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Short Report

Is pre-menstrual asthma related to use of aspirin or non-steroidal anti-inflammatory drugs?

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Introduction

About one-third of women with asthma report worse symptoms before or during their periods (1). Women with asthma may be more likely to be admitted to hospital in the peri-menstrual part of their cycle (2). A study of nine asthmatic women found an increase in bronchial responsiveness in the luteal phase (3).

Why worsening of asthma occurs before and during menstruation is not known. Some women take aspirin or non-steroidal anti-inflammatory drugs (NSAIDs) for the treatment of menstrual symptoms. It is estimated that between 5 and 20% of adult asthmatics have a reduction in lung function after taking aspirin or NSAIDs (4) and the packaging of NSAIDs recommends that they are used with caution in asthma. No studies have yet investigated whether pre-menstrual asthma is related to use of aspirin or NSAIDs.

As part of a study exploring the association between use of hormonal contraceptives and asthma severity, data were collected about perceived variations in asthma severity over the menstrual cycle and use of medication for symptoms related to menstruation. The objectives of the analysis presented here were to describe the proportion of women with asthma who took NSAIDs for menstrual symptoms and investigate whether women with pre-menstrual asthma were more likely to take them.

Methods

A questionnaire for self completion was mailed to women aged 20–29 registered with 24 general practices in South London who had been prescribed inhaled β -agonists during the 2 years before the survey.

Participants were asked 'Does your asthma vary with the time of your monthly cycle?' Those who answered 'Yes' were asked 'Which time of the month is your asthma usually worse?' The questionnaire also asked the women

which medications they took for symptoms related to their periods. The proportion of women taking NSAIDs was compared in those reporting pre-menstrual asthma and those not.

Ethical approval for the study was obtained from the St Thomas' Hospital Ethics Committee.

Results

Four hundred and eighty one (60%) questionnaires were returned. Twenty respondents were excluded from analyses because they responded 'No' to the question 'Have you ever had asthma?'

Thirty-eight women (8.2% of all those with asthma) reported that their asthma was worst either before or during their periods, so were considered to have pre-menstrual asthma.

One hundred and eighty five women (40.1%) reported taking either aspirin or NSAIDs to treat menstrual symptoms.

A slightly lower proportion of women with pre-menstrual asthma reported use of aspirin or NSAIDs for menstrual symptoms, and the difference was not significant (36.8% vs. 40.9%, odds ratio 0.7, 95% confidence intervals 0.3–1.4).

Comment

Our study in a general practice population suggests that in women with relatively mild asthma, peri-menstrual asthma exacerbations are less common than has been estimated from outpatients based surveys. We were surprised to find that a high proportion of asthmatic women reported taking aspirin or NSAIDs for the relief of menstrual symptoms, despite the advice on packaging that they are used with caution in asthma. We found no association between reported aspirin or NSAID use and pre-menstrual asthma.

We did not attempt to measure knowledge about the potential effects of NSAIDs on asthma, so we cannot say whether these women were appropriately advised when the drugs were prescribed or dispensed. As NSAIDs are freely available without prescription and from supermarkets, it is possible that they were not.

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This study was carried out in a group of women with relatively mild asthma. Aspirin or NSAIDs may cause perimenstrual asthma exacerbations in women with more severe asthma. However we can conclude that premenstrual asthma may be relatively uncommon in a community based population and there is no evidence that the widespread use of NSAIDs for menstrual symptoms is causing substantial morbidity in women with mild asthma.

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