

eyelids and hands occurred between 1 and 6 years in 33%. Distinctive EEG abnormalities were seen in 90%. Epilepsy was well controlled in 81%, improved with age, and stopped at a median age of 4 years 6 months [3].

The stereotypic electroclinical pattern of WHS is described as intermittent bursts of 2-3 Hz high voltage slow waves with superimposed spike and spike wave activity in centroparietal or parietotemporal areas, often elicited by eye closure, and associated with myoclonic jerks [4]. The electroclinical pattern of WHS characterized by discharges mixed with slow components on eye closure is similar to that described in Angelman syndrome [5]. Awareness of the clinical neurological syndrome and characteristic electroclinical findings in WHS and AS might help in early diagnosis and treatment of associated epilepsy [6].

References.

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HEADACHE DISORDERS

NEUROSURGEON'S PERSPECTIVE ON NEUROIMAGING FOR HEADACHES

Neurosurgeons at Washington University School of Medicine, St Louis, MO, address the proposed utility and negative impact of guidelines proposed by the American Headache Society (AHS), in conjunction with the Choosing Wisely initiative of the American Board of Internal Medicine. The first of five recommendations approved by the AHS Choosing Wisely [1] Task Force, "Don't perform neuroimaging studies in patients with stable headaches that meet criteria for migraine," is the subject of this neurosurgical perspective. The Choosing Wisely initiative focuses on reducing health care spending by setting guidelines to limit tests ordered by physicians, and if adopted, the guidelines threaten to negatively impact the care and outcomes of patients with brain tumors.

Patients with brain tumors may present with isolated headaches in the absence of other neurological symptoms and signs. Despite classic teaching, headaches caused by tumors may be similar to tension-type or migraine-type headaches in 77% and 9% of cases, respectively. A review of 95 patients (10 children) diagnosed with a brain neoplasm by open biopsy at Washington University found isolated headaches were the only complaint in 11.6% of brain tumor patients, and 24.2% presented with isolated headaches, no symptoms, or only non-specific symptoms. If the Choosing Wisely Task Force [1] recommendations had been followed, diagnosis would have been delayed or missed for 3 of 11 isolated headache patients (3.2% of all brain tumor patients). If the American College of Radiology/Consumer Reports recommendations had been followed, "Don't do imaging for uncomplicated headaches," a diagnostic delay/error would have occurred for 7 of 11 isolated headache patients (7.4% of all patients). Under the proposed

guidelines, neuroimaging would have been delayed or missed in 3%–7% of patients with brain tumors. Unvalidated guidelines to prevent neuroimaging in patients with headaches may reduce the perceived global economic burden at the expense of medical errors, delayed diagnoses and inferior outcomes for brain tumor patients. (Hawasli AH, Chicoine MR, Dacey RG Jr. Choosing wisely: A neurosurgical perspective on neuroimaging for headaches. *Neurosurgery* 2014 Sep 24. [Epub ahead of print]).

COMMENTARY. Headache in Children with Brain tumors.

Headache is the most common presenting symptom in children with brain tumors. In 139 children with brain tumor, a median of one symptom or sign was present at onset and six by diagnosis. Headache occurred in 55 (40%) children at onset and in 81 (58%) at diagnosis. Nausea and vomiting occurred in 39 (28%) at onset and 88 (63%) at diagnosis [2]. In a review of 200 cases to determine the presenting features of brain tumors, the commonest first presenting symptom was headache in 41%, followed by vomiting in 12% [3]. In a review of 55 children diagnosed with brain tumors, 19 (41%) of the tumors were supratentorial and 27 (59%) were infratentorial. Supratentorial tumors were associated with vomiting as the first symptom in 42%, seizures in 37% and headache in 31%. In children with infratentorial tumors, headache in 62% was the most common presenting symptom, followed by vomiting in 55% and ataxia in 48% of cases. The prediagnostic symptomatic interval had a median duration of 30 days with vomiting, 75 days with headache, and 75 days with ataxia. Diagnosis was often late in relation to the presenting symptom, especially headache [4].

References.

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PEDIATRIC MIGRAINE PRESCRIPTION PATTERNS

Investigators at Boston Children's Hospital determined the migraine prescription patterns in 4839 patients, ages 2 to 17 years, treated over a 4-year period. The most common medications prescribed at this large academic hospital were sumatriptan, amitriptyline, topiramate, ondansetron, and cyproheptadine. (Johnson A, Bickel J, Lebel A. Pediatric migraine prescription patterns at a large academic hospital. *Pediatr Neurol* 2014 Jul 1. [Epub ahead of print]).

COMMENTARY. Migraine prophylactic medication recommended in a General Practitioners Guideline is underutilized in the primary care setting in the Netherlands, and medications not listed in the guideline are preferred [1].

References.

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