

One Stop Clinic for Minor Hand Surgery

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Abstract:

Historically, minor hand surgery usually took place after referral to a specialist (after a 13 week wait) with a subsequent time to surgery of 26 weeks. The objective of this prospective study was to evaluate the effectiveness and accuracy of referrals as well as the change in average waiting time with the implementation of a one stop clinic for minor hand surgery. Data were prospectively collected over eleven months. 161 patients were reviewed, having undergone operations for carpal tunnel syndrome, trigger finger, finger cysts and De Quervains' disease. The one stop clinic reduced waiting times from time of referral to surgery from 26 weeks to 12.6 weeks. The misdiagnosis rate was 3.1% and it was felt that the triage and referral mechanism were robust enough to prevent an excessive number of unnecessary or inappropriate referrals..

Introduction

Common hand conditions, including carpal tunnel syndrome (CTS), stenosing tenosynovitis and finger cysts, can usually be diagnosed clinically with subsequent surgery routinely performed as a day case. The number of carpal tunnel decompressions alone, undertaken in the UK between 2006 and 2007, was 52791¹. Patients with suspected hand conditions have previously waited an average time of 13 weeks prior to a specialist consultation and a subsequent 26 weeks to the time of their elective day surgery². The mandatory target of 18 weeks from the time of referral to completion of treatment has therefore been a significant challenge. The usual model is that a patient is seen in a clinic after referral by a general practitioner, placed on a waiting list, operated upon and then reviewed two weeks later. This requires three hospital visits with the attendant use of resources and inconvenience to the patients.

A one stop clinic permits consultation, diagnosis and operative treatment to occur on the same day³. Thus, the mean waiting time for the patients can be greatly reduced by avoiding the unnecessary outpatient appointments. In addition, this reduces clinic overload⁴, new patient throughput and hospital cost, while increasing patient satisfaction.

A one stop hand clinic was set up as an alternative to the existing system of referral and a prospective review was performed to assess the improvement to the service that these patients received. The objective of this prospective study was to evaluate the effectiveness and accuracy of referrals from primary care and other specialists, to orthopaedic specialist care in a rapid access clinic. In addition the average waiting time was assessed.

Patients and methods

The senior author (BDF) selected referrals on the basis that an operation would be appropriate. Inclusion criteria included pathologies that were amenable to surgery as a day case under local anaesthetic. Exclusion criteria were a low likelihood for surgery because of inadequate history or unclear diagnosis and anticoagulant treatment. Referrals with inadequate information or with a low likelihood for surgery were excluded. The referring doctors were not aware of the one stop clinic. The patients were sent a standard clinic appointment letter which mentioned that they must be prepared to have surgery on the day of their clinic appointment. This included a section that recommended that they should attend the clinic with a person able to drive them home if they had an operation, and that they may be off work for a short period.

The patients were seen and assessed in the one-stop clinic, adjacent to a purpose built day surgery unit. Clinical evaluation included examination of the hand, upper limb and cervical spine. If the condition was amenable to surgery it was undertaken in the same session. The template for the clinic/theatre session was for either four or five patients to be seen in the first hour with the next three hours being used for the procedures.

All procedures were performed under local anaesthesia. They were then discharged to have their sutures removed in Primary Care. An open door referral policy with experienced General Practitioner colleagues allowed for

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immediate orthopaedic clinic access if there were any post operative concerns in the community. Patients with bilateral carpal tunnel syndrome were rebooked for a subsequent decompression two months later. No further hospital appointments were made.

Patients not appropriate for surgery were dealt with by further investigations or appropriate referral. If they declined surgery on the day, they were discharged back to the referring doctor's care with the option of re-referral if necessary.

Data were prospectively collected and analysed at the end of the 11-month period. This included the source of the referral in addition to the time from referral to seeing them in the one stop clinic. Based on these, the elapsed times were counted in days and weeks, and mean waiting times were calculated.

In addition, the suspected diagnoses, as stated on each referral proforma, were noted and compared to the final diagnoses of the specialist clinic. This permitted the assessment of the quality of all referrals and therefore sensitivity of the referral process.

Results

A total of 161 patients with a mean age of 52 years (range 24–75) were seen in the clinic during the 11 month period. 94 (58%) were referred by a General Practitioner, 57 (35%) by a Rheumatologist, 10 (6%) by a Neurologist and 1 (<1%) by a General Surgeon.

There were a few cases that were not amenable to minor hand surgery and these were referred for either further investigation, nerve conduction studies (NCS), or to the Orthopaedic clinic. Table 1 shows the referral diagnosis and final outcome.

24 (13.9%) of patients who attended the clinic did not undergo any surgery or treatment. 11 (6.8%) of the patients declined any surgical treatment, whilst 4 (2.4%) of the patients experienced spontaneous resolution of their symptoms prior to their visit to the clinic. 3 (1.8%) of the patients were referred to other specialist clinics. Nerve Conduction studies were requested on 6 (3.7%) of the patients. 7 (4.3%) of the referred patients did not attend the clinic. Misdiagnosis (a significant discrepancy between referral and actual diagnosis) of the condition occurred in 5 (3.1%) of the patients. A further 3 were found to have additional problems/diagnoses. The average waiting time patients waited to be reviewed in the rapid access clinic for their hand conditions was 88.1 days (12.6 weeks).

Discussion

There was a correlation between those that the screening surgeon thought would benefit from the one stop clinic appointment and those that went on to have minor hand surgery. The triage system and referral mechanism were robust enough to prevent an excessive number of unnecessary or inappropriate referrals. The misdiagnosis rate of (3.1%) compares with previous studies of rapid access surgery⁵. To reduce this we would recommend that the referring doctor presents the patient with a leaflet and the number of a help line to better prepare patients

Table 1 Initial referral diagnosis and ultimate outcome.

Referral Diagnosis	Outcome	Number
Carpal Tunnel Syndrome 64 Unilateral, 51 Bilateral	Surgical Decompression	95
	Nerve Conduction Studies	3
	Operation Declined	10
	Resolved	2
	C6 Radiculopathy	1
	Osteoarthritis of hand	1
	Ulnar neuritis	3
Stenosing Tenosynovitis N=31	Surgical Release	29
	Operation Declined	1
	Injection	1
Finger Cyst N=5	Surgical Excision	3
	Resolved	2
	Referral to orthopaedic clinic	1
Osteoarthritis of the wrist N=1	Surgical Release	1
De Quervain's N=2	Nerve Conduction Studies	1

for an operation on the day of surgery. Such a document is currently being developed and it is hoped that it will be used both at time of referral by the GP as well as with the clinic appointment letter. This will contain information about the procedures as well as expected time periods off work per condition.

To prevent misdiagnosis education workshops for the referring doctor may help differentiate common neurological conditions such as CTS and ulna neuritis.

The one stop clinic reduced waiting times from time of referral to surgery from 26 weeks to 12.6 weeks. This reduction of 13.4 weeks greatly improved the hospital's ability to work within the framework of the 18 week referral to treatment target time. The number of hospital visits per patient were limited to one single visit thus reducing "clinic load" and pressure, with direct effects on the cost of managing each referral for treatment. The traditional model for minor hand surgery involves at least three contacts (four with further investigations) compared to the one visit in our clinic. Many outpatient and pre-admission clinic spaces were spared and could be used for other patients of alternative orthopaedic conditions. The reduced number of clinic attendances for each patient meant decreased time off work for those in employment and less disruption for those with children. By reducing the time from referral to surgery it is hoped that the long-term morbidity associated with CTS can be reduced⁶.

Although patient satisfaction was not assessed in this study, previous smaller pilot studies have shown high satisfaction rates amongst patients with similar outcomes in terms of reduction of waiting times^{7,8}. Furthermore, there were no complaints during the course of this study.

A possible criticism of the 'one-stop' approach is that by their nature, many minor hand problems resolve spontaneously. The presumption in this study is that patients have waited for improvement of the conditions and have turned to their General Practitioner or Rheumatologist for treatment after failed spontaneous resolution. A further comment regarding the use of

diagnostic neurophysiology must be made. Carpal tunnel syndrome was diagnosed clinically in all general practice referrals and augmented by neurophysiology in rheumatology and neurology referrals (3.7% of cases). The need for electrodiagnostic testing in the diagnosis of carpal tunnel syndrome is controversial^{9,10}, and was not the focus of this study.

In summary, the one stop clinic is a more convenient treatment option for patients and an effective method of optimising the hospital's work load. For the system to work the initial referral letter and the relationship between surgeon and referring practitioner must be excellent.

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