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TOOLS FOR PRACTICE

PEER PATIENTS EXPERIENCE EVIDENCE RESEARCH

Turn down the heat… or not: Do antipyretics reduce the risk of febrile seizures?

CLINICAL QUESTION

Do antipyretics reduce the incidence of febrile seizures in children?

BOTTOM LINE

In children with a history of febrile seizures, antipyretics do not reduce the risk of seizures during subsequent febrile illnesses. One RCT suggested they reduced seizure recurrence within the same 24-hour febrile episode from 24% of children on placebo to 9%. Clinicians should focus on managing discomfort, rather than treating fever to prevent seizures.

EVIDENCE

- No RCTs evaluate antipyretics for primary prevention of febrile seizures.
- Three randomized, controlled trials (RCTs) in children with ≥1 prior febrile seizure, treated during subsequent febrile episodes.
  - 231 children,[1] age 4 months-4 years (mean age 1.7 years), any fever ≥38°C.
    - Initial rectal diclofenac followed by oral ibuprofen or acetaminophen, or placebo.
    - Number with seizures at 2 years: 23% versus 24% (placebo), not statistically different.
  - 230 children,[2] age 1-4 years, any fever ≥38.5°C.
    - Oral ibuprofen 5mg/kg every 6 hours until afebrile versus placebo.

        - Number with seizures at 1 year: No difference.
        - Limitations: Low ibuprofen dose.
    - 180 children,[3] age 0.8-4.6 years with any fever ≥38.5°C.
        - Initial rectal diazepam versus placebo, then after 6 hours, oral acetaminophen or placebo (alternating each febrile episode).
        - Number with seizures at 2 years: No difference.
    - Limitations: Open-label acetaminophen was permitted;[1,3] attained temperature not reported.
    - Meta-analysis of above RCTs:[4] No difference.
- RCT of seizure recurrence during same febrile episode, 423 children, age 6-60 months with fever ≥38°C, rectal acetaminophen every 6 hours for 24 hours versus no antipyretics.[5]
    - Number with seizures: 9.1% versus 24% (no treatment), statistically different.

CONTEXT

- In one retrospective study of 293 children with viral gastroenteritis, ~40% of seizures occurred without documented fever, suggesting that factors related to the underlying illness may contribute to seizure provocation, not fever alone.[6]
- Febrile seizures occur in 2-5% of children between 6 months-5 years. Risk factors include young age and genetic predisposition.[7]
- Risk of epilepsy at age 7 is 2% after febrile seizure versus 0.5% at baseline. Risk increases with neurologic abnormalities and complex seizure presentation.[8]
- Guidelines recommend treating discomfort, rather than fever.[9]

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