CORRESPONDENCE

Pain Therapy in Children and Adolescents

by PD Dr. med. Boris Zernikow, Dipl. Psych. Dr. rer. nat. Tanja Hechler
in volume 28–29/2008

Current Data Situation

The statement that pain that rouses the child from sleep is an alarm signal indicating the presence of an underlying organic disease is not confirmed by current data. The American Academy of Pediatrics wrote in a recent statement: "The available studies provide evidence that frequency, severity, location, and timing (postprandial, waking during night) of abdominal pain do not help distinguish between organic and functional abdominal pain" (1). The statement that children with chronic abdominal pain often report further pain, such as headache, is correct. However, this does not imply that concomitant headache is a characteristic trait of functional abdominal pain. This item is not appropriate for making a distinction between functional and organic abdominal pain: "Children with recurrent episodes of abdominal pain are more likely than children without abdominal pain or children with behavior disorders to have anorexia, nausea, episodic vomiting, constipation, diarrhea, headache, arthralgia or eye problems. Yet none of these associated symptoms have been reported to help distinguish between organic and functional abdominal pain" (1).

DOI: 10.3238/arztebl.2009.0055a

REFERENCES

1. American Academy of Pediatrics / North American Society for Pediatric Gastroenterology, Hepatology and Nutrition: Chronic Abdominal Pain in Children. Pediatrics 2005; 115: 812–5 und e370–82.
2. Zernikow B, Hechler T: Pain Therapy in Children and Adolescents. Dtsch Arztebl Int 2008; 105(28–29): 511–22.

Dr. med. Stefan Razeghi
Schlierseerstr. 1, 83714 Miesbach, Germany
stefanrazeghi@yahoo.de

Conflict of interest statement
The author declares that no conflict of interest exists according to the guidelines of the International Committee of Medical Journal Editors.

Mention the Ophthalmologist

The simplified and reduced list of causes of headache in children is desirable as a superficial CME measure but will convey the wrong idea.

In my practice area, the pediatricians refer almost all children with headache to an ophthalmologist. The proportion of children with real migraine seems rather smaller than that of children with hidden phorias or hyperopias. There are also more children with bruxism. Unless all these children are meant to be subsumed under the label "tension headache." Perhaps the selection is also a consequence of the authors' selected patient cohort, in which case diagnostic parameters should at least include a mention of presenting to an ophthalmologist.

DOI: 10.3238/arztebl.2009.0055b

REFERENCES

1. Zernikow B, Hechler T: Pain Therapy in Children and Adolescents. Dtsch Arztebl Int 2008; 105(28–29): 511–22.

Dr. med. Frank Schmidtborn
Bahnhofstr. 33, 71332 Waiblingen, Germany
schmidtborn@t-online.de

Conflict of interest statement
The author declares that no conflict of interest exists according to the guidelines of the International Committee of Medical Journal Editors.

Advise Against Metamizole

The authors suggest that metamizole is indicated especially in abdominal pain and pain of a colicky nature, because of its spasmolytic effects.

Metamizole is licensed in several countries in Europe, Latin America, Africa, and Asia. In countries with good pharmacovigilance schemes—for example, Sweden—it was taken off the market after a short licensing period in 1999. In the United Kingdom and the United States, metamizole has never been licensed.

A study sponsored by the Hoechst company found a risk of agranulocytosis while taking metamizole of 1.1 per 1 million users per week (1). More recent Swedish data contradict these data (2). Between 1969 and 1974—the year the drug was first taken off the market—50 patients with serious adverse effects of metamizole on blood count had been registered in Sweden. In the following 15 years without a license, 2 patients with agranulocytosis were seen. Both had purchased metamizole abroad.

From 1995—the first year in which metamizole was re-licensed—to 1999, 14 cases of agranulocytosis were documented; the mortality was 23%. From these data it was calculated that the frequency of serious adverse effects for the blood count while taking metamizole was 1 in 1439.

From a clinical and pharmacological perspective, use of metamizole should be strongly advised against.

DOI: 10.3238/arztebl.2009.0055c

REFERENCES

1. The International Agranulocytosis and Aplastic Anemia Study. JAMA 1986, 256: 1749.
2. Hedenmalm K, Spigset O: Agranulocytosis and other blood dyscrasias associated with dipyrone (metamizole) Eur J Clin Pharmacol 2002; 58: 265.
3. Zernikow B, Hechler T: Pain Therapy in Children and Adolescents. Dtsch Arztebl Int 2008; 105(28–29): 511–22.

Prof. Dr. med. Joachim Neumann
Martin-Luther-Universität, Halle-Wittenberg
Institut für Pharmakologie und Toxikologie
06097 Halle (Saale), Germany
sekr.pharmatox@medizin.uni-halle.de

Conflict of interest statement
The author declares that no conflict of interest exists according to the guidelines of the International Committee of Medical Journal Editors.

In Reply:

The risk of agranulocytosis in childhood owing to treatment with metamizole seems negligible—to date only one such case has been reported. We wish to mention the most important data on nonchemotherapy associated agranylocytosis in adults from the recent review by Andersohn et al (1):

- Over a time span of 40 years (1966–2006), only 980 cases were identified
- 56 cases were definitely and 436 probably associated with the administration of one of the 125 identified medications
- For 11 medications, more than 10 case reports existed: these included penicillin G and metamizole, with 11 cases each classified as certainly or probably associated with agranulocytosis
- Mortality due to agranulocytosis was less than 5% when modern therapeutic options were available.

For adults, Neumann's statement that the use of metamizole should be strongly advised against is not supported by science and is even potentially harmful if the gastrointestinal side effects of therapy with nonsteroidal anti-rheumatic or anti-inflammatory drugs (NSARs or NSAIDs) are taken into account:

- The annual death rate is 0.08%
- The chance of dying as a result of gastrointestinal complications is 1 in 1200 after two months' therapy with NSARs (2)
- In the US, 41 000 patients are hospitalized for this reason every year, and 3300 die (3).

Migraine can be distinguished phenomenologically from headache in the context of impaired eyesight. Still, for the child, impaired eyesight may be an additional stress factor and thus affect the frequency of headaches. It therefore certainly makes sense to actively investigate eye problems in children with headaches. The statements made by Razeghi are correct and do not contradict what we said our article.

We thank Hack and Mader and wish to use this opportunity to specify our dosage recommendations for intravenous paracetamol.

The manufacturers recommend for mature neonates, infants, toddlers, and children weighing <10 kg up to 4 x 7.5 mg/kg i.v. per diem. Allegaert recommends for premature babies and neonates a load dose of 20 mg/kg. Subsequent doses for premature babies <31 weeks of gestation are 20 mg up to every 12 hours, for neonates of 31 to 36 weeks' gestation 10 mg/kg up to every 8 hours, and for older premature babies and neonates 10 mg/kg up to every 6 hours (maximum dosis <36 weeks' gestation: 40 mg/kg/d i.v., >36 weeks' gestation 50 mg/kg/d i.v.) (4).

DOI: 10.3238/arztebl.2009.0056

REFERENCES

1. Andersohn F, Konzen C, Garbe E: Systematic review: agranulocytosis induced by nonchemotherapy drugs. Ann Intern Med 2007; 146: 657–65.
2. Moore RA: The hidden costs of arthritis treatment and the cost of new therapy—the burden of non-steroidal anti-inflammatory drug gastropathy. Rheumatology (Oxford) 2002; 41(Suppl 1): 7–15.
3. Griffin MR: Epidemiology of nonsteroidal anti-inflammatory drug-associated gastrointestinal injury. Am J Med 1998; 104: 23–9.
4. Allegaert K, Murat I: Not all intravenous paracetamol formulations are created equal. Paediatr Anaesth 2007; 17: 818.
5. Zernikow B, Hechler T: Pain Therapy in Children and Adolescents. Dtsch Arztebl Int 2008; 105(28–29): 511–22.

PD Dr. med. Boris Zernikow
Dr. rer. nat. Dipl. Psych. Tanja Hechler
Dr.-Friedrich-Steiner-Str. 5, 45711 Datteln, Germany
B.Zernikow@Kinderklinik-Datteln.de

Conflict of interest statement
Dr Zernikow has reported associations with Astra Zeneca, Aventis, Boots Healthcare, Bristol Meyer-Squibb, Cephalen, Grünenthal, Janssen-Cilag, Mundipharma, Pfizer, and Reckitt-Benckiser.