six hours after administration of bank blood conversion of citrate to bicarbonate occurs, the buffering effect of which may be so effective as to give a normal plasma bicarbonate level in patients who are still shocked.¹

In the absence of shock lactic acid is rapidly cleared from the blood. It is thus likely that if the patients described by Dr. Northfield had a persistently raised lactate several hours after transfusion it was because they were in state of compensated shock. The presence of a normal arterial blood pressure is no guarantee that hypovolaemia has been corrected.

My main criticism of the paper, however, is the suggestion that a persistent metabolic acidosis in shocked patients should be treated by the infusion of sodium bicarbonate. In support of their argument the authors quote the high incidence of cardiac arrest that accompanies massive transfusion of acid bank blood. The workers they quote are, however, concerned with cardiac arrest that occurs during or immediately after massive blood transfusion, and which is as much the result of hypothermia and hyperkalaemia as acidosis.^{2,3}

Dr. Northfield and his colleagues do not

make it clear at what point they believe post-transfusion metabolic acidosis should be corrected. The implication, however, from the interval between their pre- and post-transfusion acid/base measurements is that it may be several hours after the cessation of blood transfusion.

The presence of a metabolic acidosis several hours after the cessation of blood transfusion is an entirely different matter from that occurring during or immediately after blood transfusion. In the case the authors quote, only two units of blood were administered relatively slowly to a patient who was hypotensive after a gastrointestinal haemorrhage. Although a normal arterial blood pressure was restored no other relevant details are provided—for example, right atrial pressure, state of peripheral venous filling, and urine output, to help us assess whether hypovolaemia had in fact been corrected. Persistence of the metabolic acidosis in this patient was almost certainly an indication of uncorrected hypovolaemia in one who by sympathoadrenal compensation had regained a normal arterial blood pressure. The actual volume of the 200 ml of sodium bicarbonate solution was possibly as significant in correcting the acidosis as the buffer itself.

Past work has shown that the use of sodium bicarbonate to correct the metabolic acidosis of hypovolaemic shock is not only ineffective in treating the shock state, but may increase the mortality.⁴ The principal danger, however, in chemically titrating a low blood pH back to normal levels with sodium bicarbonate is that diverts attention from the need to find and correct the cause of the metabolic acidosis, usually an unrecognized hypovolaemia.

The metabolic acidosis of hypovolaemic shock is self correcting if adequate volume replacement is provided. The volume needed to achieve this may be far greater than clinically judged at the initial assessment.—I am, etc.,

M. H. IRVING

St. Bartholomew's Hospital,
London E.C.1

- 1 Schweizer, O., and Howland, W. S., *Surgery, Gynecology and Obstetrics*, 1962, 114, 90.
- 2 LeVeen, H. H., et al., *Journal of the American Medical Association*, 1960, 173, 770.
- 3 Boyan, C. P., and Howland, W. S., *Journal of the American Medical Association*, 1963, 183, 58.
- 4 Weil, M. H., and Shubin, S. H., *The Diagnosis and Treatment of Shock*. Baltimore, Williams and Wilkins, 1967.

B.M.A. Policy in Relation to Smoking

SIR.—The Council of the Association is greatly to be congratulated on the Memorandum on Association Policy in Relation to Smoking, as set out in Appendix VII of its Annual Report (*Supplement*, 8 May, p. 91). The National Society of Non-Smokers and its daughter organization, The British Anti-Smoking Education Society, have for many years advocated the advice embodied in the Association's admirable and statesmanlike Memorandum.

I should be greatly indebted if you would allow me to comment on two items in the Memorandum which I believe may be of interest to Council and members of the Association as a whole.

Paragraph (11). A very retrograde and reprehensible step was taken under Section 7 of the Finance Act on 3 April 1963 by the

abolition of tobacco retail licences. As a direct result there has been a rash of sweet-stuff shops, newspaper shops, supermarkets, etc. all encouraging customers, including the under-sixteens, illegally to purchase cigarettes. Before effect could be given to the Council's suggestion, the misguided action in the 1963 Finance Act would have to be remedied.

Paragraph (32) contains a most helpful suggestion. I suggest, however, that it would be only fair to point out that Non-Smokers Insurance Brokers (of 3 West Terrace, Folkestone, Kent) already arrange life assurance for non-smokers at low rates plus a special "no cigarettes bonus".—I am, etc.,

SELWYN SELWYN-CLARKE

London N.W.6

Sucking, Smoking, and Freud?

SIR.—May I suggest that in discussing cigarette dependence in the adult some inquiry should be made as to the possible origin of the "crave" in the habit of dummy sucking in infancy. Its continuance for months and often years must leave reflexes which can be reproduced in the adult, particularly the immature type seeking comfort and relief from the boredom so prevalent among the youth of today.

To seek first causes is the best guide to prevention.—I am, etc.,

J. MALLOCH

Havant,
Hants

"Cowardice About Smoking"

SIR.—Can you not refrain from lowering our principles to the level of a common politician (27 March, p. 683)? Doctors have two functions—to advise people regarding their health and to ensure that the conditions under which advice and treatment is given are the best possible for the patients.

Stop preaching to the world at large. All who wish to know of the evils of smoking can readily find them out; if they further wish to avoid these evils they can inquire if they don't already know how. Should they neither wish to know facts nor follow advice, it is no concern of me or any other individual, let alone the B.M.A. My opinions on the evils of smoking are dispensed only on request; so should yours be in a leading article.

Surrounded by gross overgovernment welfare, town planning, taxation, and control of, or big brother supervision over every move and saying, can the doctors at least not follow their true function in medicine and quit acting like big brother, too?—I am, etc.,

JOHN A. G. HOLT

Institute of Radiotherapy,
Western Australia

Fibrin Degradation Products in Pre-eclamptic Toxaemia

SIR.—We were particularly interested in the report of Dr. John Bonnar and others (3 April, p. 12) on the changes in the coagulation system in patients with pre-eclamptic toxaemia and eclampsia, as we have also observed similar changes in patients with these conditions.

We studied mainly the fibrin degradation products (F.D.P.) and have examined 65 patients with pre-eclamptic toxæmia of various grades of severity and 2 patients with eclampsia. These patients have been divided into two groups: group 1 hypertension with oedema and Group 2 hypertension with albuminuria, with or without oedema. The 115 tests on the 65 patients with P.E.T. are shown in Table I and compared with the results at the end of normal pregnancy in 100 women. Our mean level at the end of normal pregnancy is 9.46 $\mu\text{g/ml}$, which is higher than Dr. Bonnar gives, but we have used a different method for estimating F.D.P. The difference between these groups is statistically significant. (P, 0.001).

TABLE I

	No.	F.D.P. $\mu\text{g/ml}$		
		Range	Mean	S.D.
Normal pregnancy at term	100	2.5-20	9.46	± 4.24
P.E.T. all patients	65	5-160	31.04	± 27.15
P.E.T. Group 1	32	5-40	16.45	± 8.71
P.E.T. Group 2	33	10-160	41.49	± 27.15

We have also studied two patients with eclampsia and the serial observations on these two patients are shown in Table II. It will be seen that the level of F.D.P. had not returned to normal at 36 hours whereas the slightly raised F.D.P. levels that occur during normal labour quickly returns to normal levels.

TABLE II

Time after convulsions (hours)	F.D.P. $\mu\text{g/levels}$			
	1	12	24	36
Patient A	320	320	160	40
Patient B	320	160	—	80

One of the sites of origin of F.D.P. is almost certainly placental damage as suggested by Dr. P. M. Jones (24 April, p. 222). Not only are infarcts more common in eclampsia but the number of infarcts appears to be related to the severity of the toxæmia.¹ Intervillous thrombi also occur, which will be another site of fibrin deposition.

The relationship between toxæmia and transplacental haemorrhage has been demonstrated by a number of investigators and appears to be correlated with the severity of the toxæmia. Pilkington² detected transplacental haemorrhage in 33 of 34 patients with severe toxæmia but Devi *et al.*³ detected only 40% in a group consisting mainly of mild toxæmia patients. Although to our knowledge no direct correlation of placental infarcts with F.D.P. has been demonstrated as yet, the indirect evidence appears to be good.

We would agree that evidence is mounting that therapy aimed at preventing or reducing the effects of intravascular coagulation should be given an adequate trial in these conditions.—We are, etc.,

J. D. WRIGHT
R. F. JENNISON

Departments of Obstetrics and Pathology,
St. Mary's Hospital,
Manchester 13

- 1 Fox, H., *Biologia Neonatorum*, 1967, 11, 87.
- 2 Pilkington, R., Knox, E. G., Russell, J. K., and Walker, W., *Journal of Obstetrics and Gynaecology of the British Commonwealth*, 1966, 73, 909.
- 3 Devi, B., Jennison, R. F., and Lanley, F. A., *Journal of Obstetrics and Gynaecology of the British Commonwealth*, 1968, 75, 659.

False Economy

SIR,—I am horrified to see that the Department of Health is sending out a circular (ECL 106/69 Serial No. 4/71) comparing the costs of the hypnotic drugs. It is becoming obvious that barbiturates are dangerous drugs which are rarely indicated for casual use. However, on the very dubious grounds of economy, the Department are producing a document which encourages the use of these drugs in preference to safer alternatives.

This really is bureaucracy gone mad, and I hope that some of the civil servants from the Elephant will come and help wash out the self-poisonings.—I am, etc.,

A. K. CLARKE

London E.1

Unnecessary X-rays

SIR,—In the correspondence following Mr. D. F. Thomas's letter (10 April, p. 105), Mr. J. Charnley (1 May, p. 279) has indicated a very desirable approach to the clinical care of minor injuries. Such a thoughtful approach can be more broadly applied in the selection of patients for x-ray investigation.

In 1969 the International Commission on Radiological Protection adopted a report¹ of a task group on protection of the patient in x-ray diagnosis. This report advocates, among other measures in the interests of patients, the general exercise of clinical judgement on similar lines.

The use of clinical judgement in the particular manner Mr. Charnley cites is a clear instance of means of avoiding with comparative ease the irradiation of a large number of patients, without loss of benefit to them.—I am, etc.,

K. A. ROWLEY

Department of Radiology,
Victoria Hospital,
Blackpool, Lancs

- 1 International Commission on Radiological Protection: *Protection of the Patient in X-ray Diagnosis, a report prepared for I.C.R.P. Committee 3*. Oxford, Pergamon Press, 1970.

Outings for Mentally Handicapped Children

SIR,—We should like to give our experience, in the light of paragraph 2, Annex to H.M. (71) 22 "Hospital Facilities for Children",¹ which deals with maintaining contact between children, parents, and home.

It has been appreciated for a long time that contact between child and family is very important, but St. Lawrence's Hospital, like many other psychiatric hospitals, is 20 miles (32 km) or more from a large part of the population which it serves. This means that regular visiting and taking children home proves difficult and costly for some parents who would otherwise have their child home. Over the past six months mentally handicapped children in St. Lawrence's Hospital have had the opportunity of going home each week-end in transport supplied by the hospital management committee. The child population (between 5 and 16 years) is 115.

Frequent visits are made by parents, relatives and adoptive aunts to 29 children, thus 86 receive either few or no visits at

all during the year. The parents of these children were asked if they would have their child home from Friday to Sunday evening each week-end, if transport was provided; 33 were willing to do this, involving 28 boys and 5 girls. Correspondingly, the hospital management committee agreed to hire a coach, and London Transport and the Southern Region railways kindly provided stopping-point facilities in Croydon and at London Bridge Station. Various sundries are provided, for instance, draw-sheets, rubber sheets, and changes of underwear. Drugs are prescribed, as necessary. Nursing staff have charge of the children on both journeys.

The service has proved popular with nurses as well as parents. Many parents have expressed their pleasure to the staff on the coach at having their child home. Likewise, some children have shown obvious delight at the prospect of going home. The project "normalizes" life for them, since they spend their week in the hospital school and week-ends at home. Nursing staff, too, have benefited, since the number of children in hospital for long-term care is reduced. The cost of the project has so far been £1.40 per child for 2 days, but as more children take part this figure will be reduced.

The service goes on and is gaining momentum. It can be earnestly recommended as being extremely useful. Further help is being sought from local authorities in the matter of extending transport facilities, helping to find adoptive aunts, and supervising week-end care in some instances.—We are, etc.,

P. E. SYLVESTER
MAUREEN SEARS

St. Lawrence's Hospital,
Caterham, Surrey

- 1 Department of Health and Social Security, *Hospital Facilities for Children*, (H.M. (71) 22). London, Department of Health and Social Security, 1971.

Handicapped Children

SIR,—Your leading article on the assessment of multiple handicapped children (24 April, p. 186) highlights one of the most important problems in medical practice and the Health Service. I have been and am vitally concerned on three accounts.

My daughter, who is now a grown up woman and does not mind my writing this letter, was born profoundly deaf in the late 1940s. The first diagnosis at a teaching hospital was one of mental deficiency. The second diagnosis was the correct one, but it was only seven years later that we found out that her sight was poor and that she just escaped from being a deaf-blind child.

The diagnosis of individual disabilities is still very specialized and the danger exists of it becoming even more specialized and sophisticated. Prognosis depends on diagnosis and subsequent therapy as always. If I may paraphrase part of your article, deafness alone or deafness in combination with one or all the associated disabilities of blindness, brain damage, and emotional disturbance will need varying forms of education and care.

There is a crying need for comprehensive assessment units but the greatest care must be taken that the specialized knowledge available should be in depth, and that even before the inception of these units there be real communication between the highly