

# Direct access carpal tunnel decompression: Early evaluation of a new service

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## Abstract

A direct access carpal tunnel decompression (CTD) service was established at a satellite community hospital in rural Wales to minimise inconvenience for local patients and to reduce the orthopaedic outpatient and operating theatre workload for the main orthopaedic unit. The structure of the service is described together with an initial evaluation from the patients' perspective.

## INTRODUCTION

Carpal Tunnel Syndrome (CTS) is the commonest peripheral nerve entrapment neuropathy. Patients with CTS are often elderly and usually present with many months of debilitating symptoms and further delays prior to treatment may adversely effect outcome following surgery. Hereford County is a District General Hospital (DGH) that services a large and predominantly rural area including Powys in mid Wales. Orthopaedic outreach clinic and theatre services are provided at Community Hospitals throughout the catchment area. Previously, patients with suspected CTS were referred to an orthopaedic consultant and after an initial consultation were referred for limited Nerve Conduction Studies (NCS). They then had a follow up appointment to discuss the results and finally a further wait for definitive surgical decompression on the routine waiting list.

In order to reduce the delay from diagnosis to surgical decompression and to reduce the inconvenience of travelling long distances to the DGH for multiple hospital attendances, a Direct Access Carpal Tunnel Decompression Service was established in Llandrindod Wells Community Hospital in 2002. This report describes the structure of the new service and the results of a preliminary quality of service review that was conducted 12 months after service inception.

## METHODS

General Practitioners (GP) in the region were informed about the service and information booklets were provided. Female patients over 40 years of age who had classic symptoms of median nerve compression at the wrist and positive nerve conduction studies were referred to the

service (Table 1). A letter explaining the condition, treatment options and expected outcomes was sent to each patient. A date for surgery was offered directly from the community hospital. Patients attended on the day of surgery and underwent routine open decompression. All patients were given the alternative option of attending an outpatient consultation prior to surgery. All subsequent follow up was arranged through the local GP. Delay from diagnosis to surgery was recorded together with patient perceptions of the service, using a postal questionnaire. The mean delay from onset of symptoms to definitive surgery was compared with a cohort of 40 patients referred through the usual channels.

## Figure 1

Table 1: Inclusion criteria

Female	NCS +ve
>40 years	Normal neck
Tinel +ve	Non diabetic
Phalen +ve	Agrees

## RESULTS

The first 40 patients who used the service were included in the survey. 33 completed responses were received (78%). Of the respondees all 33 had undergone surgery using the direct access service. All had positive NCS performed prior to

surgery. The mean duration of symptoms prior to consulting the GP was 12 weeks (range 2-52 weeks). The mean delay before NCS was 9 weeks (range 4-16 weeks). The subsequent delay to surgery was 16 weeks (4-26 weeks). Patients using the direct access service experienced shorter waits overall than those referred using the normal channels.

Two patients described minor problems following surgery and these were dealt with by the GP. None were followed up at the hospital although 5 patients thought that it was necessary. 24 rated the service as excellent, 7 good and 2 satisfactory. Thirty one patients stated that they would be happy to use the service again.

**Figure 2**

Table 2: Cumulative mean delay (weeks) from 1 symptoms

	Direct Access CTS	Normal service
GP	12 weeks	11 weeks
OPA	-	33 weeks
NCS	21 weeks	53 weeks
OPA	-	61 weeks
Surgery	37 weeks	79 weeks

**DISCUSSION**

CTS is a common peripheral nerve entrapment syndrome and although diagnosis may be difficult or symptoms vague, a good proportion of those coming to surgery will have classical symptoms of nocturnal parasthesias coupled with the demonstrable clinical signs described by Tinel and Phalen. When NCS are also positive the specificity is high. Patients often experience delays at all stages of the diagnostic and treatment process and this study helps to quantify such delays. Overall patients waited more than twice as long for surgery using the conventional referral pathways compared with the direct access service, despite no

changes to the availability of NCS. Whilst some of the reduction can be explained by the omission of two outpatient consultations prior to surgery, it is possible that inclusion bias may have been a factor in the direct access group due to an increased level of awareness on the part of the GPs who were recruited to the study. It is also possible that prior to this study the GPs had instigated their own treatment protocols and therefore the patients may have been referred to the hospital after a period of failed conservative management. This would help to explain some of the delay from first GP consultation until NCS (Table two). Reviewing the data after NCS would eliminate these variables and it can be seen that the direct access group waited a mean 16 weeks (37 minus 21) compared with 26 weeks (79 minus 53). The direct access service also results in fewer outpatient consultations and if follow up is delegated to the GP, four appointments may be saved for each patient (2 preoperatively and the 2/52 and 6/52 postoperatively). This frees up time to see other referrals and improves efficiency.

Inevitably the service could not be extended to all patients with a final diagnosis of CTS but it is possible to expand the service using less stringent inclusion criteria (subject to audit) to further decrease the utilisation of orthopaedic outpatient services.

**CONCLUSIONS**

Direct access carpal tunnel surgery can be safely performed with excellent patient satisfaction in select patient groups when the necessary service infrastructure is provided.

**References**

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