PERSONAL PRACTICE

Head injury—how community paediatricians can help

Marion Crouchman

Every year in this country 45 of every 1000 children under the age of 14 years are admitted to hospital with closed head injuries; these account for 5% of all paediatric admissions.¹ Most of them have 'minor' head injuries and are discharged within 48 hours, but a small number (about 5%) have severe head injuries.² Of these, half will be left with residual motor or cognitive impairment.^{3–6} Without early and appropriate rehabilitation many will rapidly develop secondary damage.

A recent report of the Paediatric Neurology Association draws attention to the lack of consistency in the way such children are managed, and recommends that follow up should offer paediatric neurological and neurosurgical expertise.⁷ In practice, those who are admitted to neurosurgical units (and most are not) are returned to their local paediatric wards as soon as they cease to need surgical intervention or intensive care. Management of the early rehabilitation and follow up are usually, therefore, the responsibility of the general paediatrician. It is disturbing that such an important cause of childhood morbidity is not yet being tackled systematically throughout the country, but in the meantime what can paediatricians do to help these children?

Developmental rehabilitation as a specialty
Most paediatricians do not have the specialist knowledge required to build up and lead a multidisciplinary, multiagency team for the assessment and rehabilitation of the small but constant numbers of children with head injuries who come under their care. The basis for such a service already exists in many districts, however, in the form of the child development team (formerly the district handicap team), and expertise in the specialised field of acquired brain injury comes naturally to community paediatricians with neurodevelopmental training. It seems logical therefore to consult them from the outset so that there is a continuum of rehabilitation through hospital admission to reintegration into the local community.

Such a scheme of developmental rehabilitation need not be confined to head injuries. There are many causes of acquired developmental damage—chronic illness, major or repeated operations—which would benefit from this.

What should such a service provide?

IN THE EARLY STAGE OF REHABILITATION OF SEVERE HEAD INJURY

(1) Assessment of premorbid development from community health and educational records.

(2) Thorough neurological examination to detect even the most minor residual structural damage, including defects of vision or hearing.

(3) Coordination of a planned assessment programme to include:

- Detailed psychometric testing of cognitive, visuospatial, and memory function.

- Assessment of speech and language.

- Observation in an educational setting to assess distractibility, retention of preaccident learning, and the processing of new information. It may be inappropriate to make an official 'Statement of special educational needs' while the child is still improving, but suitable temporary educational provision must be made for children of school age as soon as they are well enough to attend school even part time. Such provision may initially be in the hospital school, particularly if an intensive programme of physical rehabilitation is necessary. It is essential to know what facilities are available locally and in specialist units, to be able to liaise with both the hospital school and the child's original school, and to advise the parents and educational authorities accordingly.

- Housing, mobility, and self help skills must also be assessed. Early notification of changed housing needs and appropriate use of occupational therapy services to advise and organise aids and seating ensures that a child is not kept in hospital beyond the optimal length of inpatient rehabilitation.

(4) Supervision of a multidisciplinary plan of rehabilitation.

(5) Counselling, support, and information. Parents, and sometimes children, understandably feel optimistic during the phase of rapid recovery. They tend to concentrate on physical recovery and do not appreciate that learning problems are likely to prove the most disabling long term outcome. Their grief reaction may be delayed until the reality of permanent impairment becomes established. Long term psychological support from a professional person with a knowledge of the possible after effects of head injuries is therefore essential. This can often be

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provided by the paediatrician or psychologist, or both, who may also be needed to help with the behavioural results of head injuries, and to modify the family response to the child. Litigation features prominently in many cases, and as after other types of accident, it is essential to keep the parents informed of the details of the child's condition and the possible long term outcome, to concern them in management plans, and to put them in touch with helping agencies.

WHEN CHILDREN PRESENT AT A LATER STAGE

From time to time children are referred with developmental, behavioural, or learning problems who have apparently fully recovered from a previous head injury. As one in 15 children has had a head injury 'which caused parents serious worry' there are many who present in this way.⁸ It is important to attempt to establish the relative importance of the injury to the current problems, and this can only be achieved by detailed assessment of the child and his or her home and educational environment.

FOR THE 'LOST CHILDREN'

There is a third group of children who, having recovered from what would be categorised as 'minor' head injuries, are discharged from follow up. There is growing concern that some of these children 'in fact suffer from specific cognitive deficits that significantly hamper their academic progress and life adjustment and that, in some cases, behavioural deterioration may occur long after injury.'⁶ Although there is good

evidence that such minor injury can produce serious brain lesions, the extent of subsequent problems is as yet unknown.^{9 10} It has always been difficult to assess premorbid functioning retrospectively, even in adults, and this difficulty becomes greater in younger, and therefore less well documented, children. It would be unrealistic to suggest detailed assessment and follow up of all cases of minor head injury, but community paediatricians have the network to inform parents and those professional people who come into contact with children in the community of the nature of potential problems, the diverse ways in which they may present, and how to obtain help.

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- 4 Mahoney WJ, D'Souza BJ, Haller JA, Rogers MC, Epstein MH, Freeman JM. Long term outcome of children with severe head trauma and prolonged coma. *Pediatrics* 1983; 71:756-62.
- 5 Eiben CF, Thomas TP, Lockman L, et al. Functional outcome of closed head injury in children and young adults. *Arch Phys Med Rehabil* 1984;65:168-70.
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- 7 Robinson RO, Mellor DH. Needs of children with neurosurgical problems. *Br Med J* 1989;298:1541.
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- 9 Oppenheimer DR. Microscopic lesions in the brain following head injury. *J Neurol Neurosurg Psychiatry* 1968;31: 299-306.
- 10 Sekino H, Nakamura N, Yuki K, Satoh J, Kikuchi K, Sanada S. Brain lesions detected by CT scans in cases of minor head injuries. *Neurol Med Chir* 1981;21:677-83.

LETTERS TO THE EDITOR

Terminology in community child health—an urgent need for consensus?

SIR,—Annotations in *Archives* should not be ignored; perhaps that is what makes Dr Stone's semantic agonising,¹ ostensibly on behalf of community child health, so irritating. His suggested consensus on terminology is probably unattainable. It was ever thus: what on earth makes Dr Stone think that 'ambiguous technical language' is peculiar to community paediatrics?

Such an 'urgent' consensus is not even wholly desirable. We should certainly invoke Humpty Dumpty's rule of word usage—'when I use a word, it means just what I choose it to mean, neither more nor less'. Pro-

vided that people define their use of terms and are precise, differences of meaning, emphasis, and nuance which emerge can be useful catalysts of constructive debate.

Whatever the merits of Dr Stone's proposed definitions, his view of community child health is weird, his use of expressions such as 'terminological impasse', 'chronic linguistic malaise', and 'outdated and misleading jargon' is unhelpful, and his conclusions are frankly silly. Community child health does not suffer from 'chronic linguistic malaise', but from the effects of the 'professional and organisational vacuum' within which it has hitherto had to operate (I certainly agree about that). It also suffers from the failure so far to grasp and act upon the organisational and staffing implications of what a consultant led service really means.

If community child health did not already exist, something like it would need to be invented to fill the 'intermediate position between hospital based therapeutic paediatrics, and community based public health', which Dr Stone describes as uncomfortable, but which is in fact extremely stimulating,

highly relevant to the health needs of children, and of potential benefit to all three disciplines.

As an academic community paediatrician I dissociate myself completely from Dr Stone's concluding remarks, particularly the 'we' referred to, whoever they may be. Community child health does not need to be dragged anywhere. It has momentum and a sense of direction, and community paediatricians are well aware of the reality of children's health needs in the community. I am confident that precision in terminology will also improve as we continue to focus on the practical issues involved. Semantics should never become a preoccupation.

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- 1 Stone DH. Terminology in community child health—an urgent need for consensus. *Arch Dis Child* 1990;65:817-8.