Direct access carpal tunnel surgery

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Carpal tunnel syndrome is a common condition and clinical diagnosis is often easily made. A system of direct referral for day-case carpal tunnel surgery was introduced. General practitioners, physicians and surgeons were advised of the service and the criteria for referral, which included female patients with bilateral symptoms and physical signs, and some response to conservative treatment. All patients were reviewed preoperatively by the senior author (GEBG). The service was an alternative to standard outpatient referral.

A total of 51 patients was seen. Two were refused surgery. In all those who underwent surgery, the symptoms either resolved or were improved. The service was well received, although some patients felt that they were poorly informed preoperatively. The mean waiting time for surgery was reduced by four months and the patients avoided an outpatient appointment.

Direct access day-case carpal tunnel surgery works well by reducing delays and the costs of treatment. Adequate patient information is important to make the best of the service.

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Direct access surgery involves the direct referral of patients by their general practitioner (GP) for operation or interventional investigation, bypassing outpatient or preadmission clinics. Eligible patients tend to be fit with a surgical or medical condition which presents little diagnostic difficulty. Direct access surgery has been used for a number of surgical conditions, such as inguinal hernia and varicose vein surgery.

Carpal tunnel decompression is an operation which is commonly performed; 32 465 were undertaken in England between 1995 and 1996.1 It can be carried out under local anaesthetic. Retrospectively, it appeared that when GPs referred patients confidently with a diagnosis of carpal tunnel syndrome, they were usually correct. A pilot study was undertaken, therefore, to assess the viability of direct access carpal tunnel surgery.

Patients and Methods

Before the start of the study, local orthopaedic consultants, physicians and GPs were consulted. Participation in the study was voluntary and it ran concurrently with routine referral to outpatient clinics. The GPs were given patient information sheets and questionnaires to be filled out for each patient who was referred (Table I). The questionnaire served two purposes:

To remind the practitioner of the criteria required for referral and;

To allow the consultant to screen patients’ suitability for direct access surgery before their names were added to the

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<th>Table I. Clinical criteria for referral to direct access carpal tunnel surgery service</th>
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<td>1) Patients must be female</td>
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<td>2) Symptoms should be bilateral, but it is unnecessary for both sides to be symptomatic enough to require release (the GP, in consultation with the patient, should decide in advance upon unilateral or bilateral carpal tunnel release at the one attendance)</td>
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<td>3) There must be a history of paraesthesiae in the median nerve distribution with regular night waking</td>
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<td>4) The night waking must have been relieved, in part, by a futura wrist splint</td>
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<td>5) Examination must reveal at least two of the following features:</td>
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<td>a) reduced sensation in the median nerve distribution</td>
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<td>b) wasting of abductor pollicis brevis</td>
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<td>c) a positive Tinel’s sign</td>
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<td>d) a positive pressure test</td>
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<td>e) a positive Phalen’s test</td>
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<td>6) Many GPs will inject the carpal tunnel of patients with carpal tunnel syndrome, which can often provide short-term and sometimes even long-term benefits. It is a useful diagnostic aid, since a beneficial response to steroid injection is a significant positive finding in carpal tunnel syndrome</td>
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Any patient who does not quite fulfil the above criteria, but who has had a significant response to steroid injection, would be considered upon completion of the above questionnaire and its review. Diagnostic advice is available by telephone contact.
waiting list. If the details were inadequate, more were sought or the patients seen in the clinic.

For the purposes of the study the senior author (GEBG) reviewed each referral before adding the patient to the waiting list. Open carpal tunnel decompression was performed under local anaesthetic by orthopaedic registrars or consultants. The outcomes of surgery and patient satisfaction were assessed by means of telephone interviews six months or more after surgery. These were performed independently of the treating surgeon (by MEDJ).

Results

Fifty-one patients with a mean age of 49.1 years (24 to 83) were referred and accepted for direct access carpal tunnel surgery during the 18 months of the study. Bilateral operations were carried out on 21 patients, 16 as a one-stage procedure and five as two procedures at their request, and 28 had unilateral operations. The mean time from referral to surgery was 6.9 months (1.5 to 15). This was partly determined by the financial arrangements for treatment. During the period of the study, patients seen in the clinic waited, on average, four months longer for their operation. Following consultation in the day unit, two patients (4%) did not undergo an operation. In one patient, the diagnosis was considered incorrect and this was confirmed subsequently with normal neurophysiology. The other had mild and regressing symptoms and surgery was considered unnecessary.

When reviewed six months after surgery 37 patients had complete and 12 had partial resolution of symptoms. At one-year follow-up by telephone, a further five had complete resolution of symptoms and two could not be contacted.

At follow-up, 41 patients (80%) said that they would have their referral handled in this way again, nine (18%) were unsure and one would not. Lack of preoperative information was the cause of the latter’s dissatisfaction and was also expressed by 19 other patients.

Discussion

Of the patients who underwent direct access carpal tunnel release, 80% were satisfied with their referral and treatment. This is similar to previous studies of such surgical procedures as hernias, varicose veins and skin lesions.2,3

Dissatisfaction resulted from lack of preoperative information particularly relating to whether one or both carpal tunnels would be released in patients with bilateral symptoms, and on the type of anaesthesia to be used. Only three patients recalled having been given a patient information sheet, although this was issued to all GPs. Previous direct access surgery studies have stressed the importance of detailed information leaflets for patients and practitioners, so that both the patient and consultant can feel confident that the correct advice has been conveyed.

Two patients (4%) were cancelled when seen in the day surgery unit. This compares with the reported cancellation rates for direct access general surgery of 2.8% and 15.2% in studies from Stafford2 and South Tyneside,3 respectively. The majority of the surgery in these studies was carried out under general anaesthetic and a higher cancellation rate would be expected.

Misdiagnoses of the condition occurred in only one patient (2%) compared with 0.9% and 1.1% in the Stafford and South Tyneside studies, respectively. The correct diagnosis was made in each case, as shown by either complete or partial resolution of symptoms. Carpal tunnel syndrome is, however, more difficult to diagnose than inguinal hernias or varicose veins and these results highlight the need for strict diagnostic and selection criteria, which may be easily followed by GPs in order to avoid inappropriate referrals.

Direct access surgery for carpal tunnel syndrome in this study saved the patients an outpatient visit, and reduced the time from referral to surgery by four months. This decreased the time off work for those in occupations and the duration of symptoms for all the patients. The costs and pressure on outpatient clinics were also reduced. The decrease in time from referral to surgery may reduce the long-term morbidity from carpal tunnel syndrome.4,5 The outcomes correlate well with those achieved with conventional referral with complete resolution of symptoms in 80% to 90% of patients at one year.5,6

The pilot study has highlighted the need for changes. The information sheet has been modified and its use will be reviewed. In order to ensure that all patients receive appropriate information, this will be sent by the day surgery unit upon receipt of the referral. As this is a new service, GPs, neurologists and rheumatologists still need to be informed and reminded.

In summary, direct access carpal tunnel surgery is feasible. It benefits the patients as they have a shorter wait for surgery, the hospitals by reducing pressure on outpatient clinics and the healthcare budget by reducing costs. In order to make the best use of the service, it is essential that patients are fully informed preoperatively and GPs are well educated in patient selection.

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References