Phytotherapy vs OTC and traditional herbalism

Herbal medicine: buy one, get two free

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In recent years, herbal medicine seems to have gone from strength to strength. However, not one but three types of herbal medicine exist—and we are confusing them at our peril.

The first form of herbal medicine is perhaps best called phytotherapy. It is the scientific face of herbalism and the area where reasonably good data are available.[1] In phytotherapy, we accept that one extract of St John's wort (*Hypericum perforatum*), for example, contains a multitude of pharmacologically active ingredients. Thus isolating one of them is often not the way forward. Instead, the whole extract is viewed as a single entity which can be standardised and clinically tested for one defined clinical condition. If all tests turn out to be positive, and the extract (for example. St John's wort) does demonstrably generate more good than harm (for example, alleviates symptoms without unacceptable risks), it can be used for one clearly defined condition (for example, mild to moderate depression). Phytotherapy thus closely follows the principles of pharmacotherapy. Like all drug treatment, phytotherapy requires knowledge and skills—for example, making a diagnosis and identifying the treatment that best suits the patient. Therefore it should be practised by clinicians with adequate experience. In some countries, such as Germany, many doctors have integrated phytotherapy into their practice.[1] In most other countries, very few healthcare professionals use this approach.

THE OTC MARKET

The second form of herbal medicine refers to the hugely popular over-the-counter (OTC) market of plant-based preparations currently sold as dietary supplements. In 2003, Europeans spent US$5 billion (£2.53 billion, €3.75 billion)on OTC herbal medicines.[2] This OTC herbalism can be viewed as the offspring of phytotherapy which has outgrown its parent. Inspired by the success of phytotherapy (for example, St John's wort for depression), the popular media relentlessly promote a seemingly endless range of herbal extracts.[3] The vast majority are not supported by scientific evidence.[4] This is the first major contrast to phytotherapy. The second is the absence of patient–clinician interactions. Customers buy OTC herbal supplements without consulting any healthcare professional; their impetus and ''knowledge'' usually comes from what the popular media report. Sadly, this is less than reliable.[3 5] The OTC sector is therefore plagued by uncertainty on several levels: unreliable information, poor quality of the product, lack of evidence of efficacy or safety.[6] It seems obvious therefore that the OTC sector can put consumers at serious risk.

TRADITIONAL HERBALISM

The third form of herbal medicine is the one practised by traditional herbalists worldwide. In the UK about 1000 herbalists are currently registered.[7] Worldwide, this figure goes into several hundred thousands.[8] In Britain these clinicians are largely unregulated, but statutory regulation is on its way.[9] It was clearly boosted by the scientific evidence that emerged from phytotherapy. But few people appreciate that phytotherapy and traditional herbalism are like chalk and cheese. Traditional herbalism has nothing to do with the fact that St John's wort, for example, has been shown to be effective for depression. Traditional herbalists do not even think in conventional disease categories and hold beliefs abandoned by the rest of medicine 200 years ago—a ''damp'' and ''cold'' condition requires a ''dry'' and ''hot'' remedy, for example. The medicine prescribed by traditional herbalists would typically not be an extract of a single herb but an individualised mixture of several plant extracts.[10] The composition of this mixture depends on the characteristics of each individual patient. Thus, 10 patients with the same condition could get 10 different prescriptions. Neither the diagnostic validity nor the clinical effectiveness of this approach are well-investigated. Only two randomised controlled trials (RCTs) of individualised herbalism have ever been published—and both of them failed to demonstrate the superiority of this approach over placebo or standardised herbal treatment.[11 12] As traditional herbalists use mixtures of multiple extract, safety issues are much more critical than in phytotherapy. The potential for toxicity, herb drug interactions, contamination, or adulteration increases in parallel with the number of plants in the mixture. Today there is not a shred of scientific evidence to demonstrate that traditional herbalists do more good than harm.

The implications of all this seem obvious. If we want to maximise the benefits of herbal medicine, we should support the approach of phytotherapy and continue to investigate this area with scientific rigour. Unfortunately the Traditional Use Directive, in an attempt to protect consumers of OTC herbal medicines from unsafe products, eliminates all incentives for conducting research on the efficacy of herbal extracts. Under the directive, registration of a herbal medicine does not require proof of efficacy.[13] This clearly decreases the likelihood of scientific progress and increases the risk: ''without evidence of efficacy, it is hard to judge the safety of herbal medicines''.[14] In the past, progress in phytotherapy has contributed to a general acceptance of the two other types of herbal medicine. Traditional herbalists will thus be regulated by statute in the UK.[9] But do the regulators realise that virtually none of the scientific evidence in the realm of phytotherapy is applicable to traditional herbalism? Are they aware of the fact that only two RCTs of this type of herbalism exist and that their results are not supportive of this approach?[11 12]

MINIMISING THE RISKS OF HERBAL MEDICINE

If we want to minimise the risks of herbal medicine we should think of ways to limit the damage done by those who issue irresponsible advice in this area.[15 16] In particular, health writers should be reminded that the promotion of nonsense is not entertainment but puts people at risk.[15] In these days of political correctness few doctors or scientists dare to speak out against such abuse—but in the interest of public safety we should. We should challenge false or unsubstantiated health claims whenever we see them—in our daily papers,[16] in windows of the Chinese herbal shops in our high streets, and even in government-supported, semi-official patient guides.[17]

Clearer distinction of the three types of herbalism is urgently needed: phytotherapy has considerable potential for benefit, while OTC herbalism and traditional herbalism can harm those who use them. Without these distinctions we will fail to advance our knowledge about the potential benefits of herbal treatments. More crucially, we will also fail in our foremost duty—to protect the public from treatments that cause harm.

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Primary care

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

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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 others[1] 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.

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

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 colleagues[2] 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 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 colleagues[3] 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 others[4]) 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 colleagues[5] 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 others[6]) 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. Oni[7] 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 colleagues[8] 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. Akhtar[8] 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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