The authors would like to thank members of the Department of Child Psychology, Yorkhill NHS Trust who performed the cognitive assessments included in this study.

- 1 Wallner KE, Gonzales MF, Edwards MSB, Wara WM, Shelton GE. Treatment results of juvenile pilocytic astrocytoma. *J Neurosurg* 1988;69:171–6.
- 2 Woo SY, Donaldson SS, Cox RS. Astrocytoma in children: 14 years experience at Stanford University Medical Center. *J Clin Oncol* 1988;6:1001–7.
- 3 North CA, North RB, Epstein JA, Piantadosi S, Wharam MD. Low grade cerebral astrocytomas. Survival and quality of life after radiation therapy. *Cancer* 1989;66:6–14.
- 4 Janny P, Cure H, Mohr M, et al. Low grade supratentorial astrocytomas. *Cancer* 1994;73:1937–45.
- 5 Pollack IF, Claassen D, al-Shboul Q, et al. Low-grade gliomas of the cerebral hemispheres in children: an analysis of 71 cases. *J Neurosurg* 1995;82:536–47.
- 6 Gajjar A, Sanford RA, Heideman R, et al. Low-grade astrocytoma: a decade of experience at St Jude Childrens Research Hospital. *J Clin Oncol* 1997;15:2792–9.
- 7 Morantz RA. Radiation therapy in the treatment of cerebral astrocytoma. *Neurosurgery* 1987;20:975–82.
- 8 Mulhern R, Hancock J, Fairclough D, et al. Neuropsychological status of children treated for brain tumours: a critical review and integrative analysis. *Med Pediatr Oncol* 1992;20:181–91.
- 9 Dennis M, Hetherington CR, Spiegler BJ. Memory and attention after childhood brain tumours. *Med Pediatr Oncol* 1998;(suppl 1):25–33.
- 10 LeBaron S, Zeltzer PM, Zeltzer LK, et al. Assessment of quality of survival in children with medulloblastoma and cerebellar astrocytoma. *Cancer* 1988;62:1215–22.
- 11 Glauser TA, Packer RJ. Cognitive deficits in long-term survivors of childhood brain tumours. *Childs Nerv Syst* 1991;7:2–12.
- 12 Roman DD, Sperduto PW. Neuropsychological effects of cranial radiation: current knowledge and future directions. *Int J Radiat Oncol Biol Phys* 1995;31:983–98.
- 13 Wechsler D. *Wechsler Intelligence Scale for Children—third edition (WISC-III)*. San Antonio, Texas: Psychological Corp., Harcourt Brace Jovanovich, 1991.
- 14 Berger MS, Deliganis AV, Dobbins J, et al. The effect of extent of resection on recurrence in patients with low grade cerebral hemispheric gliomas. *Cancer* 1994;74:1784–91.
- 15 Brada M, Ford D, Ashley S, et al. Risk of second brain tumour after conservative surgery and radiotherapy for pituitary adenoma. *BMJ* 1992;304:1343–6.
- 16 Sklar CA, Constine LS. Chronic neuroendocrinological sequelae of radiation therapy. *Int J Radiat Oncol Biol Phys* 1995;31:1113–21.
- 17 Moore IM, Kramer JH, Wara W, Halberg F, Ablin AR. Cognitive function in children with leukaemia: effect of radiation dose and time since irradiation. *Cancer* 1991;68:1913–17.
- 18 Ellenberg L, McComb JG, Siegel SE, Stowe S. Factors affecting intellectual outcome in pediatric brain tumour patients. *Neurosurgery* 1987;21:638–44.
- 19 Silber JH, Radcliffe J, Peckham V, et al. Whole-brain irradiation and decline in intelligence; the influence of dose and age on IQ score. *J Clin Oncol* 1992;10:1390–6.
- 20 Butler RW, Hill JM, Steinhilber PG, Meyers PA, Findlay JL. Neuropsychological effects of cranial irradiation, intrathecal methotrexate and systemic methotrexate in childhood cancer. *J Clin Oncol* 1994;12:2621–9.
- 21 Copeland DR, deMoor C, Moore BD III, Alter JL. Neurocognitive development of children after a cerebellar tumour in infancy: a longitudinal study. *J Clin Oncol* 1999;17:3476–86.
- 22 Hoppe-Hirsch E, Renier D, Lellouch-Tubania A, Sainte-Rose C, Hirsch JF. Medulloblastoma in childhood: progressive intellectual deterioration. *Childs Nerv Syst* 1990;6:60–5.
- 23 Butler RW. Attentional processes and their remediation in childhood cancer. *Med Pediatr Oncol* 1998;(suppl 1):75–8.
- 24 Edgeworth J, Bullock P, Bailey A, Gallagher A, Crouchman M. Why are brain tumours still being missed? *Arch Dis Child* 1996;74:148–51.

Infantile torticollis

Does early treatment of infantile torticollis prevent established deformity needing surgery? Do all babies with a sternomastoid tumour need passive muscle stretching manoeuvres? A large series from Hong Kong (JCY Cheng and colleagues. *Journal of Pediatric Surgery* 2000;35:1091–6) does not answer these questions but provides data about outcome.

The series included 1086 infants with torticollis (excluding acute onset torticollis, spinal anomalies, spasmodic torticollis, and torticollis secondary to neurological, ocular, or other diseases) of whom just under half had a sternomastoid tumour, about a third had a tight sternomastoid muscle but no tumour, and the remaining 20% had neither a tumour nor tightness of the muscle (postural torticollis). Hip dysplasia was found in 4% and craniofacial asymmetry in 90% of the infants.

Treatment was dictated by severity. Those with less than 10° of restriction of passive rotation (compared with the normal side) received an “active home stimulation exercise and positioning programme” (no details given). Those with greater restriction had manual stretching performed by a physiotherapist three times a week. The average duration of treatment was four months. Surgery was restricted to those with significant head tilt and restriction of rotation unresponsive to at least six months of manual stretching.

A quarter of all infants were treated at home and all did well. Of those who had manual stretching over 90% did well and 5% had surgery. None of the postural group needed surgery.

Most infants with muscular torticollis do well with conservative management. A few (4% in this series) eventually need surgery.

ARCHIVIST