be used to control unwanted behaviour and encourage specific skills. Group work with the parents can be conducted—parents confronting and being confronted with both the impact of the child on themselves, and the effect of their attitudes on their children's behaviour—while individual therapy can help children or parents to understand their feelings or reactions.

Parents' groups¹⁰ are being conducted in several centres with a variety of problems, and this may be a method of giving support and understanding when current and future crises occur before they become intense.

Finally, drugs may be needed for the brain-damaged over-active impulsive child. As the child approaches school age the parent may have to face the necessity for special education. They once more become aware of the discrepancy between their expectations and reality. With adequate pre-school educational provisions, and satisfactory solutions of earlier crises it should be possible for the transition to be less pain-

ful. Physical or mental impairment should not handicap the future emotional adjustment and development of the child.

References

- ¹ Brody, S., *Patterns of Mothering*. London, Bailey and Swinfen, 1956.
- ² Thomas, A., Chess, S., Birch, H. G., *Temperament and Behaviour Disorders in Children*, New York, University Press, 1968.
- ³ Freedman, D. G., *Journal of Child Psychology and Psychiatry*, 1964, 5, 171.
- ⁴ Wills, D. M., in *Psychoanalytic Study of the Child*, Vol. XXV. London, Hogarth Press, 1970.
- ⁵ Dinnage, R., *The Handicapped Child—Research Review*, Vol. I & II, London, Longman and the National Bureau of Co-operation in Child Care, 1970 and 1972.
- ⁶ Rutter, M., Tizard, J., Whitmore, K., *Education, Health and Behaviour*, London, Longman, 1970.
- ⁷ Schaffer, H. R., *International Journal of Social Psychiatry*, 1964, 10, 266.
- ⁸ Parad, H. J., *Crisis Intervention: Selected Readings*. New York, Family Service Association of America, 1965.
- ⁹ Caplan, G., *Prevention of Mental Disorders in Children*. London, Tavistock Publication, 1963.
- ¹⁰ Parfit, J., *Spotlight on Group Work with Parents in Special Circumstances*. London, National Children's Bureau 1971.

Second Opinion, Please

Contraception and Infertility

K. L. OLDERSHAW, MICHAEL BRUDENELL

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DR. OLDERSHAW:

Nearly 20 years ago, when I was the new young doctor in the practice, one of my first visits was to Brenda, a bright-eyed child of 6, who had just returned home after hospital treatment for tuberculous meningitis. Fortunately, she made an apparently complete recovery, and as the years went by, I was needed to treat nothing more serious than colds and 'flu.

At 19 she got engaged and sought my advice on contraception. She wanted to try the pill. I knew her past history and that of her family, and there seemed no contraindications. She had a regular 28-day cycle lasting four days, with slight first-day dysmenorrhoea and a moderate loss. Physical examination revealed no abnormality. Brenda and her husband planned to wait two or three years before starting a family, and the three of us agreed that oral contraception seemed the ideal method. Three months before her wedding she started taking the pill and suffered minimal initial side effects. The duration of bleeding was reduced by one day and the dysmenorrhoea vanished. A full pelvic examination and cervical smear shortly after her marriage were entirely normal and she continued to take the pill for three years. During this time she attended my surgery every three months to report progress, and also to have the opportunity to discuss anything concerning oral contraception that she had heard of, or read about, in the popular press. Once a year she had a check-up comprising urinalysis, blood pressure recording, examination of abdomen, breasts, pelvis and leg veins, and a cervical smear. No abnormality was detected on any occasion.

The couple decided the time had come to start a family. Brenda now 22 years-old stopped the pill, had a withdrawal bleed, and a normal, slightly painful period arrived six weeks later. Her former 28-day cycle returned and I told her to return to see me if she thought she was pregnant or if she was not pregnant within six months. I took this opportunity of explaining to her that intercourse between the 12th and 14th days of a 28-day cycle, coinciding with the date of expected ovulation, offered the best chance of pregnancy.

Her periods continued to appear and after six months she returned. The couple were having intercourse three times a week and in my experience failure to conceive with frequent intercourse in mid-cycle should be investigated by the general practitioner after six months. Often something is wrong, and even if it is not, the feeling that "something is being done" goes a long way to avoiding the anxiety and depression which soon follow the disappointing menstrual regularity. As her dysmenorrhoea had returned after stopping the pill, I was pretty sure she was ovulating, but I showed her how to read a clinical thermometer and how to keep a chart of her early morning temperature. Three months later we had a chart showing a typical ovulatory rise on the 14th day of each cycle, but still no pregnancy.

I refuse to allow my female patients to undergo what I consider to be potentially dangerous hospital investigations until the male, who is the cause of the difficulty in one-third of the cases, has been investigated. On the other hand, I find that many husbands object to being investigated at all, and most dislike producing specimens for seminal analysis. A postcoital test, which can easily be performed in the surgery, is the ideal way of solving this problem. I find it is better for the husband not to know anything about it until afterwards, as I have known impotence to occur after a doctor's instructions to have intercourse on a certain day. Accordingly, I asked Brenda to use her feminine wiles to arrange for intercourse to occur on the 12th night of the cycle, not to have a bath afterwards, and to come to see me at midday the next day. Brenda's wiles worked perfectly and 14 hours after intercourse I removed the cervical plug of

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mucus with a warmed, dry, long Spencer-Wells forceps, placed it on a warm slide, and found it clear, with the consistency of egg white. Under the microscope each high power field contained six to ten highly motile spermatozoa, with only occasional abnormal forms. There were a few epithelial cells and no polymorphs. Brenda had a look for herself, and was thrilled and relieved, because all women fear that it may be the husband's "fault" and are delighted to be assured that it is not.

But I had to tell her that I had gone as far as I could in the surgery and the time had come to ask for a second opinion.

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Dear Mike,

I would be most grateful for your help with this girl who is complaining of infertility nine months after ceasing oral contraceptives.

Temperature charts show that ovulation is occurring, I can detect no pelvic abnormality and a postcoital test shows that sperm not only are being produced but are present and active in the cervical mucus 14 hours later. The trouble would seem to lie above the cervix; it may be significant that she had tuberculous meningitis at the age of 6, but I have not mentioned this to the patient.

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Dear Leslie,

I agree with all you say about Brenda and your conclusion that the cause of her infertility seems to lie above the cervix. As you have been able to establish that ovulation is occurring and that the postcoital test is positive, I can proceed directly to the next step in her investigation, which I am sure should be a laparoscopy and hydrotubation. This will give me an opportunity of determining not only tubal patency but also a direct view of the pelvis generally. I am not sure at present if her past history of tuberculous meningitis is of any significance. I have asked her to take contraceptive precautions (her husband will use a sheath) for the first three weeks of the next cycle, so that the laparoscopy can be combined with a premenstrual curettage without the risk of disturbing a chance pregnancy (a small chance only, of course, but a proportion of patients do get pregnant after their first visit to the clinic and before further investigations can be carried out).

Hospital Admission

MR. BRUDENELL: Brenda was duly admitted and a laparoscopy was performed. Under general anaesthesia the peritoneal cavity was distended with carbon dioxide and a laparoscope introduced through a small stab incision made at the lower border of the umbilicus. A clear view of the pelvic organs was obtained. The uterus and both ovaries were normal but a number of filmy adhesions were present in the pelvis. The medial portions of both Fallopian tubes were normal but the ampullary portions were slightly distended. In the case of the left tube no fimbria could be seen; on the right side the fimbria were adherent to one another and to the posterior aspect of the broad ligament. Fifteen ml of a dilute aqueous solution of methylene blue were injected into the uterus using a cervical cannula introduced through the vagina. Blue dye could be seen to enter both tubes and the distal ends became distended with it; no peritoneal spill occurred, however. The laparoscope was withdrawn and a diagnostic curettage performed. The curettings were sent for histological and bacteriological examination.

The laparoscopic findings were somewhat unexpected. Tubal blockage, as a result of infection, can occur following a puerperal or postabortion uterine infection, as a result of a gonococcal or tuberculous salpingitis, or as a complication of

pelvic peritonitis, commonly in association with acute appendicitis. Brenda had never been pregnant and there was no history of a gonococcal infection or acute appendicitis. The normal appearance of the medial portions of the tubes was against a tuberculous salpingitis, so that the only remaining possibility seemed to be that the tuberculous meningitis, which she had at the age of 6 was complicated by a tuberculous peritonitis with direct involvement of the tubes, especially the ampullary and fimbrial portions. At that time Brenda was treated with streptomycin and PAS, which was effective in dealing with the infection but left her with residual pelvic and peritubal adhesions.

Brenda made an uneventful recovery from her laparoscopy. I told her briefly of the findings and arranged to see her in outpatients to discuss possible future treatment once the results of the endometrial investigations were known.

The infertile woman usually receives the news that her tubes are blocked with a sense of relief. Here at least is a reasonable explanation for the problem. Unblocking the tubes surgically will clearly result in a cure. It is under the pressure of such irresistible feminine logic that gynaecologists have in the past embarked on tubal surgery even though they know how poor are the prospects for a pregnancy after such procedures. Laparoscopy has proved of great value in evaluating patients for tubal surgery and represents an advance on other methods of detecting tubal patency. A direct view of the tubes enables the gynaecologist to exclude from consideration of tubal surgery cases where not only are the tubes not patent, but they are hopelessly thickened and destroyed by the previous inflammatory processes. By concentrating tubal surgery on those cases with mild pathological changes the prospects for success can be improved. In the case of distal tubal blockage division of peritubal adhesions and the mobilization of a relatively normal tube—salpingolysis—offers a better prospect of success than the formal opening of a closed tube—salpingostomy. Minor distal blockage can often be relieved by gentle blunt dissection with a probe during laparoscopy. Indeed, this procedure alone, like other tests of tubal patency may be quickly followed by pregnancy.

When I next saw Brenda in outpatients, I had histological and bacteriological confirmation that there was no tuberculous infection of the endometrium. Normal secretory changes were present in the glands confirming that ovulation was taking place. With this information, and the knowledge that her tubes were not grossly abnormal, I told Brenda that, though the chances of success were not great, I thought tubal surgery was a reasonable step in her case, bearing in mind especially her youth and the absence of any other adverse factors. She agreed to the proposed operation and was admitted to hospital shortly afterwards.

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Dear Leslie,

I operated on Brenda ten days ago and she will be leaving hospital tomorrow. At laparotomy the tubes were as we had seen them through the laparoscope and I was able to free the right tube by dividing the peritubal adhesions. The fimbria appeared normal and the tube was clearly patent. The left tube was less obliging and I had to make an incision into the ampulla before I could identify the fimbrial opening. A cuff salpingostomy resulted in a patent tube though with a somewhat thickened distal end. The whole procedure was relatively bloodless and the end result looked quite promising. During the post-operative period I carried out three hydrotubations. On each occasion she came to the operating theatre and I inserted a small cannula through the cervix without anaesthesia: saline injected through this cannula passed freely into the uterus and she experienced bilateral lower abdominal discomfort indicating that peritoneal spill of the saline was occurring. I shall be seeing her again in outpatients in four weeks' time and will repeat the hydrotubation then. She has been a splendid patient and I very much hope that the operation will be a success.

Outpatient Follow-up

The final chapter of this story should, of course, end with Brenda's pregnancy and subsequent successful delivery of a healthy baby. Alas, life is not like that, and the patient has not become pregnant. In fact, the operation, though initially successful in opening the blocked tubes, was not successful in maintaining their patency. The postoperative hydrotubations were followed at four months by a hysterosalpingogram under general anaesthesia. This showed a reblocked left tube and restricted peritoneal spill only on the right side. I carried out a repeat laparoscopy eight months after the operation and was disappointed to find bilateral distal blockage with small hydrosalpinges on both sides. With a little persuasion with a blunt probe, dye could be made to escape from the left tube, but it is clearly not very likely to function. Although a relatively short time has passed since the operation the likelihood is that Brenda will remain childless. Her name will be added to the long list of patients who have had unsuccessful tubal surgery. In the future it is possible that an ovum could be transferred from the ovary via the laparoscope to a test tube where it could be fertilized in vitro by her husband's semen and subsequently implanted into the uterus which had been artificially primed with administered gonadotrophin. Preliminary work along these lines is being carried out but some time must elapse before it can be properly assessed. Meanwhile guided by laparoscopic findings I shall continue to try to unblock tubes by careful surgery encouraged by the occasional successful outcome.

The use of Teflon prostheses, such as the Rock Mulligan hoods to cover the newly opened tubes until all healing has taken place and reduce the chance of reblocking occurring has not so far in my hands been very successful. The drawback of using such prostheses is that they require a second operation for removal some months after insertion. While improved surgical techniques may increase the chances of success, the thinking gynaecologist looks hopefully towards the prevention of tubal infection and subsequent blockage as the best approach. Sadly, with a rising incidence of gonococcal infection and the growing number of post-termination infections there is little chance that this hope will be realized.

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Dear Mike,

As you have been unable to write the expected final chapter, it falls to me to write it. Years ago, I would simply have advised Brenda to adopt. Today, thanks to the Abortion Act, that is not easy advice to follow. Meanwhile I am providing what the psychiatrists call "supportive therapy" and Brenda and her husband seem to be coping with their tragedy. As Brenda is still young, I will, if I may, remind you about her in five years' time in case she may benefit from any future advances in therapy.

My prescription of oral contraceptives for three years would appear to be a good example of a doctor providing bad treatment with the best of motives.

Any Questions?

We publish below a selection of questions and answers of general interest

Angina Decubitus

What is the mechanism by which pain is produced in angina decubitus? It is difficult to see why external pressure on the heart from, say, a distended stomach or colon should cause pain.

While angina pectoris may wake the patient from sleep, especially with aortic regurgitation, this question presumably refers to angina precipitated by the patient lying flat. This usually occurs only when the syndrome of acute coronary insufficiency is present, and, as with exertional angina, the pain is relieved by nitroglycerin. The mechanism is not known, but could be related to the higher cardiac output in the supine position.

Rubella Vaccination in Adults

If a woman who is uncertain whether she has had rubella wishes to become pregnant should she be tested for rubella antibodies before receiving rubella vaccine, or is it reasonable for the doctor to vaccinate her straight away?

Rubella vaccine should not be given to an adult woman unless serological tests have shown that she is seronegative. Approximately 80% of women of child-bearing age in most urban communities in western countries, whether they give a past history of rubella or not, already have antibodies and are immune. Thus in a high proportion of individuals vaccination is unnecessary. Furthermore, there is always a risk that rubella vaccine may be administered in the early stages of pregnancy, the recipient perhaps being unaware that she is

pregnant at the time. Though rubella vaccine consists of attenuated virus, there is no evidence that during attenuation the virus has lost its teratogenic potential.

Because of the possibility of transplacental transfer and fetal damage, the Department of Health recommends that pregnancy be avoided for at least two months following rubella vaccination.¹ Rubella vaccine is currently available for schoolgirls aged between 11 to 14, but since the risk of pregnancy in this group is minimal and because present facilities would not be able to cope with testing all potential vaccinees, vaccine is administered to schoolgirls without prior rubella antibody tests.

¹ Department of Health and Social Security, *Rubella Prophylaxis*, CMO 9/70. London, D.H.S.S., 1970.

Treatment of Premature Ejaculation

Is any drug treatment of value in premature ejaculation? Is it true that tricyclic antidepressants can cause delayed ejaculation as a side effect; if so, could such substances be used? Is yohimbine of any value?

The results of all forms of drug treatment for premature ejaculation are unpredictable. Lignocaine ointment applied to the glands in just sufficient quantity may be helpful for some cases and various forms of sedative may help others but often sedatives are likely to prevent adequate erection when given to these patients. I have no personal experience of the use of tricyclic antidepressants for treatment of premature ejaculation but I suspect that they might be beneficial in some cases. I do not think yohimbine is nowadays considered to be of much value in the treatment of disorders of erection and ejaculation.