

## LETTER TO THE EDITOR

### Aspirin-induced asthma needs a classification

**Dear Editor: I am interested in Analgesic Induced Asthma and I have been working on it for a while. I wanted to send my opinions on this subject to be published to your journal.**

The condition where asthma and analgesic intolerance appear together is called with various names like "aspirin-induced asthma" (AIA), "analgesic-induced asthma", "Samter's syndrome" or "ASA triad". More recently, interest in AIA has been stirred by demonstration of altered arachidonate metabolism with cysteinyl-leukotriene overproduction (1). Perennial rhinitis/rhinosinusitis and nasal polyp frequently can accompany this picture where chronic urticaria, metal allergy, antibiotic and food allergy/intolerance less frequently can do so (2). The frequency of aspirin intolerance (AI) is 10% among adult asthmatics, 14-35% among patients with nasal polyp, 20-40% among the ones with chronic urticaria and 1.5% among patients with rhinitis (3). Isolated AI is a condition appearing in 0.3-0.9% of the population (4).

Aspirin is the drug which comes into mind first when an analgesic is thought. Cases of bronchospasm following aspirin ingestion were reported shortly after introduction of aspirin into therapy approximately 100 years ago. The association of aspirin sensitivity, asthma and nasal polyps was described by Widal, et al in 1922 and this clinical entity, subsequently named aspirin triad, was popularized by the studies of Samter and Beers (5). As time has passed by it appeared that other nonsteroidal anti-inflammatory drugs (NSAID) having similar features as aspirin could also trigger asthma attacks. However, all the analgesic intolerant asthmatics do not have bronchospasm after taking the drug they are sensitive, they can sometimes have acute urticaria and/or angioedema or rarely anaphylactoid reaction (6). For example, some patients knowing this have discovered using analgesics less than the standard dose (1/2 or 1/4 tablet) sometimes with antihistaminic prophylaxis venturing the risk of acute urticaria and/or angioedema. Although the classical name of the syndrome is mentioned with aspirin, there are some patients who can use aspirin without any problem and

have acute asthma attacks with other analgesics (naproxen sodium, metamizole, paracetamol, etc.). Ninety per cent of the asthmatics tolerate aspirin and a small percentage benefit from it (6). Some of the AIA patients have various allergic reactions with seafood where in another group mite ingestion syndrome is described (7). Although atopy is an important risk factor, some of these patients are nonatopic (8, 9).

Namely it seems that it is time to revise the expression "AIA" nowadays. This group of patients are probably heterogeneous. For example, the asthmatics having only periorbital edema or urticaria can be accepted as a subgroup of AIA (10). In addition, the surveys performed in our clinic disclosed history of familial asthma in a frequency of 60% and familial AI 10% (2, 8). Taking this also into consideration I think that the risky patients with asthma or asthma and/or perennial rhinitis/rhinosinusitis and/or nasal polyp whose first degree relatives have AI or AIA can be called with names like "incomplete or partial AIA". It will be beneficial to discuss this subject in international dimensions.

#### ANALGESIC-INDUCED ASTHMA CLASSIFICATION

##### *I. Complete (Classical type) Analgesic Induced Asthma:*

Asthma + Analgesic Intolerance  $\pm$  (nasal polyp and/or perennial rhinitis/rhinosinusitis).

Subgroup: a) Asthma and Analgesic Intolerance (non-bronchospasm reaction).

b) Asthma and Analgesic Intolerance + (food intolerance and/or antibiotic intolerance and/or mite ingestion syndrome).

##### *II. Incomplete (partial) Analgesic Induced Asthma:*

a) Perennial rhinitis + Analgesic Intolerance.

b) Nasal polyp + Analgesic Intolerance.

- c) Asthma + First degree relative with Analgesic Intolerance or Analgesic Induced Asthma.
- d) Perennial rhinitis + First degree relative with Analgesic Intolerance or Analgesic Induced Asthma.
- e) Nasal polyp + First degree relative with Analgesic Intolerance or Analgesic Induced Asthma.
- f) Asthma + Nasal polyp + Perennial rhinitis/rhinosinusitis.

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#### REFERENCES

1. Szczeklik A, Stevenson D. Aspirin-induced asthma: Advances in pathogenesis and management. *J Allergy Clin Immunol* 1999;104:5-13.
2. Kalyoncu F, Karakaya G, Sahin AA, Baris YI. Occurrence of allergic conditions in asthmatics with analgesic intolerance. *Allergy* 1999;54:428-35.
3. Settipane GA. Aspirin sensitivity and allergy. *Biomed Pharmacother* 1988;42:493-8.
4. Kalyoncu AF, Karakoca Y, Demir AU, Alpar R, Shehu V, Çoplu L, et al. Prevalence of asthma and allergic diseases in Turkish university students in Ankara. *Allergol Immunopathol* 1996;24:152-7.
5. Samter M, Beers RF. Concerning the nature of intolerance to ASA. *J Allergy* 1967;40:281-93.
6. Szczeklik A. Adverse reactions to aspirin and nonsteroidal anti-inflammatory drugs. *Ann Allergy* 1987;59:113-8.
7. Sánchez-Borges M, Capriles-Hulett A, Fernández-Caldas E, Suárez-Cuacon R, Cacallero F, Castillo S, et al. Mite contaminated foods as a cause of anaphylaxis. *J Allergy Clin Immunol* 1997;99:738-43.
8. Karakaya G, Kalyoncu AF. Analgesic intolerance with or without asthma: what makes the difference? International Symposium on Aspirin Intolerance and Related Syndromes: a multidisciplinary approach. 11-13 november 1999; Rome, Italy. Abstract book: 40.
9. Sánchez-Borges M, Capriles-Hulett A. Atopy is a risk factor for nonsteroidal anti-inflammatory drug sensitivity. *Ann Allergy Asthma Immunol* 2000;84:101-6.
10. Katz Y, Goldberg N, Kivity S. Localized periorbital edema induced by aspirin. *Allergy* 1993;48:366-9.