Services for child sexual abuse lacking

To the Editor: Child sexual abuse (CSA) is a major public health and human rights problem in South Africa, and we fail in our responsibility to protect the victims. More than 22 000 child rapes and attempts were reported to the police in 2006/2007;[1] with the degree of under-reporting, the true magnitude could be more like 200 000. The immediate and long-term psychosocial and health consequences of CSA and its impact on the child and the family are devastating.[2] Recovery depends on post-disclosure support, but specialised skills and services are required to reduce long-term psychopathology.[3]

We are ethically obligated to ensure that these children receive the services they need, but our research on sexual assault services in the Western and Eastern Cape provinces showed that they do not. All cases of sexual abuse must be referred for immediate investigation, and services provided to the abused children, to curtail further harm.[4] The children must be referred to social workers to manage the crisis and facilitate healing.[5] We found that this was not always standard practice. Children over the age of 14 years were often not regarded as children and were seldom referred to child care services, owing to service providers' assumptions about the nature of the sexual abuse reported.

Our referral attempts met bureaucratic obstacles such as long waiting lists (sexually abused children cannot wait for 3 months to have their crisis dealt with) and referrals to many different service providers before the cases were accepted. On follow-up, we found that most referred children were never seen. For example, we tried to refer a 14-year-old girl to a social welfare agency. We established that the mother had a severe drinking problem and had not taken her back for further hospital treatment, nor had she returned to school. The girl was often maligned and blamed for being raped but was never seen by the service to which we referred her, and we could not contact the social workers.

Not all the blame falls on services. Parents and guardians are also responsible for ensuring that children receive appropriate care. However, the complexity of sexual assaults often results in families becoming immobile and unable to respond appropriately to the children's needs. Moreover, the perpetrators are frequently relatives or family friends, which further complicates responses.

The government's emphasis has been on prevention, towards which most resources are channelled. Counselling and support services for the many thousands of children who disclose abuse have not received the same priority. Children who require care and support face a hiatus in services, and are likely to move on to high-risk sexual behaviour.

Child sexual abuse is a complex matter and requires a complex response. The Children's Amendment Act[6] provides for psychological, rehabilitative and therapeutic programmes for abused children. Funding has predominantly gone to medical care for rape survivors; the state must therefore radically reconsider its funding towards services to meet their obligations and the needs of abused children. Providing adequate services is critical for ensuring the prevention of long-term psychosocial sequelae for children and their families.

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Algae an answer to biofuels?

To the Editor: With reference to the editorial 'Humans – a threat to humanity',[1] recent information could bring a little light into the darkness.

Research in the Netherlands on diesel biofuels derived from algae,[2,3] using a complex (and still expensive) photosynthetic process, could help to give alternative energy the bump it needs by way of green goo. Maritime biologist Professor Hein de Baar says that algae are ideal as biofuel; they yield 10 times more biofuel than corn or rapeseed, are easy to grow, are not a human food source, and can be produced without adding to CO_2 levels. He hopes that within a few years there will be cars running on algae oil.

Algae are the most common plants on earth, and make up most of the planet's biomass. CO_2 emissions could be reduced substantially if biofuel were produced from specially grown algae, since algae need CO_2 to grow. An intensive algae nursery would require large quantities of CO_2, which would be no problem if a nursery were hooked up to a power plant. Imagine: the plant's smoke stack emits copious CO_2 which would be captured and injected into large containers with algae situated next to the plant. The fast-growing algae could then serve as fuel for the power plant, thus creating a closed circle without any atmospheric emission of CO_2.

Biofuels have a bad reputation because some of them also serve as food for humans. In Latin America, prices of corn have

risen because the crop is used for fuel production. There is no such problem with algae (though some species are used as animal fodder).

Food production and algae nurseries are not incompatible. As Professor de Baar explains, 'A big container would have to be transparent to allow sunlight to enter. It could be a vertical container of several metres high, which would be aerated with air rich in CO_2. Another option is to have a mixture of algae and water flow through a series of horizontal pipes. At first the water would be quite clear, with some nutrients added, but it would end as a kind of pea soup, which could be pumped straight into a factory. The algae would be filtered out so they could be processed as fuel.'

Perhaps the water could be recycled and re-used afterwards?

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The use of algae to assist in addressing the biofuels (and animal food) problem has merit. However, it hardly scratches the more pressing issue of the total overload of Earth as we know it by humans and our by-products. Consider that in 1973 the world emitted roughly 17 billion tons of carbon dioxide from fossil fuels, compared with 30 billion tons today. The result is a rise in atmospheric CO_2 from 325 parts per million (ppm) in 1973 to 385 ppm today – and increasing by 2.4 ppm each year.[1] *The production of algae to address the huge and growing problem on this scale is simply beyond human capacity.* – J P van Niekerk (Managing Editor)

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Citrus aurantium – beware of the bitter orange

To the Editor: The interesting case report regarding a young man who presented with a myocardial infarction after the use of a synephrine-containing substance[1] raises a number of issues.

The hypothesis that the infarction might have been caused by coronary spasm followed by thrombosis may be supported by a similar case of a 28-year-old man who developed a myocardial infarct after abusing synephrine tablets.[2] Many patients use complementary and alternative medicines (CAMs) in conjunction with their prescribed medicines – and up to 72% of users do not inform their treating physician accordingly.[3,4] With the narrow therapeutic window of many commonly used medicines, the potential interactions and adverse effects when used with CAMs should not be underestimated. In this particular context, *Citrus aurantium* (Seville or bitter orange) is found in a number of foodstuffs, including marmalade, beer (Belgian Orange Muscat) and some teas, and in over-the-counter weight-loss products. In some countries (e.g. Iran, Mexico), the dried or ripe fruit form part of local dietary traditions.

In addition to the mechanisms mentioned by the authors, in which the use of *C. aurantium* could lead to cardiovascular side-effects, is the effect on drug metabolism. *C. aurantium*, grapefruit (*C. paradisi*) and pomelo (*C. maximi*) contain a number of flavonoids including 6',7'-dihydroxybergamottin, which is used to selectively block the intestinal cytochrome P450 isoenzyme, CYP3A4, in bioavailability studies.[5] *C. aurantium* also contains a furocoumarin (bergapten) that inhibits CYP3A4.[6] Since about a quarter of pharmaceuticals are metabolised by the CYP3A4 system (e.g. warfarin, felodipine, indinavir, simvastatin), and an inhibitory effect on this system could lead to increased serum drug levels of drugs metabolised by CYP3A4, a great potential for adverse interactions exists.[5] The potential negative interaction of *C. aurantium* has been noted by some drug manufacturers, where its concomitant use is contraindicated with agents such as imatinib and nilotinib, which are used in the treatment of chronic myeloid leukaemia.

A greater awareness of the potential danger of *C. aurantium* and other CAMs, when used in combination with other drugs, should contribute to increased patient safety. We therefore believe that it is reasonable to suggest that pharmaceutical manufacturers, pharmacists and prescribers take potential drug-CAM interactions into account, especially with the preparation of package inserts and when writing prescriptions. The public should be educated to be aware of the injudicious use of CAMs and that not informing their doctors of their use could have dire consequences.

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