CORRESPONDENCE

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Selecting Cases of Myelomeningocele for Surgery

SIR,—Dr. John Lorber¹ has given a detailed account of the results of the early surgical treatment of 524 unselected cases of myelomeningocele in Sheffield over the years 1959-63 and 1967. In all cases treatment was started on the first day of life. The overall results in the most severely affected children have been very disappointing. The infants who fared particularly badly were those with extensive paralysis at birth, those with a head circumference exceeding the 90th percentile by 2 cm or more, and those born with a gross kyphosis or with major associated congenital defects. No doubt after much heart-searching, Dr. Lorber has come to the firm conclusion that selection for treatment can be made on a humanitarian basis—in other words, that surgery should be reserved for selected cases.

This series can have few, if any, rivals in the world at present. Every doctor and every nurse who is likely to look after such infants should at least read Dr. Lorber's article carefully—written, as it has been, with courage and honesty. It provides yet another landmark in paediatric thought.

The story of the management of infants with spina bifida in this country has fallen into three main phases.

Phase 1.—In the pre-sulphonamide and pre-antibiotic era the vast majority of infants who were born with open myelomeningocele developed ascending meningeal infection and succumbed within a few weeks or months of birth. Surgery was carried out only on suitable cases without gross neurological deficit. Provided there had only been one affected child in the family, there remained a reasonable chance that a subsequent sibling would be normal.

Phase 2.—With the advent of sulphonamides and antibiotics their use was extended to these unfortunate infants both locally and systemically. Inevitably in some instances infection was prevented, the surface of the lesion became epithelized, and life

was prolonged, although the problem of hydrocephalus remained largely unsolved. The appalling results of this phase led many clinicians to acclaim later advances.

Phase 3.—The introduction of an adequate valve system for cerebrospinal fluid drainage led to a reasonable degree of prevention of hydrocephalus. It was suggested that very early closure of the myelomeningocele was essential. There followed an enthusiastic and unselective surgical approach involving closure of the myelomeningocele within hours of birth, followed later by the insertion of a suitable valve to prevent hydrocephalus. Meningitis was prevented or was treated with an increasingly effective range of antibiotics. The majority of paediatric surgeons in this country have devotedly and selflessly lent their skill—both by day and by night—to this policy. Medical students have been taught that all cases of open myelomeningocele should be subjected to surgery without delay, and nurses have been taught likewise. Owing to pressure of opinion it has been increasingly difficult to withhold surgery, even in the most severely affected infants.

Throughout these recent years there has been a number of paediatricians who have viewed this totally unselective surgical policy with acute disquiet and an awareness of the ever-mounting burden of long-term human suffering. These paediatricians now find in the Sheffield figures authentic support for their view and they look forward to a reappraisal on the part of all those concerned with the care of these children and their families.

However, if there is to be an honest shift of opinion, it is important that university teachers and the authors of the standard paediatric text books published in Britain should indicate that some severe cases of myelomeningocele may not be suitable candidates for surgery. It is essential that paediatric surgeons and neurosurgeons

should be able to support paediatricians in coming to a joint decision in individual cases as to the wisdom of carrying out surgery. Finally, when cases are deemed unsuitable for surgery, reversion to the wholly unsatisfactory situation found during phase 2 must be avoided.—I am, etc.,

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¹ Lorber, J., *Developmental Medicine and Child Neurology*, 1971, 13, 279.

Meningomyelocele: The Price of Treatment

SIR,—Mr. C. D. R. Lightowler's contribution (15 May, p. 385) to *Contemporary Themes* in which he discusses the price of treatment of myelomeningocele has reached me, and strikes one or two discordant notes. The figures in the first few paragraphs are an unsatisfactory mixture of an attempt to steer a passage between the personal and published numbers from Sheffield, and it seems that the arithmetic of the figures from Birmingham results in the deduction that as many special school places are needed per 1,000 annual births as the actual incidence of the condition among the newborn (for example, 132 in 65,935 births), which is remarkable since the number of the 132 surviving at five years is given as 27, of which almost half were alive and well and only the remainder disabled.

Assuming that the Registrar General's figures are a bit low because of the voluntary notification, and that two per 1,000 live births is a reasonable average, then Mr. Lightowler's figures for incidence need to be increased, and the probable number of survivors, if full comprehensive care is given from birth, also will be somewhat above 500. However, these survivors will bring with them relatively more of the infants with a greater neurological deficit than an untreated series will have. The general round figures from a number of sources¹ put about 50% of the survivors as total paraplegics and 25%

needing considerable orthopaedic treatment, and about 80% requiring treatment for hydrocephalus and approximately the same percentage for urinary tract problems.

Any readjustment of the crude figures in this way does not divert from his point—for example, that there will be 300 to 400 of these patients accumulating each year at the age of 5 requiring special schooling arrangements. To put them alongside traumatic paraplegia is only relevant inasmuch as the English tradition for the fullest care and rehabilitation of traumatic paraplegia has now been established as one of the best in the world. On the other hand, it should be said in this present day we are no longer paying a very high price for the treatment of poliomyelitis, tuberculosis, and various other infections which used to constitute the bulk of paediatric practice. In this context, it would be reasonable to turn towards the provision of further care for these myelomeningocele children from such financial resources as the State, voluntary organizations, and parental contribution can provide in the hope that ultimately prevention will precede cure.

If there is an undertone to Mr. Lightowler's theme that it might be better to do nothing when presented with these infants in the neonatal period then it is also relevant to say that the problem will often not die out at that stage, but because of accepted nursing and medical care, including the use of antibiotics, the infant will be re-presented in a more grotesque state some weeks or months later. Furthermore, the spectrum and variations of the condition are such, even to those who have seen a great deal of it, that it is unlikely that a method of infallible neurological assessment can be devised whereby the sheep can certainly be separated from the goats in the early neonatal period when such a decision would be relevant. Whatever the price of treatment, myelomeningocele would appear to be a problem which has to be faced as realistically as possible.—I am, etc.,

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¹ Brocklehurst, G., *Developmental Medicine and Child Neurology*, 1971, 13, 2, 147.

Laparoscopic Sterilization through Cusco's Speculum

SIR,—Mr. J. O. Greenhalf and Mr. H. R. M. Roberts (31 July, p. 304) draw attention to the risk of haemorrhage occurring from the inferior epigastric vessels after laparoscopy. This danger can be reduced to a minimum by inserting the trocar and cannula for the biopsy forceps lateral to the rectus abdominal muscle, and through an area shown to be free of vessels by transillumination. Steptoe¹ has shown that laparoscopic sterilization is a safe and economic procedure with considerable advantages for the patients. Like many other procedures in medicine, however, laparoscopy is dangerous if it is not performed with vigilance and careful attention to the details of the technique.

The use of a small Pfannenstiel incision for sterilization is not new. Using a 3-5 cm incision, according to the size of the patient, it is not difficult to pick up the tubes between two fingers and to ligate them in the normal way. It is not necessary to keep these patients in hospital for long but they have

more discomfort than after laparoscopy and are, of course, liable to all the complications of laparotomy.—I am, etc.,

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¹ Steptoe, P. C., *I.P.P.F. Medical Bulletin*, April 1971, 5, No. 2, 4.

SIR,—I must protest about your misuse of the term "Laparoscopic Sterilization through Cusco's Speculum" as title for the letter by Mr. J. O. Greenhalf and Mr. H. R. M. Roberts (31 July, p. 304). The method of suprapubic incision for sterilization which they describe is the rediscovery of a technique already in use by many gynaecologists. It matters not whether a proctoscope, Cusco's speculum, or any other small retractors are used. Indeed the procedure is facilitated if the operator cares to lock the uterine cannula in position so that the uterus can be raised and rotated so as to bring the oviducts into a medial position just beneath the abdominal incision.

May I remind your correspondents that the laparoscope is a telescope with magnifying lenses, and the detail and scope afforded by it in experienced hands are much superior to naked eye inspection through a limited incision. However, it is essential that the operator possesses the correct equipment and has been properly trained in the technique.

Intra-abdominal haemorrhage from the insertion of the trocar and cannula for introduction of the biopsy forceps is entirely avoidable. The light source used should be a lamp of at least 150 watts, better still 250 or even 500 watts, and an angled vision laparoscope should be employed. This enables one to transilluminate the majority of abdominal walls, which light up like a red balloon. The blood vessels are readily located and a safe point for introduction of the trocar away from them can be selected. This fails only in the grossest of obese patients, and laparoscopic sterilization by this technique should not be attempted in such patients, although an operating laparoscope can be used alternatively.

In the case described by your correspondents blood was seen to be running down the sheath of the biopsy forceps. When the forceps was withdrawn, its site of entry into the peritoneum should have been carefully inspected through the laparoscope, and if blood was seen to be dripping down, or flowing in an arc around the parietal peritoneum, as it more usually does, then the abdominal wound should have been explored immediately and the vessel secured. The laparoscope should have been left in position so as to make a final inspection to be satisfied that the vessels had been properly sealed. Of course, a full inspection elsewhere is always necessary to make sure that no accidental damage has been caused anywhere.

Inspections of these types are carried out as routine in all my cases in Oldham, whether bleeding is suspected or not. Hundreds of cases of sterilization by laparoscopic diathermy division of the tubes have been safely performed in my department, the patients attending as day patients only. In over 3,000 laparoscopies we have had to explore the abdominal wall for bleeding on only two occasions, and for intra-abdominal bleeding only once. The death rate in Oldham is nil, and the morbidity negligible.

Laparoscopy is now accepted all over the world as a valuable, even brilliant, diagnostic and operative technique. However, the laparoscopist must possess the proper instruments, and must have been fully trained. Let us not confuse its limitations with those of the operator. If I may draw a parallel, the fact that some gynaecologists are not much good at removing the uterus by the vaginal route does not make vaginal hysterectomy a bad operation.

Laparoscopic sterilization in trained hands is a safe, rapid, simple procedure which causes a minimal disturbance to patients of only a few hours.—I am, etc.,

PATRICK STEPTOE

Oldham, Lancs

Smallpox Vaccination

SIR,—Surely the herd immunity that we now have is what it has always been about. To give up this as is now contemplated, and at a time when air travel spreads disease so effectively, is a mistake. The Department of Health and Social Security circularized us with a *Health Trends*¹ recently claiming the whooping cough was down to almost zero when general practitioners were having the last upsurge of cases. At least I was. Was it a virus in pertussis clothing?

Has not the spread of cholera to Africa and Europe not been a warning? Who will take the blame when we suffer a smallpox epidemic in the next ten years?—I am, etc.,

SYDNEY DAVIES

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¹ *Health Trends*, 1970, 2, 77.

SIR,—Professor George Dick (17 July, p. 163) did not, in my opinion, give us a complete picture of the situation.

For instance, he did not disclose if the 100 deaths from vaccinations in England and Wales occurred in primary vaccinations and, if so, at what ages, and, more important still, how many of these deaths occurred as a result of vaccinations carried out in the panic conditions prevailing in the campaigns associated with the many (13) importations of smallpox to the U.K. in the last 20 years.

Furthermore, Professor Dick did not perhaps stress that the excellent measures which have controlled outbreaks in Britain in the past—namely, "prevention of importation, isolation and tracing of cases, and vaccination and surveillance of probable contacts" are rendered more difficult to achieve today in an era of fast air travel from every part of the world, including no fewer than 23 countries in which a total of no fewer than 31,000 cases of smallpox were reported last year. The standards of certification and control in some at least of these countries leave much to be desired. The risk of importation of smallpox is therefore greater than ever.

It seems to me foolhardy in these circumstances to abandon a measure which would prevent the fatalities which occurred in the past. Whatever exhortations are issued to the people, they will inevitably rush to get vaccinated as soon as an outbreak occurs. It is in these circumstances that vaccination becomes dangerous.