Correspondence

Classical Caesarean Section

SIR,—The remarkable thing about the correspondence on classical caesarean section, the lower-segment operation, and rupture of the uterus (Sept. 25, 1948, p. 602, Oct. 16, 1948, p. 722, *et seq.*) is that it should take place at all. It is twenty-eight years since Eardley Holland and Munro Kerr introduced the lower-segment operation in this country, and about the same time since Beck, of Brooklyn, and DeLee, of Chicago, popularized it in America. Prior to that the essentials of modern technique had been well established by several Continental obstetricians. In the years that followed the superiority of the operation became manifest, and the position is now reached (or so one had supposed) when caesarean section *means* the lower-segment operation unless otherwise stated.

With many of the points raised by your correspondents I entirely agree; no operation, however good, is applicable to every case irrespective of the particular conditions present. What the conditions are that occasionally prohibit the use of the lower-segment technique have been clearly summarized by Mr. C. Scott Russell (Oct. 16, 1948, p. 722)—almost the only champion of the lower-segment operation in this correspondence. So far so good: but what disturbs me is that the many letters have collectively conveyed an impression that the contraindications to the lower-segment section are so many and the difficulties are so great as to make it more or less a "stunt" operation. Those surgeons who still routinely employ the classical operation are thus confirmed in their complacency. This attitude I deplore, and for the following reasons.

Although the mortality rate for all types of caesarean section is now remarkably low, there is, so far as I know, no large series of consecutive cases (500 or more) which can show a mortality rate of under 1% *save those in which the lower-segment technique was used* (for example, the 0.4% mortality rate reported by Free[1]).

The abdominal incision for the lower-segment operation is relatively small and is sub-umbilical; consequently there is seldom any exposure of the intestines. Theoretically this should lessen post-operative complications, and in practice I believe it does. Patients who have had the lower-segment operation generally make a quicker and easier recovery than do those in the other group, and the testimony of women who have experienced both operations is often eloquent on this point. After the classical operation the intestine sometimes adheres to the abdominal scar or, oftener, to the scar in the uterus. Obstruction is then a possibility, and may occur early by the involuting uterus dragging a loop of ileum down into the pelvis. This complication does not occur after the lower-segment operation.

It is generally stated that 4% of "classical" scars rupture in subsequent pregnancies (this figure would undoubtedly be higher if abdominal section were not so often again employed before the onset of labour). With the lower-segment technique the risk of rupture is greatly lessened. The uterus is incised in a part that is inert and which can therefore heal quietly and soundly. Firmness of the scar is further ensured by reinforcing the suture line by a layer of fascia or a fold of uterine muscle—a procedure that is impossible in the case of the other operation. Finally, it is unlikely that the placenta will become implanted over the scar in a subsequent pregnancy—a happening which it is generally supposed strongly predisposes to rupture.

Because of these facts rupture of a lower-segment scar is an unusual event and is estimated to occur in only 0.25% of cases. On this reckoning the risk of rupture is therefore only one-sixteenth of the risk associated with the classical operation. Convincing evidence of the increased safety is also found when the uterus is examined at a subsequent operation. It is seldom indeed that the "classical" scar does *not* show, in the emptied uterus, as a long, deep furrow, whereas the lower-segment scar is only rarely identifiable—far less does it show as a weakened area.

The slight delay in extracting the foetus is sometimes cited as a point against the lower-segment operation, and it is alleged that the establishment of foetal respiration may be delayed by the relatively large amount of anaesthetic which the foetus absorbs. This difficulty, if it exists, is largely overcome by the careful choice and competent administration of the anaesthetic.

So convinced am I that the classical caesarean section is now superseded that I should be disturbed if I heard that any friend of mine had been subjected (without good reason) to that operation. And if at some subsequent pregnancy she had the misfortune to suffer a rupture of her uterus my thoughts would be bitter as well as sad.

I was once asked by an eminent gynaecologist what type of operation was being employed in my country. When I answered, "Usually the classical operation," he shook his head sadly and replied, "I cannot understand the mentality of anyone who still uses the classical section." That was eighteen years ago; how much more forceful his words have now become.—I am, etc.,

Oxford. J. C. CHASSAR MOIR.

REFERENCE

[1] *Amer. J. Obstet. Gynec.*, 1945, **49**, 401.

Spinal Anaesthesia for Caesarean Section

SIR,—If an anaesthetic technique is popular with some and condemned as dangerous by others, it means either that some are lucky when they have no trouble or that the others are violating some sound principle of anaesthetics. Many gynaecologists regard spinal analgesia in caesarean section as a procedure fraught with danger of sudden death to the mother, a danger which cannot be predicted in any particular case and about which nothing can be done. Some believe there may be biochemical changes, subtle enough to be indefinable, in pregnant women which make them liable to collapse under spinal anaesthesia. There are indeed sudden deaths in these circumstances, but I believe they are subject to a straightforward explanation and that they are preventable.

A spinal anaesthetic for a moderately high abdominal operation inevitably paralyses the nerve supply to the lower intercostal muscles, so that the lower and mobile part of the chest wall is temporarily put out of action. A full-term uterus splints the diaphragm, and the effect of this is increased by the Trendelenburg position and surgical packs. All that remains is for the surgeon's assistant to lean on the patient's chest to complete the insult to her respiratory mechanism. Even without this last there is a probability of collapse from anoxia if the patient is breathing air only. If she breathes oxygen, or there is means to inflate her with it, I believe the maternal risks are no greater than with other means of pain relief for this operation.

I am prepared to advance what I believe to be cogent arguments in favour of the trouble all being due to respiratory embarrassment, but at this stage I feel it is more profitable to end with a warning—but on behalf of the foetus. Contraction of the uterus is a notable feature of spinal analgesia, and it appears to increase with the passing of the minutes: time therefore must not be wasted. On one occasion I gave a spinal anaesthetic for a caesarean section because of placenta praevia. After the injection the diagnosis was confirmed by surgeon and assistants and the operation thus delayed some 30 minutes. Before the injection the foetal heart sounds gave no cause for alarm, but when the uterus was exposed some 50 minutes later it was tightly contracted, firmly gripping the foetus, which was found to be dead. On another occasion, with a different gynaecologist, there was a delay of some 20 minutes before the operation commenced, and my colleague, before opening the uterus, commented that so tightly was it applied that it almost revealed the sex of the foetus. In this case the infant was little the worse for the experience.—I am, etc.,

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Vitamin E in Heart Disease

SIR,—In the *Sunday Express* of Feb. 20, 1949, "Doctor-M.P." writes an article under the heading "A medical discovery 'as great as insulin.'" He discusses the use of alpha-tocopherol (vitamin E) in heart disease and states that this drug "has been proved in my view as a doctor to show miraculous results in angina pectoris, in certain kidney diseases, and in