reviewed.^{3,4} After publication one contributor was temporarily aggrieved because a portion of her submission was edited without consent; another was wounded because his recently elevated status had not been acknowledged; and a surname had been misspelt in the list of contents. Several colleagues complained that they had not been invited to contribute.

Finally, to celebrate the publication we organised a dinner for contributors and publisher, at which Michael Shepherd was presented with a leather bound copy of the Festschrift. A photograph was taken to mark the occasion and was sent as a souvenir to everyone concerned.

Unexpectedly, the form of our Festschrift has

already attracted some attention as a possible model for tributes of this type. We have come to the opinion that its construction might provide a more appropriate and more permanent accolade on such occasions. In view of the associations of the word Festschrift, however, perhaps another word is needed. We have wondered about festschrift or tributary volume. Other suggestions would be welcomed.

- 1 Buchdahl G. Nagel's message. *Nature* 1971;231:399.
- 2 Williams P, Wilkinson G, Rawnsley K. *The scope of epidemiological psychiatry. Essays in honour of Michael Shepherd*. London: Routledge, 1989.
- 3 Johnstone EC. The scope of epidemiological psychiatry. *Lancet* 1989;i:588.
- 4 Charlton B. Wider still and wider . . . *Br Med J* 1989;298:1193-4.

Lesson of the Week

Child sexual abuse presenting as organic disease

Rachel M A Brown, Marian J Perkins

Sexual abuse should be considered as a potential aetiological factor in children presenting with unexplained organic symptoms

Child sexual abuse may present to doctors in many ways, including "ordinary" emotional and behavioural problems, bedwetting, sleeplessness, anxiety, and failure at school.¹ Psychotic phenomena have also been described.² A rare but important presentation is with the signs and symptoms of a deteriorating organic state. The cardinal features of such states are a deterioration in and loss of skills, language, and play and gradual social withdrawal.³ There is usually an underlying genetic cause in these disorders.

We report one case in which the initial presentation was highly suggestive of such a deteriorating state and two cases in which an organic condition was one of the possible differential diagnoses. In all three cases further investigation and follow up showed that the major aetiological factor was sexual abuse.

Case 1

A 5 year old girl was referred by a consultant paediatrician. She had been admitted to hospital because of muteness and extreme social withdrawal. This followed several weeks during which there had been a rapid loss of skills, particularly self care, language, and play. The family background was one of marital disharmony and adverse social circumstances. The mother had allegedly suffered sexual abuse as a child and had a history of depression.

Physical investigation of the child showed no abnormality; an electroencephalogram, however, was normal when the child was awake but showed occasional generalised atypical spikes and wave discharges during sleep. There was no clinical evidence of epilepsy. Within six weeks after admission to a children's psychiatric ward her clinical picture had dramatically improved with a rapid return of functioning confirmed by formal psychological testing. The improvement in her language was followed by explicit and detailed disclosures of orogenital contact between her and her father and his repeated masturbation in her presence. After care proceedings she was placed in a foster home, where she functioned well, and she progressed satisfactorily in school.

Case 2

A girl aged 6½ was referred by a local authority social services department. Her symptoms included

social withdrawal and physical aggression towards her siblings and peers. There was evidence that she had lost play and language skills and had been under-achieving academically. She was the middle child of an unemployed mother who had had several partners. Her biological father had spent long periods in prison.

Physical examination yielded normal results. Electroencephalography showed a pattern of immature activity in the borderline range of abnormality for her age. During her stay as an inpatient in a children's psychiatric ward her play was noted to have a distinct sexual content, and she made allegations of genital contact with one of her mother's cohabitants. Although repeated psychological testing showed her to be functioning in the mildly mentally retarded range, it showed a measurable improvement in her play and communication. Other observations showed more appropriate social interaction with her peers. After discussion with the social services a decision was made to rehabilitate her to her family.

Case 3

A 5 year old girl was referred for admission as an inpatient by another consultant child psychiatrist. She had shown extreme physical aggression in school unrelated to external stimuli. She would attack, bite, and gouge other children persistently. She had also been observed to make odd movements such as flapping her hands and rolling her eyes. She had made no educational progress since starting school and at the time of referral showed severe delay in language development. She was the only child of professional parents, and her family background did not initially arouse concern.

The results of physical examinations and investigations were normal. A striking feature of the first few weeks of her admission was the highly sexual nature of both her play and her social interactions. Under a variety of circumstances she disclosed details of sexual abuse by her father. After this she made dramatic progress, especially cognitively and socially. A hearing in the high court recommended rehabilitation, which subsequently broke down. She was then abducted and taken out of the country by her family.

Discussion

In each of these cases an organic condition was

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considered because of the loss of or failure to acquire skills and the bizarre nature of the behavioural problems. The possibility was supported by minor abnormalities on physical investigation in two of the children. In all three cases, however, the disclosure and prevention of continuing sexual abuse were accompanied by distinct improvements in social and cognitive capabilities, which were confirmed by psychological testing.

Certain features of these cases may be helpful in identifying children in whom the history initially suggests an organic illness but in whom abuse, particularly sexual abuse, may be an important aetiological factor. All three were prepubertal girls. All had had a normal birth and early developmental history. In all, exhaustive physical investigations showed only minor abnormalities of doubtful importance. All rapidly improved after their admission to an inpatient unit and the consequent separation from their families and the situation in which the abuse was likely to have occurred. All the disclosures were spontaneous and seemed to be facilitated by a supportive environment.

By contrast, infantile autism and other pervasive developmental disorders, which may initially resemble organic disorders, are commoner in boys and present at a younger age. Not only is childhood schizophrenia extremely rare in prepubertal children but the diagnosis requires the presence of delusions and hallucinations or thought disorder.⁴ Degenerative conditions such as metachromatic leucodystrophy and lipoidosis are likely to deteriorate irrespective of the child's placement and to be accompanied by physical signs and neurological abnormalities.

There have been case reports of children starved and beaten by their families and imprisoned in extreme physical adversity and deprivation whose state on discovery is comparable with that described here, with language deficits, social withdrawal, and poor cognitive skills.⁵ Speedy recovery after the abuse is stopped is characteristic. None of these children, however, had been the subject of severe physical abuse and therefore

sexual abuse alone must be implicated as the causative factor. None the less, most sexually abused prepubertal children do not present with the signs and symptoms of a deteriorating organic state. Possibly some children are particularly vulnerable as a result of pre-existing mental retardation (case 2), familial mental illness (case 1), or temperament. In any case, even if a true organic condition is present that does not preclude sexual abuse.

Children like these are rare, but their identification and correct management are vitally important. Sexual abuse may not completely explain such a clinical picture, but its stopping may lead to massive improvements. This has profound implications for placement and prognosis. In children presenting with organic features it is important that sexual abuse should be considered as a potential aetiological factor. Indeed, the Department of Health and Social Security recommended that odd or unexplained behavioural symptoms should arouse the suspicion of sexual abuse.¹ The recent judicial inquiry in Cleveland⁶ may understandably make doctors wary of pursuing such a possibility. For a child returned to abusing parents or placed in an institution such wariness may have devastating effects.

We thank Dr Stephen Wolkind for his helpful comments and permission to publish details of patients under his care.

- 1 Standing Medical Advisory Committee of the Department of Health and Social Security. *Diagnosis of child sexual abuse. Guidance for doctors*. London: HMSO, 1988.
- 2 Lusk R, Waterman J. Effects of sexual abuse on young children. In: McFarlane K, Waterman J, eds. *Sexual abuse of young children*. London: Holt, Rinehart and Winston, 1986.
- 3 Corbett J, Harris R, Taylor E, Trimble M. Progressive disintegrative psychosis in childhood. *J Child Psychol Psychiatry* 1977;18:211-9.
- 4 Rutter M. Pervasive developmental disorders. In: Rutter M, Hersov L, eds. *Child and adolescent psychiatry: modern approaches*. London: Blackwell, 1985.
- 5 Skuse D. Extreme deprivation in early childhood. II. Theoretical issues and a comparative review. *J Child Psychol Psychiatry* 1984;25:543-72.
- 6 Butler-Sloss E. *Report of the inquiry into child abuse in Cleveland 1987*. London: HMSO, 1988:277-8. Appendix E. (Cmd 412.)

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ANY QUESTIONS

Local authorities and others use total weedkillers belonging to the triazine group of herbicides. Are tests of drinking water ever made for these chemicals and, if so, what are the results? What would be the effect of long term exposure to these chemicals in drinking water?

Over exposure to these weedkillers may cause tiredness; dizziness; nausea; irritation of the skin, eyes, and respiratory tract; and, in some formulations, allergic eczema or asthma.¹ In its conditions of approval for use of these herbicides the Ministry of Agriculture, Fisheries, and Food sets out the steps to be taken to avoid these effects and also the means of preventing the contamination of water courses with herbicides or used containers. There is no evidence about the long term hazards of absorption of triazine in humans, but the limited animal data available are reassuring.² The World Health Organisation has recently addressed the contentious issue of "acceptable" dietary levels of pesticide residues.³

Drinking water is routinely tested for triazines, and the levels are usually below the limits of detection (Severn Trent Water Authority, personal communication). —A R SCOTT, senior employment medical adviser, Nottingham

- 1 Bainova A. Herbicides. In: Parmeggiani L, ed. *Encyclopaedia of occupational health and safety*. Geneva: International Labour Office, 1983:1034-9.
- 2 Reinhardt CF, Britelli MR. Heterocyclic and miscellaneous nitrogen compounds. In: Clayton GD, Clayton FE, eds. *Patty's industrial hygiene and toxicology*. New York: John Wiley, 1981:2772-8.
- 3 World Health Organisation. *Guidelines for predicting dietary intake of pesticide residues*. Geneva: WHO, 1989.

Is there a risk of AIDS and hepatitis B virus being spread by Heaf guns, and what sterilisation procedures are necessary in a clinic that uses a Heaf gun?

Both hepatitis B virus and HIV may be transmitted by infected needles whether used for injecting drugs, acupuncture, or tattooing. There is therefore a risk that these viruses could be spread by the Heaf gun if not properly sterilised. As used in the United Kingdom, the Heaf gun is sterilised between each patient by immersion in 95% ethyl alcohol. This is then burnt off. The amount of debris or blood on the pins is small and so any infectious agent would be exposed to the action of both the alcohol and the heat.

Dr J B Selkon at the Public Health Laboratory Service in Oxford has shown that this renders HIV non-infectious (personal communication). Furthermore, he has shown that the treatment with 95% ethyl alcohol alone would be sufficient to prevent infection. There is debate whether the alcohol treatment would be sufficient to render hepatitis B virus non-infectious, but there is no question that heat treatment is effective.^{1,2} The present method of sterilisation of the Heaf gun is thus satisfactory in preventing transmission of these, as well as other, infectious agents. —DAVID ELLIMAN, consultant in community child health, London

- 1 Kobayashi H, Tsuzuki M, Koshimizu K, et al. Susceptibility of hepatitis B virus to disinfectants or heat. *J Clin Microbiol* 1984;20:214-6.
- 2 Bond WW, Favero MS, Petersen NJ, Ebert JW. Inactivation of hepatitis B virus by intermediate-to-high level disinfectant chemicals. *J Clin Microbiol* 1983;18:535-8.