Correspondence

Letters to the Editor should not exceed 500 words.

Ruptured Uterus after Buccal Oxytocin

SIR,—We have just had an opportunity of studying your issues containing records of rupture of the uterus following buccal oxytocin (12 September, p. 689, and 3 October, p. 876) and your leading article (19 September, p. 705).

Since we began our study of this method we have induced 206 cases with what Mr. H. O. Nicholson (3 October, p. 876) describes as the "Worcester course." During this time we have had four cases only of hypertonicity of the uterus, and in all of these relaxation followed rapidly after removal of the tablets from the mouth and washing out with cold water. In none of these was the foetal heart disturbed, and in 17 cases which had shown some disturbance of the foetal heart primary abnormalities of the placenta such as infarction, calcification, etc., were observed, as reported in a paper read last week to the Fourth World Congress of Obstetrics and Gynaecology at Mar del Plata, Argentina.

We have felt, however, that the dosage was unnecessarily large, and therefore for the last 12 months we have been experimenting with lower dosages. Starting with a dose of 50 mg. instead of 100 mg., and a build-up leading to half the original total, we have treated 100 cases with 79% success, and no instance of hypertonicity. In an attempt to reduce the dosage still further, the most recent series, now amounting to 17 cases with 100% success, has used an initial dosage of 25 units. In this most recent series the total dosage required for each induction has averaged 837 units. It may be that we shall be able to reduce the dosage still further, but our study continues and we hope to publish our results in the course of the next few months. In 323 cases, therefore, we have had only four instances of uterine hypertonicity, which were easily controlled by removing the tablets and washing out the mouth. There has been no rupture of the uterus and no case in which we were unduly anxious about the foetal heart. In your leading article you stress the necessity of careful selection of cases and of close and continuous observation in a fully equipped hospital maternity unit. We are, of course, entirely in agreement with this, and indeed pointed it out in our recent paper.¹

In Mr. P. M. Leney's case (12 September, p. 689) it seems probable that the rupture of the uterus occurred not less than two hours after the completion of her course of buccal oxytocin, and this therefore may have been spontaneous rather than due to the therapy. In the case reported by Mr. Nicholson, however, the rupture of the uterus seems to have followed more closely on the completion of the course of treatment, and one cannot so clearly exculpate the drug in this instance.

While we would not wish to minimize the seriousness of even a small number of cases of uterine rupture, we would point out that spontaneous rupture of the uterus does occur

without medication. We feel that it would be a pity if a valuable method were to be abandoned, and we believe that buccal oxytocin offers a method of induction which has many advantages over the intravenous drip, and—particularly in the reduced dosage which we are now using—appears to be safe provided the same careful supervision required for any oxytocin induction is employed in this field also.—We are, etc.,

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REFERENCE

- ¹ Spence, D. N., and Chalmers, J. A., *Lancet*, 1964, 1, 633.

Surgery for Peptic Ulcer

SIR,—I would like to comment on Mr. H. W. Burge's criticism (12 September, p. 687) of the paper in which I compared the results of the insulin and electrical stimulation tests for completeness of vagotomy.¹

(1) Mr. Burge refers to my failure in three cases to obtain any pressure response to electrical stimulation before vagotomy, and he mentions various factors which may adversely affect the response to stimulation. Anticholinergic drugs were not given as premedication to any of the patients in my series, and halothane was not employed. It is true that D-tubocurarine was used as relaxant instead of gallamine triethiodide, although this did not prevent a satisfactory response to stimulation in 22 of my 25 cases. The electrode which I used was the one manufactured to Mr. Burge's specification in 1959. I note that he now uses an electrode of rhodium-plated silver, and possibly this new electrode would have given a response in every patient.

(2) He states that no trunk can remain outside the ring electrode if the coeliac division of the posterior nerve is felt. This is not supported by the recent anatomical study of Ruckley,² who found one case with two coeliac divisions, one of which descended on the right crus of the diaphragm, and another case with a high bifurcation of the posterior vagus.

(3) Mr. Burge says that by the use of his test 30% of patients will have nerve trunks divided which would otherwise be left intact. This was not our experience, because in no case did we obtain a response to stimulation after severing all strands of nerve which could be located at the initial careful search. Even when the test is used, it is still necessary to see or feel the nerves in order to divide them. If every visible or palpable strand is divided, what more can be done?

(4) Even the most experienced vagotomists report around 10% of patients with incomplete nerve section as judged by the insulin

test. As I have previously suggested³ this hard core of "incomplete vagotomies" may have parasympathetic secretomotor fibres reaching the stomach by extra-vagal pathways. Mr. Burge has yet to tell us what proportion of his cases have a positive response to the insulin test. Until he does so his claims for the electrical stimulation test remain unsubstantiated.—I am, etc.,

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J. P. LYTGOE.

REFERENCES

- ¹ Lythgoe, J. P., *Brit. med. J.*, 1961, 1, 1196.
- ² Ruckley, C. V., *Brit. J. Surg.*, 1964, 51, 569.
- ³ Lythgoe, J. P., *Brit. med. J.*, 1961, 2, 244.

SIR,—May I suggest that section 4 of Mr. H. W. Burge's letter (12 September, p. 689) is invalid and on this point hinges the main argument against using the stimulator test.

The purpose of the test is to pick up vagus-nerve fibres which are not palpable, but yet are sufficiently large to cause gastric stimulation. If such fibres form an important part of the anterior nerve then they must also be expected to accompany the main branch of the posterior nerve.

If a special test is necessary to identify such fibres in a relatively exposed position on the oesophagus, how can Mr. Burge claim always to find them when they may be running behind and amongst the fibres of the right crus?—I am, etc.,

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Umbilical Cord

SIR,—Your leading article on the umbilical cord (1 August, p. 264), discussing the greater chance of a baby requiring resuscitation if it is born with the cord round the neck, states, "Perhaps here again spasm of the vessels is the trouble rather than compression, strangulation, or the premature separation of part of the placenta owing to the relatively short cord pulling on it during descent of the foetus." The following cases are of interest because they lend support to this statement.

Case 1.—Multigravida. Normal pregnancy and labour. Birth weight 7 lb. 13 oz. (3.55 kg.). Cord three times round the neck. Total cord length 74 cm. Available cord length 10 cm. (4 in.).

Case 2.—Primigravida. Normal pregnancy and labour. Birth weight 6 lb. 11 oz. (3.04 kg.). Cord twice round the neck. Total cord length 63 cm. Available cord length 16.5 cm. (6½ in.).

Case 3.—Primigravida. Normal pregnancy and labour. Birth weight 7 lb. 10 oz. (3.46 kg.). Cord once round the neck. Total cord length 48 cm. Available cord length 19 cm. (7½ in.).

Case 4.—Primigravida. Normal pregnancy and labour. Birth weight 6 lb. 12 oz. (3.06 kg.). Cord once round the neck. Total cord length 52 cm. Available cord length 23 cm. (9 in.).

Case 5.—Multigravida. Normal pregnancy and labour. Birth weight 6 lb. 12 oz. (3.06 kg.). Cord once round the neck. Total cord length 52 cm. Available cord length 23 cm. (9 in.).

In all the cases the baby was born in excellent condition, crying within 30 seconds, and required no resuscitation apart from mucus extraction.

Foetal asphyxia is unlikely to develop once a baby's head has been born. In considering the possible role of a shortened cord in the production of neonatal asphyxia by tension it is therefore the length of cord necessary to allow birth of the head that is of interest rather than that required for birth of the entire foetus.

The information in the Figure has been derived from clinical examination, lateral radiographs of the pelvis, and measurement

AB. Distance between cord insertion and placental margin (battledore insertions excluded)=5 cm. (minimum). BC. Distance between promontory and tip of coccyx=11 cm. CD. Distance between tip of coccyx and fourchette=8 cm. DE. Elongation of posterior vaginal wall due to distension by head=5 cm. (minimum). FH. Distance between crown and neck at level of sternal notch=12 cm. HI. Distance between sternal notch and umbilicus=14.5 cm. IJ. Distance between umbilicus and rump=7 cm. FJ. Crown-rump length 33.5 cm. XY. Available cord length. SS. (not indicated) Distance around back of neck between right and left sterno-clavicular joints=14.5 cm. NC. (not indicated) Neck circumference=17.5 cm.

of full-term infants. The measurements coincide well with those reported by Gardiner.¹

The length of cord available (XY) to allow descent of the foetus can be calculated by subtracting the cord utilized by coiling from the total cord length. The length of cord utilized by coiling can also be calculated. For example, the length of cord involved in a single loop round the neck equals HI+SS or 29 cm., a cord twice round the neck will utilize HI+SS+NC or 46.5 cm., a cord three times round the neck will utilize HI+SS+2(NC) or 64 cm., and so on.

For a baby's head to be born without tension on the cord the available cord length (XY) must equal or exceed the distance AB+BC+CD+DE or 29 cm. (11½ in.). This is a conservative estimate because the values given for AB and DE are the minimum ones, and in most cases the placenta

will be situated higher within the uterine cavity than is indicated in the diagram, where its lower border reaches the junction of the upper and lower uterine segments at the level of the sacral promontory.

If the available cord length exceeds 29 cm. then obviously the situation of the portion of cord involved in coiling in relation to the cord insertion into the placenta would have to be taken into account.

In the cases reported the available cord length was less than 29 cm. in every case, yet none of the babies was asphyxiated at birth or required resuscitation. Whatever the factors responsible for the association of an increased need for infant resuscitation with cord round the neck, the length of available cord in itself would not appear, except perhaps in occasional cases,²⁻⁴ to be of importance. It seems likely that when the available cord length is reduced to below that required for delivery some mechanism, such as descent of the uterus, usually prevents the development of cord tension.—I am, etc.,

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REFERENCES

- Gardiner, J. P., *Surg. Gynec. Obstet.*, 1922, 34, 252.
- Munro Kerr's *Operative Obstetrics*, edited by J. C. Moir, 6th ed., 1956, p. 268. Baillière, Tindall and Cox, London.
- Morgan, J., *Brit. med. J.*, 1948, 2, 820.
- Reiss, H. E., *ibid.*, 1958, 1, 1394.

Eczema Vaccinatum

SIR,—Dr. P. W. Monckton Copeman and Dr. H. J. Wallace in their article (10 October, p. 906) rightly draw attention to the serious danger of eczema vaccinatum when patients who are suffering from atopic eczema are exposed to infection by the vaccinia virus. This grave risk perhaps does not always receive sufficient consideration, and the authors are to be congratulated on their detailed and important study of 185 case records of this grave and sometimes fatal complication of eczema.

However, I would suggest that when vaccination is necessary for members of a family in which there is also an eczema subject, proper cover of vaccination sites may be a valuable measure in the prevention of spread of virus to the eczema subject at risk. The usual small dressing fixed with two strips of adhesive plaster is not satisfactory for this purpose. I believe that a large, dry, sterile dressing pad covering the upper arm and site of vaccination and bandaged securely in place from elbow to shoulder will reduce the risk of spread of the vaccinia virus from vaccinated subjects to those suffering from eczema. Those vaccinated must be warned not to tamper with the dressings, and any inspection of vaccination reactions must be made with full precautions with regard to contaminated dressings. In eczema subjects who have themselves been vaccinated such dressings may be of some value,¹ and I believe that although viraemia occurs auto-inoculation may play at least some part in the spreading process.

Finally, I would suggest that in the planning of new hospitals consideration should be given to the real dangers of eczema vaccinatum and also of eczema herpeticum which exist when patients who are suffering

from eczematous conditions are treated in general medical wards. In a busy general ward it is almost impossible to ensure that eczema cases are not occasionally exposed to grave risk from patients who are suffering from herpes febrilis and also from patients who have active vaccinations. A "standard-size" ward may be useful for planning purposes, but in my opinion there is a great need for smaller self-contained units for the treatment of skin conditions.—I am, etc.,

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W. A. DEWAR.

REFERENCE

- Dewar, W. A., and Finn, O. A., *Glasg. med. J.*, 1954, 35, 141.

Protection Against Tetanus

SIR,—Dr. H. J. Parish in his letter to the *B.M.J.* on protection against tetanus (10 October, p. 941) very rightly emphasizes the need of personal records of immunization, or otherwise, which could be readily at hand at an emergency.

May I suggest that, as a first step at least, space for this purpose be made available on driving licences? This would by no means cover the whole population, but it would be a measure which would protect a large and growing section of the population and one which is specially at risk in road accidents. On this document, which every motorist must carry, doctors would be requested to enter all prophylactic immunizations as well as those given at the time of an accident—information which should prove invaluable to a doctor at any future emergency. The measure might also serve the purpose of educating the public on the importance of their protection against tetanus and ultimately to convey to the public the difference between the different types of immunization conferred by prophylactic anti-toxin and a course of toxoid.—I am, etc.,

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W. H. CRICHTON.

Atheroma and Leg Pain

SIR,—I have read with interest the case report by Dr. N. de M. Rudolf and Dr. H. A. W. Forbes on leg pain related to hip flexion associated with atheroma of the femoral arteries (3 October, p. 863). Tenderness over the tibiae is not generally associated with uncomplicated ischaemia of the lower limbs. This finding is, however, a common sign of thrombophlebitis of the deep veins of the lower limbs.¹ This may be present during the acute stage of thrombophlebitis, and in a small percentage of thrombophlebitic patients remains as a residual sign. As thrombosis of veins is a common accompaniment of atheroma of lower limb vessels, the finding of tibial tenderness in this patient may have been venous in origin. It would be of interest to know if this patient had any other signs of venous thrombosis—such as selective adductor tenderness, induration of calf muscles, etc.—I am, etc.,

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REFERENCE

- Knox, E. W., *Ulster med. J.*, 1964, 33, 28.