more in forced expiratory volume in 1 second or allergic symptoms, such as rhinorrhea or conjunctival irritation within 3 hours of an aspirin challenge. These patients were desensitized with increasing-dose oral challenges of aspirin until 650 mg twice daily was tolerated without adverse effect. These patients were then maintained on 650 mg aspirin twice daily long-term. After a mean of 3.1 years the desensitized group had fewer sinus infections per year (2 vs 6; P<.001), fewer hospitalizations per year (0 vs 0.2; P<.001), and less oral steroid use (median 10.2 vs 2.5 mg/d prednisone; P<.001) compared with the control group.3

A 2003 cohort study of 172 AIA patients with varying degrees of symptom severity noted similar results. All underwent aspirin desensitization and maintenance therapy. Analysis at 6 months revealed reductions in the number of sinus infections (from 2.5 to 1 sinus infection over 6 months, P<.001) as well as improved nasal and asthma scores compared with the control group.4

In 2007 a randomized controlled trial of 137 patients with AIA, also with varying severity of symptoms, compared aspirin desensitization and maintenance with high-dose aspirin (650 mg twice daily) with low-dose aspirin (325 mg twice daily). At 1 month, patients in the low-dose group were asked to increase their dose if their symptoms were inadequately controlled. Those in the high-dose group were asked to decrease their dose if their symptoms were adequately controlled. Both groups demonstrated significant improvement in number of sinus infections (from median 4.5–5.5 to 1.9–2.8 per year), sinus operations (from median 0.25–0.36 to 0.09–0.13 per year), and hospitalizations for asthma (from median 0.15–0.31 to 0.00–0.03 per year) (P<.001 for all comparisons).5

Evidence-Based Answer
Most cases of nasal lacrimal duct obstruction resolve either spontaneously or with lacrimal sac massage. In children 6 to 36 months old with persistent obstruction, nasolacrimal duct probing has an overall success rate of about 78%. (SOR B, based cohort studies and case series.)

In 1923, Crigler described a technique of covering the nasolacrimal punctum and massaging downward to increase hydrostatic pressure in the nasolacrimal sac, thereby rupturing the membranous obstruction. The article reported a 100% success with this technique over 7 years, but it did not report the number of patients in the series or the follow-up length. In 1947, another case series reported a cure rate of 94.6% in 203 cases by 1 year of age using the Crigler technique. In 1978, a study of a cohort of 50 infants reported spontaneous resolution in 44 (88%) patients by 8 months of age.3

In 1982, a prospectively randomized controlled trial was conducted with 132 children (average age 7 months; 175 affected eyes) referred to a pediatric ophthalmologist. The infants were randomized into 3 groups: (1) the Crigler technique, (2) simple massage of exerting gentle pressure on the nasolacrimal sac expressing pus from the puncta, and (3) no massage. The trial lasted 1 month or until 6 months of age, whichever came later. The results showed superiority of the Crigler technique with 31% resolution versus 9% and 7% for the other approaches, respectively (P<.0005).1

If conservative treatment is not effective, then nasolacrimal duct probing is often recommended. A review of 9 case series enrolling between 60 and 2,369 patients showed success rates of 84% to 100% in patients <1 year of age, 69% to 99% in patients <2 years of age, and 33% to 97% in patients >2 years of age.2

A large, multicenter, randomized controlled trial that enrolled 955 eyes of 718 children between 6 and 48 months of age evaluated the success of probing in the office versus the surgical setting and at various ages. Probing was successful in 78% of eyes (328/421) for children ages 6 to 12 months, 79% of eyes (326/421) ages 12 to 24 months, 79% of eyes (37/47) ages 24 to 36 months, and 56% of eyes (6/11) ages 36 to 48 months. The resolution rates by age group were not statistically different.3 However, for children younger than 1 year

---

of age, an ophthalmologist may choose to do probing in the office setting using a papoose restraint, obviating the need for general anesthesia. Among children under 1 year of age in this study (N=421 eyes), there was a 72% success rate in the office setting compared with an 80% success rate in the surgical facility (adjusted relative risk 0.88; 95% confidence interval, 0.80–0.96).1

Keren Wilson, DO
Richard Guthmann, MD, MPH
UIC Illinois Masonic FMR
Chicago, IL

What is the sensitivity and specificity of routine EEG in the diagnosis of epilepsy?

Evidence-Based Answer
The sensitivity of electroencephalogram (EEG) for the diagnosis of suspected epilepsy in adults is 29% to 55%. Sensitivity can be increased to 80% to 90% with use of serial EEGs. The specificity in healthy patients is generally 99.5%. (SOR A, based on multiple diagnostic cohort studies.)

A 2007 systematic review assessed evidence for the use of routine EEG in the evaluation of a first adult seizure.1 The review included 11 prospective cohort studies with a total of 1,766 adult patients. Pediatric studies and studies with fewer than 10 patients were excluded. Data from studies containing a mixed population of adult and pediatric cases were reviewed, and data pertaining to adult patients were extracted. Epileptiform activity was seen on initial EEG in 29% of cases (510 of 1,766).

Two recent narrative reviews also addressed the sensitivity of EEG to diagnose epilepsy.2,3 Both reviews cited multiple retrospective studies. In these cohorts, epileptiform activity was seen on the initial EEG in 29% to 55% of patients assigned a clinical diagnosis of epilepsy.

A 1987 retrospective cohort of 429 adults with a clinical diagnosis of epilepsy was used to define an operational curve for serial EEGs. Data from more than 1,200 EEGs were analyzed. Half of these patients with clinical epilepsy had epileptiform activity present on their first recording. Sensitivity increased to 84% by the third EEG and 92% by the fourth.4

To determine the specificity of screening EEGs, a prospective cohort of 13,658 healthy men without epilepsy who were candidates for aircrew training was studied.3 Only 69 of 13,658 candidates (0.5%) had epileptiform activity on their EEG, yielding a specificity of 99.5%. Between 5 and 29 years of clinical follow-up was available for 43 of the 69 patients with epileptiform activity. Only 1 of these patients developed epilepsy.

Joshua Merok, MD
Helen P. Xenos, MD
UIC Illinois Masonic FMR
Chicago, IL

Is megestrol acetate an effective appetite stimulator in the HIV anorexia-cachexia syndrome?

Evidence-Based Answer
In HIV/AIDS patients with anorexia-cachexia syndrome, megestrol acetate (Megace<sup>®</sup>) increases weight, but does not significantly improve appetite or quality of life. (SOR B, based on subgroup analysis in a systematic review.)

Anorexia-cachexia syndrome is a condition characterized by weight loss, loss of appetite, and tissue wasting that is seen among patients with cancer, HIV/AIDS, central nervous system disorders, and anorexia nervosa.1,2 When this condition is noted in patients with HIV/AIDS, it is commonly referred to as HIV wasting syndrome. In 1993 the US Food and Drug Administration approved megestrol acetate for the use of unexplained weight loss and anorexia in patients with AIDS.1

Two recent systematic reviews addressed the efficacy of megestrol acetate. A 2005 Cochrane review included 34 randomized controlled trials (RCTs) that included 4,826 patients with a diagnosis of cachexia-anorexia and...