Postcoital Asthma and Rhinitis*

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Sexual intercourse as a trigger factor for attacks of asthma and/or rhinitis and the morbidity caused thereof is not well recognized. We present four patients (three males and one female) with postcoital asthma and/or rhinitis. Acute severe asthma subsequent to sexual intercourse in one male patient had resulted in several emergency department visits and hospitalization on one occasion. Anxiety was a predominant feature in the patients and their spouses that had interfered with their sexual life and worsened their disease. Late asthmatic response, on occasions, occurred in two patients. None of the patients developed wheezing dyspnea or rhinitis, nor did they have a fall in peak expiratory flow rates on climbing two flights of stairs, an exercise considered equivalent to energy expended during sexual intercourse. Thus, sexual excitement rather than exercise appeared to be the cause of postcoital asthma and rhinitis. Adequate pharmacotherapy along with counseling of the patients and their spouses restored normal sexual function and control of asthma and rhinitis. Postcoital asthma and rhinitis can easily be overlooked due to patient embarrassment and lack of physician awareness. (Chest 1991; 100:1039-41)

Attacks of asthma and rhinitis can be provoked by a variety of stimuli, including infections, allergens, exercise, and emotional stress. Sexual intercourse, too, has rarely been reported to trigger attacks of asthma and rhinitis. Although studies have documented the impact of chronic obstructive pulmonary diseases and cystic fibrosis on sexual activity, little attention has been paid to the effect of asthma and rhinitis on adult sexual life. We present, for the first time from India (to our knowledge), four patients with postcoital exacerbation of asthma and/or rhinitis, which in one patient had resulted in several emergency department visits and hospitalization on one occasion.

Case Reports

Case 1

A 45-year-old male statistician, a nonsmoker, married for 22 years, was referred to our Institute with a 17-year history of allergic rhinitis and conjunctivitis associated with wheezing dyspnea for the last nine years. Symptoms, on commencement, were seasonal but were perennial at the time of presentation. His mother was an asthmatic. For the past four years, the patient had experienced sneezing and rhinorrhea immediately following sexual intercourse; the symptoms lasted for about 10 min. In addition, during the last 2 1/2 years, he had acute attacks of wheezing dyspnea after every coitus; the wheezing dyspnea usually lasted for an hour and required oral/aerosolized bronchodilators for relief. The attacks did not occur prior to or during coitus, but always commenced immediately afterwards; on several occasions the attacks had resulted in emergency department visits for parenteral therapy for relief of acute severe asthma. The only time the patient was ever hospitalized for an asthmatic attack was after one such episode. The patient and his wife were extremely apprehensive resulting in a greatly decreased frequency of coitus. This had led to the patient exhibiting signs of depression.

Case 2

A 26-year-old male shopkeeper, a nonsmoker, married for eight months, presented with a ten-year history of perennial rhinitis and wheezing dyspnea. There was no family history of atopy. Ever since his first coitus eight months ago, the patient had experienced wheezing dyspnea 5 min after completing sexual intercourse. Each episode lasted for about an hour but was not accompanied by rhinitis. Postcoital symptoms had progressively increased in severity leading to apprehension and greatly reduced frequency of sexual intercourse. These symptoms required oral/aerosolized bronchodilators for relief, but on a few occasions, wheezing dyspnea recurred 4 to 6 h after coitus. The patient further disclosed that milder attacks were precipitated by intimate sexual contact even prior to actual coitus; this had often interfered with the satisfactory completion of coitus. The patient and his wife were greatly distressed because of this.

Case 3

A 25-year-old female school teacher, married for 1 1/2 years, reported a seven-year history of seasonal rhinitis associated with wheezing dyspnea of 1 1/2 years’ duration. Wheezing dyspnea first occurred with her first coitus after marriage and subsequently recurred with every coitus. Each episode, moderately severe in intensity, commenced prior to actual coitus with intimate contact only and subsided without medication 15 to 20 minutes after coitus. She also reported that on a few occasions, more severe asthmatic attacks had occurred 4 to 6 h after coitus. Wheezing dyspnea was not accompanied by any of the other local or systemic manifestations of human seminal plasma allergy nor was it abolished by condom usage. During the last six months, mild wheezing dyspnea previously associated only with coitus had occurred at other times as well, more so just prior to menstruation. Rhinitis did not occur after sexual activity.

Case 4

A 26-year-old male telephone operator, a nonsmoker, married for five years, presented with perennial rhinitis and conjunctivitis of four years duration. There was no history of wheezing dyspnea nor any family history of atopy. For the past two years, the patient had experienced attacks of rhinorrhea accompanied by a chocking sensation 5 min after every coitus. Antihistamines were always required for relief of symptoms. Postcoital rhinitis was never associated with wheezing dyspnea.

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Clinical Examination and Investigations

Clinical assessment of all four patients was done along with routine hemogram, urinalysis, and roentgenograms of the chest and paranasal sinuses. Pulmonary function testing (PFT) included spirometry before and after bronchodilators and exercise provocation test. In addition, all four patients were given Wright's minipack flowmeter to record peak expiratory flow rates (PEFR). Circadian variation of PEFR was recorded per methods followed by Hetzel and Clark. Since sexual activity involves exercise equivalent to climbing two flights of stairs, PEFR was recorded in each patient before and after climbing two flights of stairs on three different occasions. Subsequently, the patients and their spouses were requested to record simultaneously their PEFR prior to and after coitus. All recordings were done while the patients were receiving therapy, prior to reporting to us.

RESULTS

Results of clinical examination were unremarkable except for the presence of wheeze on auscultation in patients 1 and 2. Routine hemograms, urinalysis, and roentgenograms of the chest and paranasal sinuses were normal in all patients. The results of PFT, including PEFR, are summarized in Table 1. None of the patients developed wheezing dyspnea or rhinitis nor did they have any significant drop in PEFR after climbing two flights of stairs. Postcoital drop in PEFR was abolished in patients 1 and 2 after initiating adequate pharmacotherapy that included 200 μg of aerosolized salbutamol from a metered dose inhaler 15 min prior to coitus and appropriate counseling of the patients and their spouses. Although patient 3 also reported that her postcoital wheezing ceased with above measures, she did not provide us with the precoital and postcoital PEFR recordings. No further episodes of delayed attacks of wheezing dyspnea were reported in patients 2 and 3 after commencement of therapy with sustained-release theophylline. Patient 4 reported symptomatic relief and cessation of postcoital rhinitis after initiation of beclomethasone nasal spray, although an earlier trial with cromolyn nasal spray was unsuccessful.

DISCUSSION

Although sporadic reports have documented that sexual activity in some asthmatics can cause acute attacks, morbidity caused by sexual dysfunction in asthma and/or rhinitis is yet to be highlighted. Two of our male asthmatics (patients 1 and 2) were greatly distressed due to sexual dysfunction, which caused an increase in the frequency and severity of the asthmatic attacks. Their concerns were shared by their spouses, especially in the case of patient 1, where postcoital asthma was responsible for several emergency department visits and hospitalization on one occasion.

All our patients had preexisting asthma and/or rhinitis, but patient 3 with long-standing rhinitis dated the onset of asthma to her first act of coitus while patient 2 reported an exacerbation of asthmatic attacks after commencement of postcoital asthma with his first intercourse. This observation supports the views expressed by Straus and Dudley that sexual activity for the first time may set the stage for an associated asthmatic attack.

An important feature common to both patients 2 and 3 was that wheezing dyspnea commenced merely with intimate contact only, even prior to actual coitus. This always occurred in the female patient (patient 3) while it was not an infrequent happening with the male patient (patient 2). In patient 2, this feature had often prevented the satisfactory completion of coitus causing anxiety which always aggravated the attack. These observations do not support the view that exercise is the cause of "sexercise-induced asthma." Further evidence against this opinion was provided when neither airway obstruction nor rhinitis was induced in any of the four patients when they were made to climb two flights of stairs, an exercise considered equivalent to the energy expended during sexual intercourse.

Another noteworthy aspect seen in both patients 2 and 3, hitherto unreported, was the recurrence of wheezing dyspnea on a few occasions 4 to 6 h subsequent to the resolution of immediate postcoital symptoms. Such attacks never occurred, except in association with postcoital asthma 4 to 6 h earlier. It appears that sexual excitement may also cause a late asthmatic response. It is possible that isolated late asthmatic response may also occur which may mask
the temporal relationship to coitus. Coitus, as a trigger factor for the asthmatic attacks, may thus go unrecognized in such patients.

Allergy to human seminal plasma in female subjects has also been reported to cause postcoital asthma. This does not seem to be the likely explanation in our female patient as she did not have any other associated local or systemic manifestations and more importantly, the symptoms were not abolished by condom usage.

Postcoital rhinitis was reported by patients 1 and 4. In patient 1, rhinitis subsequent to sexual intercourse predated postcoital asthma by 18 months, while patient 4 had only rhinitis. Both patients did not consider symptoms of rhinitis to be alarming until postcoital asthma also commenced in patient 1. Although rhinitis has been associated with exercise, neither climbing two flights of stairs nor an exercise provocation test elicited symptoms of rhinitis in either of these patients. It appears that sexual excitement, rather than exercise, is the likely cause of postcoital or "honeymoon rhinitis" in our patients.

The exact mechanism by which sexual intercourse can precipitate "sexercise-induced asthma" or "honeymoon rhinitis" is not known. Emotional excitement along with anxiety or even the position of the partners may be the trigger factors for postcoital asthma rather than exercise. The first two factors may also be responsible for postcoital rhinitis. Sexual activity is associated with autonomic stimulation with the parasympathetic predominance during the early stages, while the sympathetic segment is more active towards the culmination in orgasm. Autonomic imbalance with parasympathetic overactivity may occur in some patients which may be caused by intense emotional stimuli during sexual intercourse. Cholinergic stimulation is known to cause release of mast cell mediators which may be one of the mechanisms that can provoke postcoital asthma and rhinitis in these patients.

Coitus-linked exacerbation of asthma and/or rhinitis caused significant morbidity, including severe asthmatic attacks requiring hospitalization. Anxiety due to postcoital symptoms was a predominant feature among our patients and their spouses that caused an increase in severity and frequency of asthmatic attacks. However, once coitus was recognized as a trigger factor, adequate pharmacotherapy, including prophylactic metered dose inhaled salbutamol prior to sexual intercourse, along with appropriate counseling of the patients and their spouses, restored normal sexual function and control of asthma. We would, however, like to stress that postcoital asthma and rhinitis can easily be overlooked due to patient embarrassment and lack of physician awareness, especially in our social conditions and busy outpatient departments.

REFERENCES