Awareness and use of Antipyretic analgesics and the provision of information in asthmatic patients

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Abstract

Background: Asthmatic patients should be aware of their daily use of antipyretic analgesics, which inhibit cyclooxygenase-1 enzyme, because of the aspirin-induced asthma (AIA) risk. A survey study was performed to determine the basic knowledge about antipyretic analgesics and the risk of AIA, and the use of antipyretic analgesics among asthmatic patients.

Methods: Sixty-six interviews were carried out by a pharmacist between March and May 2004 at St Luke’s International Hospital. The characteristics of subjects were investigated from their medical records. Verbal informed consent was obtained from all subjects.

Results: Of the 66 subjects who participated, 13 (20%) had a history of AIA. Of the 13 subjects with a history of AIA, 12 (92%) recognized the risk of AIA. Of the 53 subjects with no history of AIA, 24 (45%) recognized the risk of AIA. Subjects with a history of AIA were more aware of the AIA risk and antipyretic analgesics, including the commercial names of aspirin or NSAIDs, and we’re more careful about taking antipyretic analgesics than those with no history of AIA. These results did not correlate with age, sex or severity.

Conclusions: Patients with no history of AIA used antipyretic analgesics without knowing the risk of AIA. More education and the provision of information about AIA and antipyretic analgesics are needed, so we created information documents that showed which over-the-counter antipyretic analgesics should not be taken and those that can be taken with relative safety by asthmatic patients.

Key words: asthma, aspirin-induced asthma (AIA), antipyretic analgesics, non-steroidal anti-inflammatory drugs (NSAIDs), acetaminophen

Introduction

Aspirin-induced asthma (AIA) is an allergic hypersensitivity response to cyclooxygenase-1 (COX-1) inhibitors, and makes up 10-20% of adult asthma cases. It is characterized by the onset of asthma 30 minutes to three hours after the ingestion of aspirin. The mechanism of AIA is unknown, but it is potentially life threatening. Although the name of the condition relates to aspirin, it is well established that affected patients are cross-sensitive to all non-steroidal anti-inflammatory drugs (NSAIDs) that inhibit the COX enzyme. It has also been reported that asthmatic patients sensitive to aspirin are usually cross-reactive to NSAIDs but seldom react to acetaminophen and basic NSAIDs. Therefore, caution should be exercised daily with regard to antipyretic analgesic use in asthmatic patients. It is unclear whether patients recognize AIA and how often patients routinely use antipyretic analgesics. We performed an awareness survey of antipyretic analgesics and combination cold remedies in asthmatic out patients.

Subjects

Patients with stable asthma aged 20 to 89 who were regularly followed in the outpatient clinic of the Pulmonary and Respiratory Division of St Luke’s International Hospital were recruited between March and May 2004. Patients were eligible for enrolment if verbal informed consent was obtained. The diagnosis of asthma was based on the definition of the American Thorax Society (ATS).

Survey contents

A hearing investigation was conducted by a pharmacist regarding the history of AIA, the understanding of AIA and the understanding of antipyretic analgesics (Table 1). In addition to the medical records of the study patients, these items including sex, age, average duration of asthma, Global Initiative for Asthma 2002 (GINA) severity, incidences of emergency room (ER) visitations over the last year and incidences of asthma-related hospital admissions.