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Primary care

A proposal justifying an alternative referral practice from primary care for three common hand surgery diagnoses

Frank D Burke, Mary J Bradley

A hand therapy primary care clinic offering advice on task modification at work and in the home and the use of splints was found to almost halve referrals of carpal tunnel syndrome from a single primary care trust. Dorsal ganglion aspiration and steroid injection for trigger digits can also be safely performed in primary care, further reducing the need for hospital care.

Wildin and others¹ compared hand surgery activity from two audits and identified a 36% increase in elective referrals between 1989/90 and 2000 (table 1). In such circumstances there is a need to optimise treatment in a

primary care setting to ensure referral is limited to those patients needing treatments, which require hospital facilities or expertise. Three elective hand surgery conditions are reviewed (carpal tunnel syndrome, ganglia, and triggering of

digits). Referrals with these diagnoses constituted 39% of the total in district referrals to a hand unit at the 2000 audit.

EASE OF DIAGNOSIS

Diagnostic difficulty in primary care is a common reason for referral to hospital. If more comprehensive treatment is to be offered in primary care for the three common hand conditions, diagnosis by a general practitioner (GP) without undue difficulty must be possible in most cases. As part of the 2000 audit, all local GPs were asked: "How difficult was it to diagnose carpal tunnel syndrome, triggering and ganglia?" The results from 201 GPs are shown in table 2. Triggering and ganglia were not considered to present much of a diagnostic dilemma, with carpal tunnel syndrome proving somewhat more difficult for a quarter of respondents. The three conditions are, in the main, readily diagnosable in primary care.

CARPAL TUNNEL SYNDROME

Referrals from primary care with a diagnosis of carpal tunnel syndrome have almost doubled over a decade from 59.7 per 100 000 of population per year in 1989/90 to 112 per 100 000 of population per year in 2000 (an 88% increase). It is the most common diagnosis referred to the unit. Burke and colleagues² in a literature review identified that there are modalities of treatment available in a primary care setting which may be helpful in controlling mild or moderate cases, for the short to middle term at least. These modalities include advice on task modification in the home and at work, posture and exercises, splints, and nerve and tendon gliding exercises. The questionnaire to GPs indicated that only a minority currently employ any of these techniques before referral.

Table 1 Changes in the 10 most common elective hand conditions

	Per 100000 population per year		
	1989/90	2000	% change
Carpal tunnel syndrome	59.7	112	+88
Ganglion (wrist and finger)	43.9	55	+25
Pains, sprains, DeQuervain's and tenosynovitis	25.6	36	+41
Osteoarthritis	12.7	34	+268
Dupuytren disease	32.5	33	+1.5
Trigger finger or thumb	24.2	28	+16
Swellings	14.6	24	+64
Ulnar neuritis	11.9	19	+60
Rheumatoid arthritis	8.8	8	–9
Congenital hand conditions	3.5	6	+71

Table 2 General practitioners' views on ease of diagnosis for three common hand conditions

	Strongly agree (%)	Mildly agree (%)	Neither agree/disagree (%)	Mildly disagree (%)	Strongly disagree (%)
Carpal tunnel syndrome is difficult to diagnose	2.5	20.1	19.6	44.7	13.1
Ganglia are difficult to diagnose	0	2.0	5.0	38.2	54.8
Triggering is difficult to diagnose	0	5.0	8.5	43.0	43.5

A pilot study was therefore set up by Storey and colleagues³ within a single primary care trust (Amber Valley PCT) to second an experienced hand occupational therapist to run carpal tunnel outpatient clinics in two community hospitals. The Pulvertaft Hand Centre (Haywood and others⁴) had previously developed a referral protocol for carpal tunnel syndrome. The authors, following discussions with GPs from the Amber Valley PCT, modified this referral protocol. Using this modified protocol, Amber Valley GPs selected patients for the hand therapy clinic. Patients with a diagnosis of mild or moderate carpal tunnel syndrome were given detailed information about the condition with advice on task modification at home and at work. Wrist splints were provided, holding the joint in a neutral flexion extension position that Gelberman and colleagues⁵ have shown minimises pressure within the carpal tunnel.

The primary care trust has a population of 128 000. The hand therapy clinic saw 75 patients with carpal tunnel syndrome over the trial 12 month period. Forty-two patients (56%) did not respond adequately to the splintage and advice on task modification, and were referred on to the hand unit. Thirty-three patients (44%) did not require referral to the hand unit. The 33 conservatively managed patients were reviewed at a mean of 23.9 months (range 18–30 months) after treatment. During this period only one patient had been referred to hospital for consideration of carpal tunnel decompression. If a similar scheme, without refinements, was employed in all primary care trusts in the health authority (adjusted for cross boundary flow), a minimum of 132 patients currently attending the hand unit new patient clinics would be satisfactorily treated in primary care in a more convenient and timely manner. Eight hand therapy clinics would be required a month for our population of 511 381.

DORSAL GANGLIA OF THE WRIST

Ganglia are the second most common referral to the hand unit, with a 25%

increase between the 1989/90 audit and 2000 (from 43.9 per 100 000 of population per year to 55 per 100 000 per year). Sixty-four per cent of ganglia were dorsal. GPs consider dorsal ganglia easy to diagnose (table 2) and are offering more for hospital treatment. However, surgeons have become more reluctant to operate on such cases as studies (including Burke and others⁶) have revealed a high complication and recurrence rate combined with a high spontaneous resolution rate, if left untreated. Reassurance, combined if necessary with repeated aspiration, is a reasonably effective treatment with minimal complications. Oni⁷ reduced the need for surgery to 12% of referrals by using this technique. Reassurance and aspiration can readily be performed in a primary care setting and if applied throughout the hand unit's primary care trusts would reduce referrals of dorsal ganglia from 35.2 per 100 000 of population per year to 4.2 per 100 000 per year. This would reduce dorsal ganglion attendances at the new patient clinics from 180 per year to 22—a reduction of 158 new patients.

TRIGGERING OF DIGITS

GPs consider they can identify triggering of digits without difficulty. Numbers attending the hand unit have risen 16% over the decade (1990–2000), from 24.2 per 100 000 of population per year to 28 per 100 000 of population per year. Splintage and non-steroidal anti-inflammatory medications are only of very limited benefit. Akhtar and colleagues⁸ consider steroid injections are effective at resolving triggering in approximately 70% of cases. Responses from the GP questionnaire indicate that only 21% performed steroid injections for trigger digits. If the remaining 79% of GPs had competence and confidence in injecting steroid for trigger digits (or referred to colleagues who did), more of these cases could be satisfactorily treated in a primary care setting. If a 70% success rate with steroid injection is assumed (a figure consistent with the available literature) and 79% of GPs are currently referring without injection, an additional 62 cases

currently referred to the hand unit could be satisfactorily treated in primary care.

Steroid injections to trigger finger can readily be demonstrated and practised on hand models. The Pulvertaft Hand Centre runs an annual 1 day course for GPs on common elective hand conditions, which includes skill sessions involving steroid injections into the flexor tendon sheath. Akhtar⁸ advises that some care is needed to avoid damage to the digital nerves to the border digits. Dorsal ganglion aspiration is better demonstrated in a clinic setting. The procedure gives rise to little in the way of complications and would very readily be performed in a primary care setting.

The hand unit saw 2644 in-district elective new patients at the time of the 2000 audit. Modest adjustments in primary care (a hand therapy clinic for carpal tunnel syndrome patients and additional skills for some GPs or therapists aspirating ganglions and injecting trigger digits) would reduce the number of referrals to hospital by 352, providing 13% of elective patients with a swifter local service. If these changes were introduced throughout England and Wales, 25 000 patients who currently attend district general hospital new patient clinics each year would no longer need to attend, with effective treatment available more locally.

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