The Use of Antipyretic Agents in the Prevention of the Recurrence of Febrile Seizures

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Febrile seizures occur in 3-5% of children aged 6 months to 6 years. The recurrence rate is 20-30%. The most common time for recurrence is unclear: recurrence may occur during the same febrile illness or with subsequent febrile illnesses. The etiology of febrile seizures is still unclear, and genetic, viral, and bacterial factors have been suggested. It has been assumed that the key factor associated with febrile seizures is fever, but the exact relation between febrile seizures and fever is still unclear. Many suppose that the administration of antipyretic agents during febrile episodes will prevent seizures and their recurrences by the lowering of the fever. As a result, many parents administer antipyretic agents frequently and often prophylactically in order to prevent febrile seizures. While antipyretics are for the most part safe, they are not completely benign and have their own associated side effects. Therefore, an extensive review of the literature was completed to determine whether the administration of antipyretics during an acute febrile illness prevents children with a history of febrile seizures from having a recurrence. PubMed MESH was searched using the keywords “febrile seizure”, “antipyretic agents”, “acetaminophen”, “ibuprofen”, “non-steroidal anti-inflammatory drug,” yielding four studies that were appraised. The studies that were included defined and evaluated clear end-points and were applicable to our patient population. Each of these studies had their own limitations, including small number of patients and loss to follow up; however, they all reached similar conclusions. The clinical bottom line for this topic is that antipyretic agents do not prevent the recurrence of febrile seizure. It is therefore important to educate and provide appropriate anticipatory guidance to parents, students, nurses, and physicians in order to avoid the use of unnecessary medications.

**References**:

* Offringa M & Newton R. Prophylactic drug management for febrile seizures in children (review). The Cochrane Collaboration 2012.
* Schnaiderman D, Lahat E, Sheefer T, et al. Antipyretic effectiveness of acetaminophen in febrile seizures: ongoing versus sporadic usage. Eur J Pediatr 1993; 152: 747-9.
* Steering Committee on Quality Improvement and Management, Subcommittee on Febrile Seizures American Academy of Pediatrics. Febrile seizures: clinical practice guideline for the long-term management of the child with simple febrile seizures. Pediatrics 2008; 121: 1281-6.
* Strengell T, Uhari M, Tarkka R, et al. Antipyretic agents for preventing recurrences of febrile seizures. Arch Pediatr Adolesc Med 2009; 163(9): 799-804.
* Van Stuijvenberg M, Derksen-Lubsen G, Steyerberg E.W., et al. Randomized, controlled trial of ibuprofen syrup administered during febrile illnesses to prevent febrile seizure recurrences. Pediatrics 1998; 102(5); e51-8.