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Commentary

Short Takes

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Potential role of febrile seizures and other risk factors associated with sudden deaths in children. Crandel LG, Lee JH, Friedman D, Devinsky O. JAMA Network Open 2019; 2:e192739

Flash summary: This study attempts to assess the role of febrile seizures and other risk factors with sudden unexplained death in children (SUDC). This is a case series that reviewed 622 consecutive deaths between the ages one and 17 years from 18 countries. Data were collected from family members whose children died. Family members added data voluntarily to the SUDC Foundation. The outcome measure was a certified manner of death characterized as accident, natural, or not determined. Deaths were characterized as SUDC or sudden explained death in childhood (SEDC). Three hundred and ninety-one families supplied information, including forensic information.

Compared with the general population, SEDC and SUDC were both significantly elevated in children with febrile seizures. The authors opine that febrile seizures might contribute to some cases of both SEDC and SUDC. Of note, SUDC occurred at higher rates during sleep, in contrast to SEDC.

Bottom line: The study was limited because all data were voluntarily submitted to a database by families who lost a child. As such there is an inherent bias in the data submission. Having said this, there is an increased incidence of death in children with febrile seizure. There has been additional recent speculation that children with febrile seizures might have an increased incidence of sudden unexpected death in epilepsy.

I have long suspected that febrile seizures, although generally benign, might not always be so innocent after all. At least there may be a subset of patients who meet clinical criteria for febrile seizures who do not have a benign course. Alternatively, the same factors at play in sudden unexpected death in epilepsy and epilepsy might be factors in febrile seizure and death, making all seizures whether “benign” or “malignant” a rare risk factor for sudden death.

One of the early pioneers in pediatric neurology, Sidney Carter, in the 1980s told me he was wrong about febrile seizures in the 1960s. This is the second time I have quoted him in this column. He encountered a child with febrile seizure in the 1960s who went on to have status epilepticus and died. As a result, Dr. Carter recommended that all children with a first febrile seizure start phenobarbital, and that was the standard of care 50 to 60 years ago. By the time I became a resident, the recommendation had loosened, based on no real data. We did not treat a first febrile seizure but initiated phenobarbital after a second event. By the 1990s, care again changed based on data that phenobarbital did not prevent febrile seizure recurrence (but that was true when levels were not obtained?). So the standard of care changed to never treating febrile seizures, which is where we are today. Now with new data, we need to reassess the whole concept of febrile seizure, and this will be a challenging task. It is suffice to say that pediatric neurologists might want to study febrile seizures more thoroughly to improve our approach to this common problem that has recently been felt to be a benign, almost incidental condition. Epilepsy and sudden death are topics that intrigue me, and now febrile seizures too might be an issue.

Frequent cellular phone use modifies hypothalamic-pituitary-adrenal axis response to a cellular phone call after mental stress in healthy children and adolescents: A pilot study. Geonikolou SA, Chamakou A, Mantzou A et al. Sci Total Environ 2015; 536:182-188

Putting Down Your Phone May Help You Live Longer. New York Times. Catherine Price. April 24, 2019

Flash summary: Mounting evidence suggests that increasing cell phone use correlates with increased levels of cortisol. For example, one study in children showed that salivary cortisol levels increased after taking a phone call, more in those who were frequent phone users. Cortisol levels were higher after a phone call in frequent, compared with occasional, cellular phone users. The New York Times article opines that cell phone use increases stress, and based on multiple studies this might be related to cortisol excretion, because cortisol is excreted during and after stress triggers.

Bottom line: Does cellular phone use make our patients anxious? When I care for adolescents with migraine, many have poor sleep hygiene as a headache trigger. With such patients, the proper amount of time each child needs to sleep as well as the methods for achieving good sleep are discussed. Cell phone,

Editor's note: Short Takes offers a brief analysis by Steven G. Pavlakis of selected articles that may be of interest to child neurologists. Papers that strike the fancy of the analyst or the editors are selected for inclusion, but we welcome suggestions.

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computer, and television use in bed are discouraged. Anecdotally, decreasing nighttime technology use seems to help both sleep and headaches.

On the day the New York Times article appeared, I encountered a 15-year-old boy with chronic daily headaches related to migraine. His cell phone was on the examining table face up next to him; he glanced down at it periodically in case a text arrived. He was anxious and made me anxious as well. I asked him if he slept with his cell phone on next to him in bed. He affirmed that he did, and I decided that this was a major problem with both sleep and anxiety; we attempted an intervention. On his return his headaches were much better as a result of better sleep. He placed his cellular phone in another room at night and this seemed to do the trick, at least in part.

On the clinical side, I've concluded that excessive cell phone usage worsens sleep hygiene, at least in adolescents. I wonder whether cell phone use increases anxiety in general. It might be a factor in the increased anxiety of our patient population that many of us have witnessed over the past couple of decades. Certainly, Geonikolou and colleagues' article could explain such a supposition. Nighttime electronic use should be strictly limited for all of us, including our patients, when possible.