Community Clinics in Clinical Pharmacology

Compliance with drug treatment

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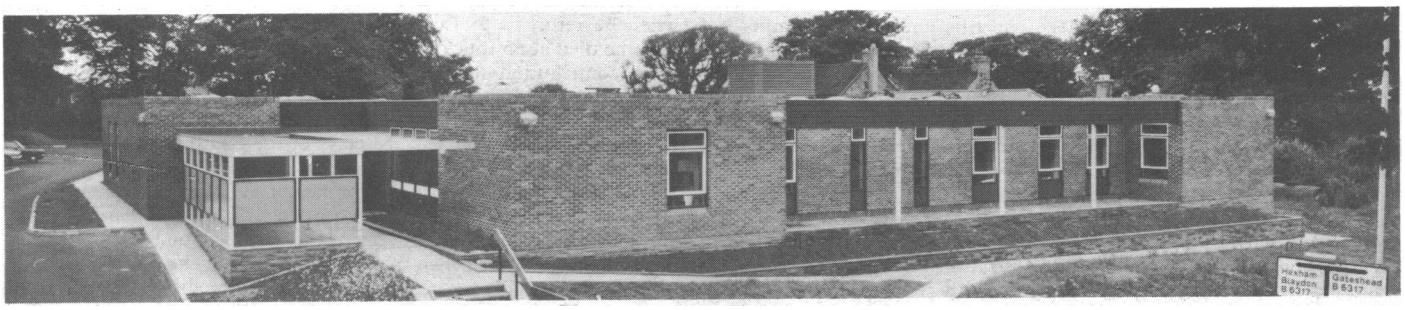

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Problem

We are told that many patients do not take their drugs in the way they have been prescribed. Yet very few patients will admit to this. How can we spot them and what should we do when we have?

Advice

We know from numerous studies that there is no area of therapeutics where good compliance can be guaranteed. Estimates of the size of the problem vary according to the type of patient studied, the disease, and the treatment used, but it is now widely accepted that at least half of patients receiving drugs will deviate appreciably from the prescription.

Methods available for measuring compliance include the assay of drug metabolites or tracer substances in biological fluids, and indirect assessment by patient interview or tablet count. No single method is entirely satisfactory: direct assays seldom give an overall idea of behaviour and indirect measures are prone to error and bias. The aim is to obtain an estimate of the ratio between tablets taken and tablets prescribed, and a discreet tablet count remains the most practical method. One possible alternative for patients receiving continual repeat prescriptions, which agrees well with tablet counts made in the home, is a careful cumulative record of all tablets prescribed. The actual demand for tablets over a period compared with the number that should have been needed provides a measure of compliance about which the patient need know nothing. Whichever method is used, deviation of more than 10% (in either direction) from the prescription is generally assumed to indicate patient error rather than methodological inaccuracy.

Once poor compliance has been diagnosed the cause (or causes) must be discovered before it can be improved. When treatment has recently been started or changed, the commonest reason for poor compliance is *misunderstanding of the doctor's instructions*. This can be overcome (or better, prevented) by making sure that whenever a new prescription is issued the patient is given a clear explanation of how to follow it.

Often, however, despite adequate understanding when the treatment began *deliberate alteration of dosage* occurs: there are several reasons for this. Some patients believe that once they start to feel better, the treatment can either be taken "as required" or stopped altogether (epileptics whose seizures have been controlled are particularly apt to gamble in this way). Patients with symptomless disease such as uncomplicated hypertension also fall into this category. On occasions treatment is stopped because the patient is concerned about habituation. Alternatively, new symptoms may be ascribed, rightly or wrongly, to the treatment, and this leads to alteration of dosage.

Undoubtedly compliance gets worse as the complexity of the treatment increases. Lengthy prescriptions and more than two doses daily are frequent causes of error—usually due to *confusion and forgetfulness*. Treatment can almost always be simplified, which may have a dramatic effect upon compliance, and the timing of doses can be adjusted so that this coincides with regular events in a patient's daily life.

Some patients remain forgetful despite reorganisation of treatment, and they need some form of memory aid. Written instructions about dosage with a check list in the form of a diary/calendar have proved useful, although the problem can often be overcome by putting single dosage units in a prominent place and checking they have been taken at the end of each day. For the patient who is prepared to replenish them, pill-boxes with compartments (Pillsure, Dosett, Mediset, Medidos) may

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be invaluable, although in the elderly these containers tend only to confuse.

The *elderly patient* with failing eyesight or memory and the mentally ill or handicapped need special attention. Here, supervision of medicine-taking is the only sure answer, and this can usually be arranged with a relative or neighbour.

Postscript

Compliance was assessed in a sample of AS's elderly patients (81 in total). Tablet counts in the patients' homes showed that only 27 (33%) were taking all of their drugs as prescribed. AS is trying to increase this percentage.

MATERIA NON MEDICA

No middle way

The informative contribution on bookbinding by Dr Peter Beattie (27 January, p 241) tempts me to make the following point relating to an aspect of this craft and of its sister craft of printing.

Lettering on the spine of a book—the title and author's name—should, if possible, be positioned transversely. If the lettering is simply too long to appear transversely, even in small type, it must run from bottom to top of the spine, and not inversely. When books with correctly applied longitudinal lettering are housed in a bookcase one walks along the shelf (ideally from left to right) reading the lettering from the bottom to the top. Let others explain why this is the "natural" way for head, eyes, and neck. It is certainly the right way, and violation of it a departure from tradition.

Similar remarks can be made with regard to illustrations, tables, and their captions within the book itself: illustrations should be positioned transversely—parallel to the lines of type. With "tall" illustrations, no problem arises. If "squat" illustrations have to be positioned at right angles to the lines of print the left-to-right axis of the illustration must run from bottom to top of the page. This applies whether the illustration is to the right or left of the central gutter, and whether, in the opened two-page spread, both pages or only one carry illustrations: if a squat illustration is to the left of the central gutter, it "sits" on it; if it is to the right of the central gutter, it "hangs" from it.

To this day, in Continental countries lettering on spines and squat illustrations to all intents and purposes never depart from this basic rule. The Americans, on the other hand, consistently and systematically reject this rule, as far as titles on spines are concerned, and all of them run from top to bottom. The supposed rationale for this is that, when books are stacked on a shelf, the lettering on their spines is automatically "the right way up" and immediately readable—an argument scarcely weighty enough to overturn the traditional norm.

The Americans follow a false principle, the Continentals a true one. We British, on the contrary, abjectly priding ourselves on our pragmatism and our freedom from "constrictive dogma," also pride ourselves on disdaining consistency and on throwing principle to the winds. The result, as far as book spines are concerned, is that only in Britain is there total—and to our shame, blissfully unconscious—chaos. Whereas in a Continental library heads tilt left and, in an American one, they tilt (unnaturally) right, in Britain they tilt left and right, madly and without rest as if at Wimbledon. This recalls the remark of the bewildered French ambassador to the Court of St James in the reign of Elizabeth I: "In my country, they hang Protestants; in Holland, they hang Catholics; in this country, they hang Protestants and Catholics!" A fitting comment on Elizabeth's fatuous policy of the "Middle Way"!

The muddleheadedness of the British at least implies the possibility of redemption. Until recently British binders and printers knew and followed the European tradition; only unawareness (at least in the case of the non-revolutionary majority) led to its neglect. (It seems now, as often as not, to be no more than a matter of chance.) Let us therefore once again take thought about the matter, and right-mindedly re-espouse a tradition that in every sense is ours.—WILLIAM STODDART (medical adviser, London).

Doctor Young

"Thomas Young, MD, the marvel of his age," as he was described in Munk's Roll of Fellows of the Royal College of Physicians of London, was born in 1773 and while still a medical student of 21 was elected FRS. He had discovered that visual accommodation was due to curvature of the lens. His simultaneous conclusion that changes in curvature were due to inherent contraction of lens tissue was not refuted in time to prevent his election to the Society.

Raised a Quaker, he gave this up on moving from Bart's to Edinburgh, where he played the flute and sang and danced. Moving to Gottingen he learnt to ride round a ring standing on two horses. He went to Cambridge for a further MD and was nicknamed "Phenomenon Young." He was appointed to the staff of St George's when he returned to London. He continued to attend the hospital until he died at 55, but he gave up practice when he was only 41. His main contribution to medicine was "Young's rule" for modifying dosage for children, not now highly regarded. He had a modest private fortune as well as salaries for being inspector of calculations to the Palladian Insurance Co, secretary of the Board of Longitude, and supervisor of the Nautical Almanac. He wrote on languages for the *Encyclopaedia Britannica*, being proficient in Latin, Greek, Hebrew, Chaldee, Arabic, Syriac, Persian, Samaritan, French, Italian, Spanish, and German. After the discovery of the Rosetta Stone he first solved demotic Egyptian and then made a good start on the hieroglyphs. He preceded Champollion, who got more of the credit in the long run. Returning to optics, he discovered astigmatism and postulated that there were separate cells in the retina to distinguish red, green, and violet, which could explain colour blindness. He promoted the idea of the wave movement of light and showed that it could be deflected by music. He studied blood flow and capillary attraction—"the cohesion of fluids." Young's modulus of elasticity is still in the books and so is the energy, mass, and velocity formula $E=MV^2$. On request he reported on the probable effects of introducing coal gas to London, on shipbuilding, on tides, on the length of the one-second-swing pendulum. "Phenomenon" was a pretty good cognomen.—PHILIP EVANS (paediatrician, London).

Under the covers

I saw blood dripping from an eye-socket. Nearby, a platinum blonde winked at me, her decolletage heavy with lust. I half-turned: a volcano vomited rock, incandescent lava ripping through the earth's crust. . . . The whole Dali-esque mirage had risen in front of me as I entered our local bookshop. Innocently seeking a new copy of Roget's *Thesaurus*, I found myself grabbed, jostled, pummelled, bruised, buffetted, assaulted, battered, and given one in the eye by a bunch of hardbacks, as colourful a galaxy of advertising men's creations as I have seen outside a fairground. Two months ago, at Christmas time, shimmering book displays had been just another part of the tinsel season, but now, on a pale February afternoon in a university bookshop, they seemed needlessly lurid.

I remember when dust-jackets were matt brown affairs that merely protected books from dust, and I can even remember paperbacks in uniform green and white, with titles in demure black type. Nowadays books are becoming like longplaying records and after-shave lotion—products secondary to their packaging. For centuries books have struggled to live up to their publishers' glowing claims, and now the glossy '70s have made "puffing" one of the visual arts, thanks to laminated plastic and luminous ink.

When my eyes grew accustomed to the glare, I realised that many of the works fell within my own specialty. All of obstetrics and gynaecology was there: menarche, menstruation, sexual intercourse, vaginal discharge, cystitis, pregnancy, breast-feeding, child care, and the climacteric—each being championed, vilified, or put firmly in its place by a posse of forceful lady authors. It appears that women buy instruction manuals on physiological functions as enthusiastically as men buy road maps. And on the covers, photogenic females suckled, looked indignant, or sank into picturesque post-coital slumber. Several times I picked up a volume only to replace it again. Normally easily seduced by books, this time I felt overwhelmed. Like a voyeur in a nudist camp, I realised with growing irritation that it was all too much for me. I found my dowdy thesaurus, and crept, slunk, tottered and slipped away.—JAMES OWEN DRIFE (senior registrar, Bristol).