BRONCHIAL ASTHMA DURING MENSES AND PREGNANCY

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Bronchial asthma is a disease that appears to be irregular in its occurrence. Sometimes[1] it may present as one of the symptoms of the premenstrual syndrome, described by Frank in 1931. However, we noticed that many asthmatics seem to be worse premenstrually and improve with pregnancy. As this might be of importance in the pathogenesis of the asthma process, the relationship to menstrual changes was investigated.

METHOD

Careful and thorough case histories were taken of 27 adult Bantu female asthmatics. All the histories were taken by the same observer, no indication being given as to the type of answer expected from the patient. Particular care was taken to try to follow the relationship of asthma to the menses and pregnancy without arousing the patient's interest.

RESULTS

From the case histories the following points were observed:

Age. The age of the patients ranged from 26 to 54 years, and the average age was 38 years.

Length of attack. The length of an asthmatic attack may range from ½ day to 14 days. In the majority of cases (15 out of 27) the attack usually lasted 1-2 days.

Frequency. The frequency of asthmatic attacks ranges from 1 to 30 attacks per month, with an average of 7·5 attacks per month. The major proportion of cases (8 out of 23) had 2 attacks per month.

Time of onset. Out of 27 patients the attack started in the morning in one case, and during the day in one case. Of the remaining 25 patients (92·6%) the attacks started either in the evening or during the night. Of these 25, 14 said the attacks began in the evening and 11 said the attacks began during the night. Where asthma began in the evening the attack continued into the night in 12 cases. Of 11 patients where asthma began during the night, the attack continued into the morning in 6 cases and into the day in 2.

Weather. Of 27 patients, 17 (62·9%) said the attacks were worst when the weather was cloudy or wet, and one said it did not make any difference. Nine were unaffected by cloudiness. Two said they were worse when the weather was very dry. Of these 27 patients, 11 (40·7%) were worse in summer, and 9 (33·3%) were worse during winter. Three had bad attacks in both summer and winter, and 4 were not affected by either summer or winter.

Locality. Of 27 patients, 8 were worse in Johannesburg as compared to some other town, and 9 were worse when away from Johannesburg. In 10 cases it did not make any difference where they lived.

Menses. Of 27 patients, 7 (25·8%) said the severity of their asthma remained unchanged before, during, after and between menses.

In 20 patients (74·1%) the asthma was worse premenstrually (up to 1 week before) or during menses. Fourteen (51·8%) became worse premenstrually, and 6 (22·2%) became worse during menses. Of the 14 premenstrual cases, 4 continued with the bad attack during the menses.

Of 17 patients (62·9) the asthma became better after menses in 15, and between menses in 2. Ten patients reported no change in the severity of asthma after and between menses.

Pregnancy. Eighteen women in this series of 27 patients had pregnancies during the time they suffered from asthma. Eleven (61·1%) became better with pregnancy. In 5 improvement started at the 1st trimester, in 5 at the 2nd, and in 1 at the 3rd. Six patients (33·3%) reported they were worse with pregnancy and 1 (5·5%) reported no change with pregnancy.

After parturition 15 (83·3%) were much better. Three patients, still had bad attacks after parturition. The beneficial effect lasted for an average of 6·6 months, ranging from 2 weeks to 3 years. In the major proportion of cases (9 out of 18) this beneficial effect lasted 4 months or less.

DISCUSSION

From the results it is apparent that asthma is related to both menses and pregnancy. The greater proportion of cases (74·1%) became worse premenstrually or during menstruation. With pregnancy they became better in 61·1% of cases, the attacks either disappearing altogether or becoming less and milder. This beneficial effect bestowed by pregnancy lasted for several months (average 6·6 months), after which the asthmatic condition returned.

These two facts point to an endocrine link with asthma, because both menses and pregnancy are associated with endocrine changes.

Another fact in the history which suggests an endocrine link with asthma is the occurrence of asthma during the evening and the night—92·6% of the patients said their asthmatic attacks started either in the evening or the night. A diurnal variation also exists in hormonal secretion. Pituitary secretion decreases in the dark hours and increases in the light hours of the day. Also less 17-ketosteroids are excreted during the night than during the day.[2] Asthmatic attacks are provoked in a high percentage of cases (62·9%) by changes of atmospheric water vapour such as in cloudy or wet weather. It is not known whether this can be related to endocrine changes, but it does seem pertinent that alterations in body water occur with menstruation and pregnancy.

SUMMARY

Twenty-seven case histories of female adult Bantu asthmatics were taken.

It was found that bronchial asthma is worse during the night (92·6% cases), in cloudy or wet weather (62·9% cases) and at the time of the appearance of the menses (74·1%). Pregnancy alleviates asthma in 61·1% of cases.

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