Take a Breather!

Karen Binkley, MD, FRCPC

Notes on Diane

Age: 36

Presentation:

- Complains of worsening asthma
- Sometimes wakes at night with chest tightness and shortness of breath

Situation:

√ Diane, 36, presents to you with worsening asthma.

√ At 22-years of age, she was diagnosed with asthma. Initially, Diane paid several visits to the ED and was given courses of oral corticosteroids.

√ For the past several years, symptom control has been excellent with inhaled budesonide 100 µg q.d. Use of a rescue short-acting ß2-agonist was required less than once every two months, until the last two months. Since then, her use has increased to six times to eight times per day because of increased shortness of breath and chest tightness.

√ Diane's symptoms occur with excercise, but not with laughing or cold air exposure. They also frequently occur at rest. Diane is sometimes awakened at night with chest tightness and shortness of breath. Her short-acting ß2-agonist gives incomplete relief. For the first time in many years she visited the ED where she was given an aerosolized bronchodilator and then discharged.

History:

√ Diane denies any exposure to known allergens.

√ She lives in a house without animals and avoids going to the homes of friends who have cats.

√ She has a history of mild, perennial allergic rhinitis due to dust mite allergy and cat, but her symptoms are well-controlled with dust mite avoidance strategies and she requires no medication in this regard.

√ She works in an office environment and is a lifelong non-smoker.

√ She has no unusual hobbies or exposure to airborne allergens.

√ She has no known food allergies and her eczema resolved during infancy.

√ Diane's mother has allergic rhinitis.

√ Past history is remarkable for occasional migraines.

√ Diane takes no regular medications. Acetylsalicylic acid and non-steroidal anti-inflammatory medications have always upset her stomach, so she uses acetaminophen with codeine for migraines which occur about once every three months. The use of acetaminophen with codeine does not correlate with asthma exacerbations.

Evaluation:

√ Her systems review is essentially unremarkable, but Diane admits to being under a lot of stress.

√ She is extremely busy professionally and the increased hours she is spending at work are now causing stress at home; her husband is finding it difficult to manage their special-needs child without Diane's help. Diane feels particularly guilty about not being home to help and support her family.

√ Now, with deteriorating asthma control, Diane is afraid that she may not be able to help raise her child.

Diagnosis: Panic attacks and asthma

What do you suspect?

Panic attacks and asthma

√ While the diagnosis of asthma is not in doubt, there are some atypical features of Diane's current presentation that suggest there may be a second diagnosis. First, if asthma is poorly controlled, symptoms are often precipitated by cold air exposure or laughter, which is not the case with Diane's current situation. Short-acting bronchodilators now give her incomplete relief, in contrast to previous mild asthma exacerbations. While asthma can have a variable course, the absence of any factors that might account for a deterioration in asthma control should always prompt an evaluation for other concomitant conditions.

√ Diane's current professional and personal stressors are certainly significant enough to precipitate panic symptoms in a genetically predisposed individual.

√ Panic attacks can be precipitated by exercise and can often awaken the patient from sleep with chest tightness and breathlessness.

√ Bronchodilators would not be expected to give any significant relief.

Further investiagtions and management:

√ Diane's pulmonary function testing is normal and there is no response to a bronchodilator. Methacholine challenge shows only borderline airway hyperreactivity, consistent with well-controlled asthma treated with inhaled corticosteroids.

√ On further reflection, Diane realizes she also experiences palpitations and occasional lightheadedness with her recent symptoms of chest tightness and shortness of breath. These symptoms help to establish a diagnosis of panic attacks.

√ Diane is instructed in the use of a peak flow meter. She graphs her morning and evening peak flow values to establish her normal diurnal range. Peak flow measurements taken during episodes of chest tightness and shortness of breath confirm that flow rates are normal during these episodes and support a diagnosis of panic attacks. Peak flow meter measurements are diagnostic as well as therapeutic for Diane; if an episode of chest tightness and shortness of breath does occur, she immediately measures her peak flow and a normal value helps reassure her that an asthma attack is not imminent. This immediately lessens her anxiety and helps her symptoms resolve.

√ Reassured with the knowledge that she has not lost control of her asthma, Diane's anxiety begins to lessen. With the near-end of her heavy work schedule, she is able to spend more time at home and ease her husband's burden and her own guilt. As her anxiety is significantly reduced, episodes of chest tightness and shortness of breath diminish.

√ She continues to improve over the next several weeks and also decides to take a course in relaxation training that is offered by a credible local institution. Dx

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