From traditional herbalism to modern phytomedicine

Many of medicine's most potent drugs were originally isolated from plants. Aspirin was derived from the bark of the willow tree, digoxin from the leaf of the foxglove and Intal from the fruit of *Ammi visnaga*. Today pharmaceutical companies run large screening programmes to identify new active compounds from herbs. However, when it comes to acknowledging that phytotherapy, medical treatment with remedies derived from plants, can be a useful addition to our modern therapeutic repertoire, many of us remain unconvinced: British GPs, for instance, judge herbal remedies as the least effective of all major complementary therapies (White et al, 1997).

Each medicinal plant contains a multitude of constituents. Often it is unclear how many of them are pharmacologically active and in exactly which way. In some instances we cannot even define what the active ingredients are. Thus our understanding of whole plant pharmacology, pharmacokinetics or mode of action is usually incomplete. Therefore a critical attitude might well be justified: why should we consider using such insufficiently understood medicines?

CONSUMER POWER

One politically correct but not very convincing answer is that consumers have engaged themselves in a romance with almost anything promoted as natural or 'green'. A recent survey from Germany suggests that 65% of the general population use natural remedies (Häusermann, 1997). The most impressive statistics come from the USA where, between 1990 and 1997, the usage of medical herbalism has increased by 380% (Eisenberg et al, 1998). Sales in 1997 amounted to more than $350 million (Brevoort, 1998). Physicians, however, remain unimpressed and rightly insist on proof that, for a given condition, a given phytomedicine is more than a placebo.

GOOD CLINICAL DATA

Few doctors are aware that relatively compelling data from systematic reviews exist. A meta-analysis of St John's Wort as a treatment of mild to moderate depression, for instance, suggested that it is more effective than placebo and probably as effective as conventional antidepressants with fewer adverse effects (Linde et al, 1996). A recent systematic review concluded that long-term medication with Ginkgo biloba might be helpful in delaying the clinical deterioration of Alzheimer's disease and multi-infarct dementia (Ernst and Pittler, 1999).

Further analysis suggested that peppermint is a promising symptomatic treatment for irritable bowel syndrome (Pittler and Ernst, 1998a), that saw palmetto is helpful for benign prostate hyperplasia (Wilt et al, 1998), and that horse chestnut seed extracts can ease the symptoms of varicose veins (Pittler and Ernst, 1998b). This listing of powerful evidence from systematic reviews could easily be continued and is by no means exhaustive*.

ARE HERBAL REMEDIES UNSAFE?

Even though compelling to some, such data are unlikely to convince sceptics. They may ask, why use botanical remedies which are associated with so many 'unknowns' when much better researched synthetic drugs are available? The reason could be that plant-based remedies are safer. In fact, the public is often led to assume that natural can be equated with harmless. But not all herbal remedies are safe, and the fact that one particular herb has been in use for millennia is a notoriously unreliable warranty.

The problems range from direct toxicity of certain medicinal plants to contamination of herbals with toxic substances or misidentification of specific botanical ingredients and complex interactions between herbal and conventional drugs (Ernst and de Smet, 1996). Some herbal products have been associated with serious incidences, even deaths. Vigilance and proper control of the market are therefore mandatory. Other herbal treatments are almost entirely devoid of adverse effects. Compared to conventional antidepressants, St John's Wort, for instance, is associated with only about half the incidence of adverse effects (Linde et al, 1996). Ginkgo biloba has an incidence of unwanted side-effects comparable to placebo (Ernst and Pittler, 1999).

So some phytomedicines have been demonstrated to do more good than harm, but will this convince the sceptics? At a time when money has become a limiting factor in health care, the ultimate argument could turn out to be costs. Again generalizations are not possible, but many plant remedies are, in fact, cheaper than their synthetic competitors. Proponents of medical herbalism would further point out that fewer adverse effects would also represent a saving in real terms.

WE NEED BETTER EVIDENCE

However, there is an indisputable paucity of evidence and we require more in-depth, rigorous cost evalua-

*A full list can be obtained from the author.

tions to substantiate the notion of cost-effective phytotherapy. With certain plant species, we also need to be aware of environmental issues like over-harvesting. In searching for new plant-based treatments we often rely on indigenous knowledge. Therefore we must also find ways of sharing the profits of such work with those who donated their expertise in the first place.

Almost unnoticed by many physicians, traditional herbalism has matured into modern phytotherapy. Even though many questions remain to be answered, we do know that certain (but by no means all) botanical drugs are safe and effective for certain conditions. Physicians might profit from considering this evidence with an open mind. Modern phytomedicine is not a step back towards the dark ages of mysticism; it has the potential to harmonize the demands of our patients with the needs for evidence-based treatment. HM

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KEY POINTS

- Physicians often have a disregard for medical herbalism.
- Consumers are voting with their feet and wallets in favour of it.
- Recent evidence from systematic reviews is in favour of some herbal remedies.
- Not all herbal medicines are free of side-effects.
- The area of herbal medicine deserves rigorous scientific investigation.

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