training, and one-quarter had no meaningful work. Shunts had been changed 103 times in 29 patients still alive. Encouragement and support for the families seemed essential in improving social development of patients in adolescence.

PSEUDOTUMOR CEREBRI WITHOUT EDEMA

The pathologic findings in two adult patients with idiopathic intracranial hypertension (IIH) who died unexpectedly are reported from the University of Iowa College of Medicine, Iowa City. Patient 1 died of cardiac arrest during operation for duodenal ulcer, and patient 2 died in her sleep of unknown cause. No histologic evidence of either intracellular or interstitial brain edema was found at autopsy. Arachnoid granulations were not available for study. (Wall M et al. Idiopathic intracranial hypertension. Lack of histologic evidence for cerebral edema. Arch Neurol Feb 1995;52:141-145). (Reprints: Dr Wall, Department of Neurology, University of Iowa, College of Medicine, 200 Hawkins Dr, Iowa City, IA 52242).

COMMENT. The absence of cerebral edema was in agreement with the report of 3 patients studied by Greer and in contrast to a finding of interstitial and intracellular edema in cortical biopsies of 10 patients reported by Sahs and Joynt. A review of tissue from 3 of the Sahs and Joynt cases, one a girl aged 17 years, showed artifactual changes and no convincing evidence of edema on re-examination of slides. The authors recommend measures of brain water content of frozen tissue and examination of arachnoid granulations when available, in future investigations of pathogenesis of pseudotumor cerebri.

The MRI has been used to clarify the pathophysiology of pseudotumor in 7 children, aged 6 months to 13 years. Normal signal intensity in the white matter was in keeping with absence of brain edema, as reported in the Iowa autopsy specimens. (Connolly MB et al. 1992; see Progress in Pediatric Neurology II, 1994, pp 336-7).

HEAD TRAUMA

MANAGEMENT OF CONCUSSION IN YOUNG ATHLETES

The discharge instructions received by youth athletes hospitalized for a sports-related closed head injury over a 5-year period (1987-1991) were examined at the Children's Hospital and University of Alabama, Birmingham, AL. Injury severity was graded according to Cantu's 1986 guidelines and compared to the Colorado Medical Society guidelines as endorsed by the American Academy of Pediatrics. Concussions were grade 1 (least severe) in 8 patients (24%), grade 2 in 10 (30%), and grade 3 (most severe) in 15 (45%). Discharge instructions were inappropriate and not in compliance with guidelines in 8 of 10 patients with grade 2, and in all of 15 with grade 3 concussions. The majority had uneventful hospital courses, but most received inadequate counseling regarding potential future risk. Of 23 for whom instructions were inadequate, 3 were allowed to return to sports participation too quickly, and no instructions were documented for 20 (87%) patients. (Genuardi FJ, King WD. Inappropriate discharge instructions for youth athletes hospitalized for concussion. Pediatrics February 1995;95:216-218). (Reprints: Dr FJ Genuardi, University of Florida Health Science Center, Dept of Pediatrics, 653-1 W 8th St, Jacksonville, FL 32209).

COMMENT. Lack of familiarity with guidelines for the management of concussion in sports-related head injuries was one explanation for the frequency of inappropriate discharge instructions. The Colorado Medical Society guidelines are summarized as follows:
• Grade 1. Confusion without amnesia or loss of consciousness. Return to sport permitted after 20 minutes, if no symptoms at rest or on exertion.
• Grade 2. Confusion with amnesia but no loss of consciousness. Observe 24 hours. Return permitted after 1 week without symptoms.
• Grade 3. Any loss of consciousness. Admit if neuro exam abnormal. Return permitted after 1 month, if asymptomatic for past 2 weeks.

Football accounted for 55%, baseball 12%, soccer 6%, and wrestling 3% of injuries in the above study. Documentation of discharge instructions is important for medico-legal reasons.

PERPETRATORS OF ABUSIVE HEAD TRAUMA

The identity of abusers and their relationship to victims was studied by reviewing medical charts of 151 head injured children, aged 24 months or younger, seen at the Children's Hospital, Denver, CO from Jan 1982 - Jan 1994. All infants had documented intracranial bleeding and other injuries. Male infants were abused more frequently than female (60% v 40%); and 23% died. Male perpetrators outnumbered females 2.2:1. Fathers and boyfriends were the most common perpetrators: 37% and 20%, respectively. From 1989 to 1993, the percentage of infants abused by men nearly doubled. Female baby-sitters were a large, previously unrecognized group of perpetrators, accounting for 17%. Mothers were responsible for only 12%. (Starling SP et al. Abusive head trauma: The relationship of perpetrators to their victims. Pediatrics February 1995;95:259-262). (Reprints: Dr SP Starling, The Children's Hospital, B-138, 1056 East 19th Ave, Denver, CO 80218).

COMMENT. These findings should focus attention on baby-sitters as a previously unrecognized group of abusers. Despite an increase in support services and media publicity, non-accidental head injury ("shaken baby syndrome") remains the leading cause of death or long-term disability among child abuse cases. Subtle or mild trauma is particularly difficult to diagnose, often mistaken for viral illness, feeding problems, or infant colic. Shaking injuries are rare after the second year. The most common age for whiplash abuse is 5 months, when the head is large in relation to the body, and the neck muscles and head control are weak. (Brown JK, Minns RA, 1993). See Progress in Pediatric Neurology II, Chicago, PNB Publ, 1994. pp387-396, for an overview of head injury in children by Dr J Keith Brown, Edinburgh, and various recent articles and editorial commentaries.

LEARNING AND BEHAVIOR DISORDERS

MECHANISM OF SUGAR-INDUCED BEHAVIORAL EFFECTS

The adrenomedullary response to a standard oral glucose load (1.75 gm/kg; maximum, 120 gm) and susceptibility to neuroglycopenia (assessed by the hypoglycemic clamp and measurements of P300 auditory evoked potentials [AEP]) were studied in 25 healthy children (8 - 16 years of age) compared to 23 young adults at the Children's Clinical Research Center, Yale University School