

calcium concentrations; units of blood transfused; blood group; evidence of further rebleed/continued bleeding (see text); findings on endoscopy or barium meal examination; final diagnosis; and final outcome.

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(Accepted 22 April 1977)

Letter from . . . Chicago

Shopping-bag syndrome

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British Medical Journal, 1977, **2**, 240-241

Recently at a party a shapely blonde took me aside to ask if she could make an appointment at my clinic at the county hospital. She then explained, somewhat to my disappointment, that the prospective patient was not herself but her aging mother and that she needed not my superior diagnostic skills but relief from the monthly drug bill. Reaching into her handbag, she produced a list showing that her mother was taking 13 different drugs:—thrice weekly methyldopa, allopurinol, spironolactone, paracetamol, tripeleminamine, quinidine, thiamine, and adiphenine; twice daily multivitamin tablets; and once daily diphenhydramine, hydroflumethiazide, oestrogens, and thyroid extract. Yet she was a sturdy 72-year-old lady who could have outpaced many a sedentary middle-aged doctor—including the aetiological agent of her shopping-bag syndrome.

The syndrome is never seen in hospital patients—who receive an average of eight medications per hospital admission but do not have to carry them. Ambulatory patients, however, often leave the clinics and doctors' offices loaded with bags full of bottles of medicine; and the natural history of these bags has been only incompletely described. Hospital consultants can help but little, since they rarely see the patients in their normal surroundings. But family practice residents, who make house-calls as part of their training, afford interesting insights—as exemplified by the rare "case" of hypertension, arthritis, easy bruising, and light-chain proteinuria. The case turned out to be a poor old lady, living alone in a tiny room without a kitchen, bathroom, or medicine cupboard. On a shelf in her room, the resident reported, 10 brown paper bags were lined up in a row, each representing one visit to the clinic, each full of bottles of medicine labelled with instructions that clearly were not followed. The bags, it appears, were not necessarily in chronological order, having a tendency to fall off the shelf. Moreover, the bag currently in use contained two

methyldopa bottles, each labelled "take one tablet four times daily," apparently because the pharmacy had run out of larger containers. So she was taking a full dose from each bottle, since "They would not have given them to me had they not wanted me to take them." A study of shopping bags and brown bags could turn up some nasty surprises—this at a time when the medical profession is constantly being besieged by complaints about rising costs.

Cost of drugs

Within the span of a decade the national expenditure on drugs has doubled. In 1973 doctors wrote 2.8 billion* prescriptions or drug orders, representing an average of 10 prescriptions per person and an annual cost of \$11 billion. Tranquillisers, antibiotics, and non-narcotic analgesics topped the list, followed by contraceptive steroids, expectorants, antispasmodics, and diuretics. Some 30m restless Americans take sleeping pills. One in 10 takes benzodiazepines, for at least a week a year; and the consumption of these drugs has more than doubled in a decade. Some 97% of general practitioners or internists prescribe diazepam. In 1974 doctors wrote 60m prescriptions for 3 billion tablets of diazepam and 20m prescriptions for one billion tablets of chlordiazepoxide—to tranquillise, to relieve anxiety, perhaps to satisfy the prevailing belief that happiness is a constitutional right. Furthermore, writing prescriptions helps terminate the interview, makes up for lack of time, mollifies the chronic complainer—and provides an adequate supply for diversion to those who occasionally or continuously need to feel "high." This drug orgy can, however, be curbed with remarkable ease—as shown by the experience at this hospital, where in any one day medical residents would issue prescriptions for psychoactive or analgesic drugs to 125 of 200 visiting outpatients. Yet after a directive from the chief of medicine, the use of propoxyphene and pentazocine was stopped; and prescriptions for tranquillisers, limited to 10 tablets at a time unless countersigned by a staff physician, fell to 12 a day—with an incidental yearly saving of \$150 000, and no appreciable outcry from deprived patients or restricted house officers.

*US billion = 10⁹.

Use of antibiotics

Americans also consume some 26 000 tons of antibiotics and spend some \$1-2 billion yearly fighting true or imaginary bacterial foes. Ampicillin is the most popular antibiotic, but the cephalosporins and aminoglycosides constitute a major part of the drug bill. According to one study, over half of all practitioners prescribe antibiotics for the common cold. And although prescribing habits vary in different settings, with many internists using antibiotics appropriately, and with much abuse coming from surgeons, urologists, ENT doctors, and dentists, there is too much prescribing of antibiotics for viral illnesses, by telephone, without prior cultures, or for questionable prophylaxis.

Yet any suggestion of overprescribing will provoke angry repartees from offended practitioners, suspicious that academicians and bureaucrats are trying to tell them how to run their business. In November 1975, when President Ford had an upper respiratory tract infection, his personal physician Dr Lukash prescribed an antibiotic. This prompted the *Medical Tribune*, a newspaper circulated to doctors, to conclude that what is good enough for the President is good enough for the nation; that most colds were "uncommon," not common; and that millions of patients were undermedicated rather than overmedicated. Later Dr Louis Lasagna wrote that he suspected that most people did not visit their doctors for uncomplicated colds, but that by the time they went to spend good money they usually had bacterial complications. And he expanded his argument by suggesting that some infections were caused by mycoplasma; that streptococci, pneumococci, and anaerobes could not always be cultured; that the early use of antibiotics had virtually eradicated mastoiditis and osteomyelitis; and that geriatric patients were best treated empirically at the first sign of infection.

A vast correspondence ensued, with several infectious diseases specialists expressing horror at the mere thought of shotgun treatment. Most practising internists, however, supported the empirical use of antibiotics. Pointing to the dangers of delay and the cost of obtaining cultures, and loudly proclaiming the need to listen to practising not preaching doctors, they suggested that much trouble could be saved if the ivory tower professors and the know-it-all academic ex-egg heads in high places spent some time treating patients; and that now at last they could stop feeling guilty each time they prescribed an antibiotic in the office. One doctor thought that the *Medical Tribune* editorial was the most important contribution to medicine since penicillin; another that the precepts of armchair generals did not apply to the front line; and another that it was good to know that others were also using common sense in treating the "uncommon cold," that there was still an art of medicine, and that it was results that counted.

And yet assuredly the practising doctor deserves much sympathy, practising as he does in this litigation-conscious climate of high expectations. To deny a patient his expected shot of penicillin demands unusual fortitude and scientific detachment—and the same goes for his sleeping pills, tranquillisers and analgesics, his hormones, multivitamins, and tonic injections—not to speak of the self-administered laxatives, sinus drops, brewer's yeast, and vitamin E. Perhaps it all lends support to the cynical view that the main feature distinguishing man from other primates is his desire to take medicine. Yet the same over-medicated public will listen only too readily to the recent clamour about the Adverse Drugs Reactions Numbers Game.

Drug reactions

Although such reactions have always occurred, their incidence—with the advent of powerful and effective remedies—has undoubtedly risen. Almost a century ago Oliver Wendell Holmes suggested that throwing the entire materia medica

to the bottom of the sea would benefit the human race and harm only the fish. But in recent times the issue has been taken up by crusading doctors, sensation-hungry newspapermen, and, of course, the politicians. "I want to know," asked Senator Edward Kennedy in 1973, "why physicians receive an inadequate education in the drug area." And others have been equally vociferous in blaming the medical profession and demanding even tighter controls and more regulation of the use of drugs by doctors. Yet the true incidence of drug reactions remains unknown. It has been claimed that 1% of all hospital admissions are for drug reactions; that 8% of all drug orders lead to adverse effects; that 15-40% of hospital patients suffer a side effect from drugs; and that 30 000 people die unnecessarily each year from the drugs their doctors prescribe for them—a figure later extrapolated to 140 000 deaths and a cost of \$3 billion. But the problem of defining a drug-related adverse effect is unresolved, and the need for considering only genuine drug reactions is apparent. Much of the data on which estimates are based are unreliable or misleading. Some reactions are trivial, some occur in desperately ill patients, and others are unexpected and unavoidable. Genuine physician errors, one study showed, are unusual; and in the Boston Collaborative Drug Surveillance Programme of 26 462 medical inpatients the drug-related death rate was under 1 per 1000, with many of the deaths occurring in patients terminally ill with cancer, heart failure, and alcoholism. All this suggests that some of the earlier figures were exaggerated. But now, under the aegis of Senator Kennedy, a three-year study by a national commission on prescription drug use will devise postmarketing mechanisms for monitoring adverse reactions and trends in drug usage. What will come of this latest study—other than more rhetoric and paperwork—is hard to imagine; in the meantime the medical profession could well help cut down on both by going easy on those shopping bags—and a call for prudent prescribing is in order.

Patients taking oral contraceptives are warned of the possibility of ovulation if a tablet is missed in mid-cycle. Why, therefore, is ovulation not possible in the tablet-free interval between cycles?

This is a sharp observation, and it is difficult to find a convincing answer. It is easy to see why pregnancy does not occur, if only because of the mechanical effect of the endometrium being shed during the pill-free interval so that the fertilised ovum is unable to nidate. But ovulation is a different matter. Ovulation occurs because a surge of luteinising hormone stimulates a ripe Graafian follicle. This surge is triggered by the positive feedback of oestrogen from the ovary. Possibly after a 21-day cycle of oral contraceptive treatment no Graafian follicles in the ovary are in a sufficient state of development to respond by ovulation even if an aberrant luteinising hormone surge should occur. Such a surge is in any case highly unlikely as the positive feedback is lacking during the pill-free interval. Oral contraceptives also suppress follicle-stimulating hormone secretion, and the premenstrual rise in follicle-stimulating hormone levels that usually stimulates follicular growth does not occur in patients on the pill. All of this may go some way towards explaining this phenomenon, but it is not an entirely satisfactory answer to this shrewd question.

Is glaucoma that develops in early adulthood likely to be inherited?

Glaucoma that develops in early adulthood may be due to mild developmental abnormalities of the angle of the anterior chamber and could be considered to be a form of congenital glaucoma with late clinical manifestations. It has usually been assumed that congenital glaucoma is inherited as an autosomal recessive but a recent study still in progress suggests that in many cases it is non-genetic in origin. If, however, the glaucoma is chronic simple glaucoma of early onset, the results of family studies suggest that the children of a parent with glaucoma have an increased risk of developing glaucoma—some five times that of children without a family history of glaucoma.