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Short report

The Southampton Dupuytren's Clinic: audit of an effective multidisciplinary model

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Abstract

Introduction. The Southampton Dupuytren's Clinic (SDC) was preceded by a four-month period when the therapist accompanied the surgeon in Clinic to learn about Dupuytren's Disease (DD) and to develop a specific proforma to collect details of the patient, the condition and the planned treatment.

Methods. A special clinic was set up for general practitioner referrals for patients with DD. Each patient was seen by the therapist. A detailed history and examination were recorded on the proforma. Treatment options to include the outcome, risks and benefits of surgery were clearly explained, supported by a handout. The patient was then seen by the surgeon to arrange management.

Results. One hundred and ninety-four patients were allocated to the SDC. In all, 5% failed to attend; 8% had an alternative diagnosis made; 16% with DD were discharged as the disease was not advanced enough for intervention or the patient decided not to have surgery. The therapist then allocated 71% for surgical assessment. The surgeon, to efficiently allocate personnel and theatre resource, listed 22% for skin graft, 8% fasciotomy, 70% fasciectomy; 35% for consultant to perform, 35% for fellow/registrar to perform and 30% for the consultant to train the registrar.

Conclusions. We consider that triage and assessment of patients with DD is improved by a multidisciplinary approach: a hand therapist: to quantify deformity and functional deficit, explain the purpose, risks and outcome of surgery; and a hand surgeon: to decide the type and duration of surgery and the appropriate grade of surgeon.

Keywords: Dupuytren's, multidisciplinary clinic, audit

Introduction

With the political demands upon the National Health Service (NHS) in England to reduce waiting times, collaboration between hand therapists and hand surgeons should thrive.[1] If therapists can take on some of the outpatient clinic load, then surgeons can take on a greater surgical load. The role of extended scope therapists in the NHS has accordingly grown considerably over the past few years.[2]

Dupuytren's Disease (DD) is a very common condition providing a substantial proportion of outpatient and surgical workload, as well as postoperative therapy. This condition provides a good model for a proper multidisciplinary clinic. By appropriate allocation of their respective skills and time, the surgeon and therapist can provide a cost-effective, time-efficient, high-quality service.

We have previously demonstrated in our centre that patients with carpal tunnel syndrome can be effectively triaged by the hand therapist with no need for assessment by the surgeon.[3] A carpal tunnel operation is a standard surgical procedure that can be undertaken by a relatively junior trained surgeon with a predictable allocation of theatre time.

We believed DD to be a condition that is well suited to multidisciplinary management. The existing service was compromised with the surgeon having too little time within a 10-minute new patient slot to fully assess a patient, document all relevant information, discuss treatment and plan surgery.

In contrast with carpal tunnel syndrome, DD is a heterogenous condition. Some simple cords can be divided with a needle or small incision under local anaesthetic, a procedure taking just a few minutes and within the remit of a junior trained surgeon. However, other patients with a larger recurrent cord involving the skin with secondary joint contracture would need allocation of over two hours

of theatre time and the skills of an experienced consultant in hand surgery. Therefore, a triage clinic for DD should also be attended by the consultant to ensure appropriate allocation of surgical resource.

In this paper, we describe the development and outcome of the Southampton Dupuytren's Clinic.

Methods

Proforma development

For a four-month period, patients with DD were interviewed, examined and notes prepared according to traditional practice by the consultant hand surgeon. The therapist was then called from the nearby therapy room and the case was discussed. During this time a Proforma was gradually developed, piloted and finalized (Figure 1). The respective strengths and roles of the therapist and surgeon were clarified (Table 1). A specific Dupuytren's Clinic was then established on the hospital computer system, scheduled when both therapist and consultant were present. The therapist was relieved of hand therapy room duties during the time allocated for the Dupuytren's Clinic.

Dupuytren's Clinic

After four months, all general practitioner (GP) referral letters with a diagnosis of DD were read by the consultant and allocated to the Dupuytren's Clinic. The clinic was held once each month, attended by the consultant hand surgeon and hand therapist in adjacent rooms. The patients were seen by the therapist within a 30-minute allocated slot. The patient was then presented by the therapist to the surgeon, who saw them within an allocated five-minute slot.

The therapist completed the proforma; the thorough history and examination that this entailed, together with the explicit explanation of the risks, benefits and usual outcome of surgery by the therapist, meant that the patient was fully informed and consented and thus able to agree to surgery or choose to leave the DD untreated.

Ethics

This was a service development that re-allocated existing resource (clinic space, therapist time, consultant time) to improve efficiency. The results were audited as part of proper practice. Patient identifiers were not held on a computer database. Therefore Ethics Committee approval was not required.

Results

Clinic attendance

One hundred and ninety-four patients passed through the clinic during the period of this study (36 months). Five percent of patients failed to attend. A routine re-appointment was not made; the patient was asked to contact the clinic or the GP if they still wished to be seen (Figure 2).

Therapist assessment

The therapist made an alternative diagnosis in 8% (most commonly trigger finger or a flexor sheath ganglion). The therapist discharged 16% of cases, having discussed the diagnosis, reviewed the patient's symptoms and described the options for treatment. A specific policy was made not to review patients routinely. Instead, the patient was counselled to contact their GP for a new referral if and when they felt the DD had progressed and the threshold for surgical treatment as discussed was met.

Surgeon assessment

In all, 71% of patients were thought suitable for surgery by the therapist and the patients were fully informed of the expected outcome, recovery and risks of an operation. These patients were then discussed with the surgeon with a view to surgical treatment.

The surgeon then briefly met the patient and decided which operation was needed and what would be the most suitable grade of surgeon.

Type of surgery

The surgeon allocated 8% to a fasciotomy, 22% to a skin graft and 70% to a fasciectomy with or without a z-plasty (Figure 3).

Time allocation

Of the cases, 30% was allocated 30–45 minutes of surgical time, 40% between 45 and 75 minutes and 30% over 75 minutes (Figure 4).

Surgeon allocation

Of the cases, 19% was allocated for the consultant to teach, 36% for the experienced registrar or staff grade to perform and 46% for the consultant only (due to complexity, e.g. revision, severe deformity) (Figure 5).

In no case was the therapist's view, that surgery was appropriate, contradicted by the surgeon.

Discussion

A multidisciplinary clinic is a time-efficient and cost-effective way of delivering high-quality outpatient care. A condition such as DD is heterogenous, with a wide range of clinical presentation and functional restriction. Surgical treatment can be simple (percutaneous fasciotomy) or very complex (dermofasciectomy with full thickness grafting). It takes time to assess the patient's

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Dupuytren's proforma

Patient's Name .....DOB..... *Date: ----------*

Address: ---------- *cons ----------*

---------- *Occupation ----------*

---------- *Dominant hand Left Right*

Subjective findings

Duration of symptoms ---------- *Duration of PIP joint contracture----------*

Recurrent dupuytren's ---------- *Dupuytren's extension----------*

Date and nature of Previous Dupuytren's surgery ----------

Family history of Dupuytren's ---------- *Previous hand trauma ----------*

Plantar disease ------ *Peyronie's disease ------* *Alcohol intake Weekly units ----------* *Smoker ------*

Sensibility Normal Abnormal Monofilament test DASH score

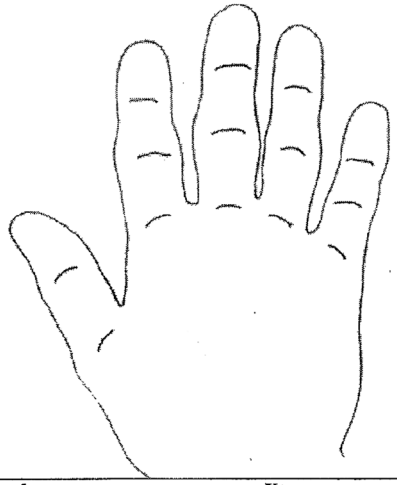
Objective findings ***Right hand*** ***Left hand***

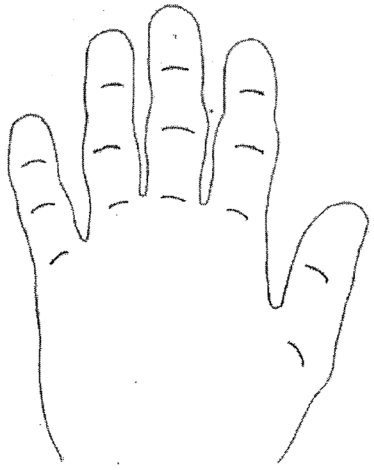
Record
Nodule
Cords and
Joint ROM

Sennwald Grade

Knuckle Pads

Skin Maceration





Sennwald Grade

knuckle pads

skin Maceration

PMH

Heart lung disorder	*Yes*	*No*	*If not for surgery review in therapist clinic*
Diabetic	*Yes*	*No*	
Epileptic	*Yes*	*No*	***Complications discussed:-***
Anticoagulants	*Yes*	*No*	*Scar contracture [ ] Wound infection [ ]*
Risk & Benefit sheet given to patient	*Yes*	*No*	*Dystrophy [ ] Nerve damage [ ]*
Refer to Consultant	*Yes*	*No*	*Recurrence [ ] Extension [ ]*

Surgical Procedure	***Recommended grade***	***Estimated time in theatre***
Fasciectomy	*Consultant*	*30 minutes*
		45 mins. *60 minutes*
Fasciotomy *Z plasty*	*Teaching*	*90 minutes*
		75 mins. *120 minutes*
FTSG	*Registrar*	*150 minutes*
Card filled----------	*Fellow*	

Consultant signature ---------- *Therapist signature ----------*

Figure 1 Dupuytren's clinic proforma

functional problems, to measure the deformity, as well as to discuss the postoperative management and potential outcomes.

A combined therapist–surgeon model works well for DD. However, the clinic is run differently from a Carpal Tunnel Clinic in which the condition and surgical treatment is fairly homogenous. In a Carpal Tunnel Clinic, the patient can be managed effectively and efficiently with just the therapist, who can put the patient directly onto a list.[3] In a Mallet Finger Clinic, the patient is seen first by a

Table 1 Roles of surgeon and therapist in Dupuytren's Clinic

Surgeon should assess:

- What operation is needed?
  - fasciotomy
  - fasciectomy
  - graft
- Who is the most suitable surgeon?
  - Consultant
    - Difficult case
    - Teaching case
    - Younger patient
  - Hand Surgery Staff grade
    - Z-plasty
    - Straightforward revision
  - Registrar
    - Simple fasciotomy
    - Simple fasciectomy
- What anaesthetic is most suitable?
  - GA
  - Block
  - LA
- Which operating theatre facility?
  - Day case
  - Overnight

Therapist's role:

- Detailed Assessment
  - What is the functional difficulty?
    - DASH
    - Free text
  - What is the deformity?
  - Range of movement
  - Distribution
- Education
  - Condition
  - Options for treatment
  - Explain surgery
    - Risks
    - Benefits
    - Outcome
    - Rehabilitation

surgeon; the type of mallet finger is decided and then the therapist provides the appropriate splint for the appropriate duration.[4] With DD, the surgical options and skills required are varied. This needs surgical expertise in the clinic for proper allocation of surgical staff.

In our catchment area, many patients with hand conditions are seen by therapists in community clinics without the presence of a surgeon. This model is inappropriate for DD, and indeed many other conditions, because those who need surgical advice need to be referred again, duplicating resources and delaying final treatment.[2,5] This delay, within an 18-week pathway from referral to definitive surgery, may incur substantial extra cost to the NHS as surgery must be performed so soon after assessment by the surgeon (that assessment having been delayed by previous separate assessment in a triage clinic), that extra surgical lists must be funded to provide the treatment.

Allocation from the point of receiving the GP letter is the most efficient way of managing this condition. The advent of anonymous clinic classifications dampens the opportunity to develop efficient multidisciplinary systems. Provision of condition-specific clinics that can be chosen and booked at the moment of GP referral should be strongly encouraged.

The data collected by the therapist in the Dupuytren's clinic can form a valuable source of audit and research; indeed, we have devised a scoring scheme for DD based on the Dupuytren's Clinic.[6]

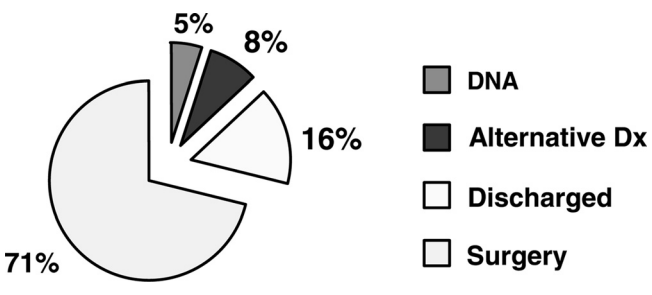


Figure 2 Clinic management by therapist

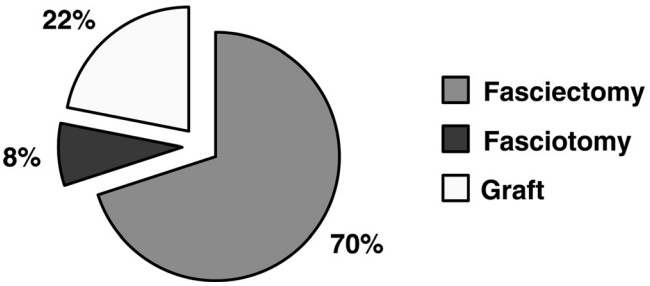


Figure 3 Type of surgery

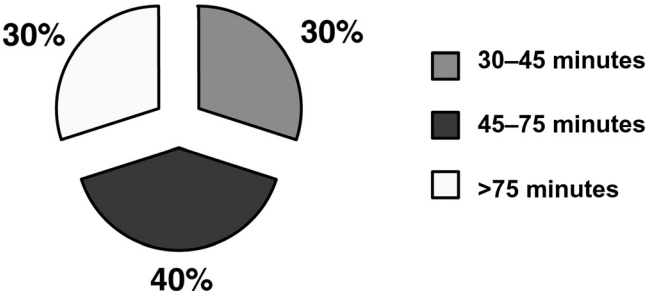


Figure 4 Surgical time required

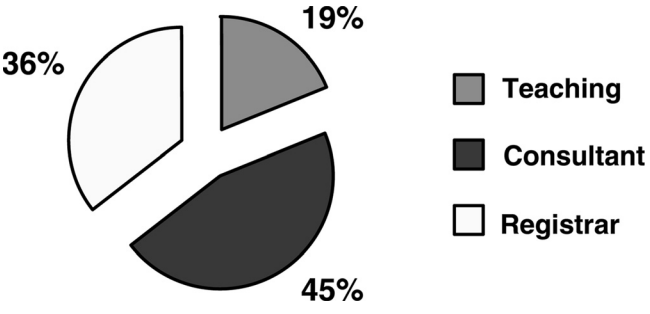


Figure 5 Grade of surgeon

Finally, a Dupuytren's Clinic offers the opportunity for 'just-in-time' surgery. The patient does not need to meet the surgeon until their condition is such that the functional defect and the patient's perception of the benefits (and risks) of surgery justifies an operation. The therapist can carefully and thoroughly explain this balance to the patient on initial contact in the Dupuytren's Clinic, inviting them to return only when they need. For those patients who are not certain, or who may need a further explanation, the therapist can offer a follow-up appointment at a suitable interval.

We plan to continue this clinic in the Teaching Centre and also to develop it within the multidisciplinary triage clinics held in smaller community hospitals. Further audit should include measurement of patient satisfaction, calculation of the total time spent with each patient and the accuracy of allocation of time and theatre resource.

The Southampton Dupuytren's Proforma is available to any reader on request by email to davidwarwick@handsurgery.co.uk.

Competing interest: None declared.

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References

1 Department of Health. *The NHS Plan: A Plan for Investment, a Plan for Reform*. London: The Stationery Office, 2000
2 Pearce EO, MacClean A, Ricketts DM. The extended scope physio therapists in orthopaedic outpatients: an audit. *Ann R Coll Surg Eng.* 2006;**88**:653–5
3 Warwick DJ, Belward P. Hand therapist-led Carpal Tunnel Clinic. *Br J Hand Therapy* 2004;**9**:23–7
4 Katsoulios E, Rees K, Warwick DJ. Hand therapist-led management of mallet finger. *Br J Hand Therapy* 2005;**10**:17–20
5 Rogers BA, Kabir C, Bradley N. An audit of orthopaedic referrals via Multiprofessional Triage teams. *Ann R Coll Surg Engl* 2008;**90**:671–4
6 Warwick DJ, Vadher J, Mohan A. The Southampton Dupuytren's Scoring Scheme. British Society for Surgery of the Hand Scientific Meeting, 2008

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Q2	Please check the sentence "This model is inappropriate for DD, and indeed many other conditions. . .. ." for sense clarity.	