Outpatient Operations. II—As the G.P. Sees It

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The preceding paper deals with the method of discharging patients home on the day of operation, as seen by the surgeon. The purpose of this article is to present the general practitioner's point of view.

For years it has been the custom to admit a patient to a hospital bed for anything but the most trivial minor operations. The general practitioner did not deal with the patient again until the whole surgical episode had been completed, and, apart from declaration of fitness for work, had little clinical responsibility. Confinement to bed for several days was also customary, and inevitably the length of stay in hospital was protracted. In recent years early ambulation has for a variety of reasons been one factor in reducing the time a patient remains in hospital after operation. A more recent step has been to operate and return the patient home on the same day. This seems revolutionary when applied to such operations as herniorrhaphy, and for this to be done the general practitioner has to be prepared to accept clinical responsibility for the immediate postoperative period.

Cases

Selection.—For the scheme to work it is most important that there should be mutual trust and understanding between the surgeon and the general practitioner. If the latter does not feel that he can co-operate it is better that day case operations be avoided. In selecting suitable cases the knowledge which the general practitioner possesses of his own patient is most valuable in deciding suitability. It is not just a question of medical fitness; mental attitude to illness and pain and social circumstances are extremely important. When referring a patient initially it is our policy to intimate whether we consider him suitable (after discussion with him). The surgeon then makes his decision. Only if both agree do we consider that the patient is suitable as a day case. Any doubt on the part of either surgeon or general practitioner means that the patient should be dealt with only in the conventional way.

Types.—It is the surgeon's province to decide which operative procedures are suitable for day cases. In this practice 25 of our patients have had operations of this type over the past two and a half years, an average of 10 patients a year. The types of cases dealt with are shown in the Table.

Type of Cases

Removal of fibroadenomata and other benign lesions of breast	12
Inguinal hernia repair	9
Combined inguinal and umbilical hernia repair	1
Femoral hernia repair	1
Stripping of varicose veins	1
Biopsy of testicular swelling and fixing to prevent torsion	1

There were 12 male and 13 female patients aged 17 to 55 years, the average being 35 years.

Day of Operation

As a hospital bed is not required it is possible to name the day of operation accurately instead of just putting the patient's name on a waiting-list for some time in

the future. It is essential that the general practitioner should be aware of the date, and this is usually intimated by the surgeon in his letter after seeing the patient initially. A note of this is made in the day-visit book. To be doubly sure we also ask the patient or relative to inform us the day before the operation, and also to let us know when the patient arrives home. With foreknowledge one can arrange visits accordingly. This double checking should prevent any slip up.

It is our policy to visit patients within an hour or two of their arrival at home. To make the journey tolerable they will have been sedated before leaving hospital and given a few oral pethidine tablets to take if necessary. If further sedation is required we may give an injection of morphine or pethidine at the time of the afternoon visit, and usually supplement the oral pethidine with a barbiturate to be taken at night. The patient is examined to make sure all is well. (The surgeon's summary of operative procedure accompanies the patient home.) The relatives are instructed in what should be the normal sequence of events and are asked to inform us if there is any deviation or if they are worried in any way.

Follow-up

We ourselves are fortunate in having a local health authority nurse attached to the practice; this ensures complete liaison between doctor and nurse. Usually both doctor and nurse visit on the first two or three days after operation; the nurse then continues to visit daily, reporting any problems which may arise. Usually the doctor will visit once more when the nurse removes the sutures.

Two of our hernia cases developed low-grade fevers during the first two days, but these settled without sequelae.

In the 25 cases mentioned above the only postoperative complication was a haematoma of the breast in a patient who had had a fibroadenoma removed. This was allowed to localize, and was evacuated a few days later—as an outpatient.

All patients were allowed up to the toilet from the beginning and were encouraged to be ambulant from the second day onwards. Occasionally it was hard to get relatives to accept that early mobilization was important, but all co-operated well to this end when the reasons were given. Altogether the whole process was accepted very naturally by patients and relatives.

Discussion

The advantage of saving hospital beds by this method of dealing with operative cases is obvious. How then does it affect the patient and the general practitioner? With regard to the patient there are two apparent disadvantages. Firstly, he will travel by ambulance within a few hours of having had an operation. He will also be at home without the constant presence of professional medical aid. In practice these objections appear to be more theoretical than real. With adequate sedation before leaving hospital all the patients we dealt with had a relatively comfortable ride home. When at home they were seen by one of us within a short time and any complications were looked for. Sedation was given if required and the

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patients felt secure in the knowledge that one of us could be obtained in an emergency in a relatively short time. Constant supervision by either doctor or nurse in the follow-up period was prophylactic.

In what way can the patient benefit from this procedure? There appear to be two main advantages. First of all, the waiting-time for operation is greatly reduced and the date of operation can be fixed when he is first seen as an outpatient. Both these factors are of distinct economic and social advantage to the patient, who can plan his life accordingly, instead of waiting for some vague time ahead. Secondly, he can be nursed in familiar surroundings by people he knows, and this has a good psychological effect. Also he does not occupy a hospital bed for several days, and therefore does not have to share communal care. Hospitals hold a real fear for some persons, and early return to familiar surroundings is greatly appreciated.

As regards the general practitioner, he will obviously be involved in more work, and in these days of diminishing medical manpower anything which increases his work-load should be looked at critically. Whether a doctor can cope with this depends largely on his individual commitments and practice arrangements. We personally belong to a group practice

of four doctors and find that our arrangements are such that we can easily cope with these cases. In practice the extra work is minimal (involving little more visiting than, say, a case of measles). Anything which increases a general practitioner's clinical responsibility will indirectly make him a better doctor, and we feel that looking after these patients widens our horizon, however slightly.

Altogether we feel that there is a very real place in the National Health Service for this type of procedure, but believe that this depends on trust between surgeon, general practitioner, and patient.

To conclude, we would stress that these cases can be successfully undertaken only if the following criteria are observed: (1) there should be a high standard of co-operation between surgeon, general practitioner, nurse, and patient; (2) there should be good communication between hospital and general practitioner; (3) the general practitioner should be willing to visit, probably at an inconvenient hour; (4) the general practitioner should make doubly sure that his deputizing arrangements are adequate and that the patient is aware of them; and (5) the selection of the type of patient should be primarily the responsibility of the general practitioner, whereas the selection of the type of operation should be the surgeon's responsibility.

NEW TECHNIQUES

Haemagglutination-inhibition Tests for Rubella

Dr. C. C. DRAPER and Mr. A. KELLY, Wellcome Research Laboratories, Beckenham, Kent, write: The estimation of serum antibodies is essential in the assessment of exposure to rubella during pregnancy (Banatvala, 1968), and also for the evaluation of candidate vaccines against rubella. The determination of haemagglutination-inhibiting antibodies has been found to be as sensitive as other methods, and has the advantage of speed and comparative simplicity (Field *et al.*, 1967; Lennette *et al.*, 1967; Stewart *et al.*, 1967). In some instances a feasible method for the use of capillary blood may have advantages over venepuncture, while in other instances a convenient way of storing small quantities of whole venous blood may be of value, especially if there is likely to be delay in the separation of the serum and transmission to the virus laboratory. The successful use of blood collected on absorbent paper has been described for the estimation of antibodies to several viruses (Brody *et al.*, 1964), and the method described here has been found satisfactory for rubella.

METHOD

Whole capillary or venous blood was collected by two methods. In one method discs of Whatman No. 3 chromatography paper, 21 mm. in diameter, were saturated with blood by applying them to a finger-prick or allowing blood to drop on to them. They were left to dry for an hour on a clean flat surface and were then put into labelled envelopes and stored in a refrigerator at about -20°C . One disc was found to

absorb about 0.12 ml. of blood; this was eluted overnight at 4°C . in 0.6 ml. of isotonic saline, and was then wrung out with fine forceps. About 0.5 ml. of fluid so obtained was taken as a 1/10 dilution of serum.

In the other method blood was allowed to drop from finger or syringe on to 11-cm. pieces of Whatman No. 3 filter paper, which is very similar to chromatography paper, to form several blots, each a few centimetres in diameter. It was found by experiment that a circle of 6 mm. diameter was equivalent to 0.01 ml. of blood, and it was usually possible, with a paper punch, to cut 20 such circles, which were eluted in 1 ml. of isotonic saline to give a 1/10 dilution of serum. If fewer circles only could be cut they were eluted in a suitably smaller volume. Wringing out of the circles was easily done by squeezing them in a disposable 1-ml. syringe. Though it was more difficult to obtain adequate samples from finger-pricks by using the large pieces of filter paper rather than the smaller discs, the former were easier to dry and handle.

For the removal of non-specific inhibitors of haemagglutination a method suggested by Plotkin *et al.* (1968) similar to one described for reovirus serology (Mann *et al.*, 1967) was found to give clearer preparations than kaolin extraction (Stewart *et al.*, 1967). The disc eluates were heated at 60°C . for 30 minutes, and then to 1 ml. was added 0.05 ml. of 1 M manganous chloride and 0.05 ml. of a solution of heparin containing 4,000 units per ml. The mixtures were allowed to stand for 20 minutes at 4°C ., when a precipitate was formed, and were then

centrifuged at 2,000 g. for 20 minutes. The supernatant fluid was removed and 0.05 ml. of 50% pigeon erythrocytes was added. After standing for 60 minutes at 4°C . the mixtures were again centrifuged to remove the erythrocytes, the supernatant fluid being taken as the 1/10 dilution of serum.

The haemagglutination-inhibition tests were done by standard methods (Stewart *et al.*, 1967), with twofold dilutions of the serum preparations, made with microtitre apparatus and 0.025-ml. volumes, and these were incubated at 35°C . for 20 minutes with 8 units of haemagglutinin prepared in these laboratories by Tween-ether treatment of rubella virus grown in BHK 21 cell tissue cultures. Instead of day-old chick erythrocytes, however, 0.19% pigeon erythrocytes was added, the plates being left at 4°C . for about one and a half hours and then at room temperature for about half an hour for the cells to settle before reading. Because they retained the dark colour of haemolysed blood it was difficult to obtain clear results with the 1/10 serum dilutions from the paper samples, and the lowest dilutions tested were 1/20.

RESULTS

Through the kindness of Dr. A. H. Griffith of these laboratories, venous blood samples were obtained from 55 adults, of a wide range of ages, living in this area. Discs of 21 mm. with capillary blood were also taken from some, while for all a portion of