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Risk and safety in practice

Complementary medicine and interactions

A very recent Canadian paper by Shelagh McRae presents the story of a heart patient of 74 who had been stabilized on the same dose of digoxin for many years; then on a routine control visit he was suddenly found to have a raised serum digoxin level. The most likely causes of such a problem – such as overdosage or renal failure – were ruled out, and the matter remained a mystery until the patient informed the doctor that he had been taking Siberian ginseng. Once he abandoned the ginseng, his serum digoxin returned to normal. A few months later, when he took ginseng again, the problem recurred. The author speculates that some component of the ginseng may have been converted to digoxin *in vitro*, interfered with digoxin excretion or caused a false serum assay result. Rightly, she warned physicians to be alert to the possibility that a patient's self-medication with 'alternative' remedies can lead to troublesome interactions.

Ginseng is a familiar problem in this respect. Cardiovascular and oestrogen-like effects have been attributed to it, and it has on more than one occasion deranged prescribed drug therapy in one way or another. The basic problem is undoubtedly that ginseng preparations usually fall outside the scope of drug control and there is as a result no certainty as to their composition. As that grand expert in the problems of complementary therapies, Prof. E. Ernst has pointed out, the term 'ginseng' can refer to any of several *Panax* species, as well as to so-called ginseng species from Siberia, Romania or Brazil which are in fact rather different plants. No-one knows what a given 'ginseng' preparation contains; one investigator known to this Journal found a so-called ginseng tonic to consist of turnips floating in cheap wine. Anyone who is rash enough to take ginseng, especially alongside prescribed medication, needs to be warned that he is taking quite a step into the unknown.

References

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Bottle feeding and intelligence

In recent years a number of papers have advanced suggestive evidence that children who have been raised on breast milk rather than on bottle feeding go on to attain a higher level of intelligence. However, attractive the conclusion, in view of the desirability of promoting breast feeding, it looks as if it is one reflecting false reasoning. The difficulty in any study of the matter is that several factors which could influence the intelligence of the child, notably the social status of the parents, their intelligence and their preference for breast feeding, tend to be mutually interdependent.

The matter can be studied in a little more depth by looking at individuals born some sixty to seventy years ago, when it was precisely the upper class and more educated and intelligent parents who, believing that they were being progressive, preferred bottle feeding to the breast. In the Lancet, Gale et al. have reported on a study examining some 2000 individuals born between 1920 and 1930, examining their social class, the intelligence, and other measures, as well as the type of feeding which they had received as infants. After multivariant analysis, a positive correlation was found between IQ and a higher social class, and between IQ and the age of the mother at birth. There was a negative correlation between IQ and the use of pacifiers (dummies) and between IQ and the presence of older siblings. No correlation at all was found between breast feeding and IQ.

It seems very likely that the environment into which a child is born is determinant, as one would expect. At the present day, the use of dummies and the use of bottle feeding are merely indicators of an environment which negatively influences intelligence. Conclusion: physicians and midwives should most certainly continue to advise breast feeding wherever it is feasible (as it almost always is!) but they should be careful to use only valid arguments in its favour.

References

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Oestrogen replacement therapy in breast cancer survivors

Since breast cancers are sometimes estrogen-dependent, it is generally considered that oestrogen replacement therapy (ORT) should not be used in women with a history of breast cancer of any type. It has been argued, however, that exceptions may apply in women whose quality of life is severely compromised by menopausal symptoms, or those having major osteoporotic or cardiovascular risk factors or coronary artery disease. Several small investigations (notably by Eden et al. in 1995) have suggested that the short-term use of ORT does not greatly change the risk of recurrence of the cancer, but more work is needed to determine whether this is indeed the case, and whether the risk situations can be better defined. It is important to realize that there are alternative means of relieving various menopausal symptoms (e.g., clonidine, vaginal moisturisers). It is also possible that tamoxifen, as an anti-oestrogen, will be helpful in those cases where prophylaxis for osteoporosis or cardiovascular disease is needed. For the present it would still seem wise to avoid oestrogens in former breast cancer cases wherever possible.

References

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Development of antibacterial resistance in long-term care facilities

The growth of antibiotic resistance is a global problem, but also one which can cause problems at first hand in long-term care centres, such as nursing homes. Recent work points to factors which promote development of resistance in such an environment. They include:

- the frequent use of broad-spectrum antibacterials – which in fact can often be avoided;
- large size of the facility, shortage of staff and poor infection control policies;
- initiation of antibacterial use without patient examination or culture information, e.g., prescription by telephone.

In addition, patient interchange between acute and chronic facilities contributes to the spread of resistant organisms beyond the walls of the institution where they first emerged.

Clearly some of the above are factors which can be corrected, notably by adopting a firm discipline as regards the use and choice of antibacterials in closed institutions. In many situations, a narrow-spectrum antibiotic will be adequate, in many others no antibacterial agent at all is needed.

Reference

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Iron overdosage in children

Despite the use of child-resistant packaging for iron preparations in the USA, more than 110,000 children are reported to have ingested iron since 1986, and 35 of them have died. The F.D.A. is currently developing regulations to further improve the packaging and labelling of those drugs and of dietary supplements which contain iron. It is a supported by a public relations campaign, for which a poster is available in both English and Spanish.

The poster on the risks of iron overdosage is available from the *Food and Drug Administration (Dept. HFI-44), Rockville, MD 20857, USA.*

Confusion between drug names

One important argument for prescribing drugs under their generic (non-proprietary) names is the fact that trade names often resemble one another and can easily be confused. However some generic names also resemble trade names of other products. The FDA has drawn attention to recent instances of confusion in prescribing or dispensing between Flumadine (the antiviral rimantadine) and flutamide (the generic name of Eulexin), which is used to treat prostatic cancer. Trade names which have been interchanged in error include Clonidine and Klonopin, Amiodarone and Amrinone, Retrovir and Ritonavir, while slight lack of clarity of handwriting on a prescribing can easily lead to confusion between Lodine and Codeine. One might add that these problems, as defined in the USA, are only a fraction of those which can arise when patients and prescriptions travel around the world, where trade names can differ from country to country.

Reference

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Patient dumping at U.S. hospitals

A report issued by the Public Citizen Health Research Group in Washington DC provides evidence that 'patient dumping' – refusal to provide emergency care – continues to be a major problem in the U.S. The federal Emergency Medical Treatment and Labour Act of 1986 obliges hospitals to screen all patients seeking emergency care to determine whether the patient indeed has a medical emergency and to provide whatever treatment is necessary to stabilize the patient's condition; severe penalties are prescribed for violations. Despite this, the Public Citizen report found evidence that 144 hospitals in 30 states had engaged in dumping violations between April 1994 and March 1995, while the Department of Health and Human Services had knowledge of more than 500 violations between 1986 and 1995. The Department proved to have made little use of its authority to impose penalties; in more than 90% of known cases, the hospital had escaped without sanctions. As the author of the Public Citizen report points out, hospitals may coldly conclude that it is cheaper to risk (and even pay) a fine than to provide service to an uninsured patient with a potentially expensive illness.

Reference

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Surgery, rubber gloves and HIV

A study by Jordan Fink and his colleagues at the University of Wisconsin has concluded that latex gloves used in medicine and surgery do not provide a barrier against the passage of viruses the size of HIV or hepatitis. In the study, latex gloves were moistened with saline to mimic the effects of perspiration on the hands. A harmless virus the size of that causing HIV or hepatitis was then introduced into the glove and proved to pass through it readily despite the fact that the latex was intact. The intact human skin is itself known to be effective; health workers with cuts or breaks in their skin are thus inadequately protected and will not be rendered immune from infection by wearing a single pair of latex gloves.

Reference

[1] News item, *New Scientist* (Australian Edition), March 23rd, 1996.

Systemic effects of anti-pediculosis agents

In most countries, a range of sprays and other products for topical use are on free sale in pharmacies for the treatment of pediculosis. The possibility that they might cause systemic reactions appears to

be overlooked both by pharmacists and the public – perhaps because the feet are so far away from the head? When the Fernand Widal Centre in Paris looked into possible risks, it traced 25 notified cases of problems, involving 22 children (with a mean age of 8 years but including a 17-months old infant) and 3 adults. Symptoms included convulsions (11 cases), confusion, headache and giddiness; central symptoms were often accompanied by gastrointestinal upsets. In some but not all cases the agent may accidentally have been inhaled, in some the skin was not intact. Many different agents were involved; it is important to realize that most anti-pediculosis agents have neurotoxic potential and pharmacists should warn purchasers accordingly.

Reference

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Physical risks of laryngoscopy and intubation

When performing laryngoscopy or intubation it is regarded as important to avoid exerting axial force on the incisor teeth, since they can readily be damaged. All the same, a recent study by Bucx et al. seems to show that even among experienced anaesthetists and operators this error is very commonly made, perhaps in the majority of cases. For purposes of study, an intubation dummy used for training purposes (the Laerdal airway management trainer) was fitted with sensors to measure both axial and transverse forces exerted on the incisors. 75 subjects, ranging from experienced surgeons or anaesthetists to medical students were asked to intubate the dummy; none was informed as to the purpose of the investigation. It was found that in 40% of the manipulations the transverse forces exerted exceeded 10 N and in 15% they exceeded 20 N. In some instances forces up to 50 N were detected. Similar problems arose regarding axial forces. Although the more experienced manipulators exerted less transverse force on the teeth, axial forces tended to be excessive in all types of subject.

References

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