SUMMARY AND CONCLUSION

Bronchial asthma is one of the most common diseases in children. It is responsible for a significant proportion of acute and chronic illness in children.

Nawadays asthma is considered a chronic inflammatory disease involving many interacting cells that release many inflammatory mediators activating several target cells in the airways. This result in bronchoconstriction, microvascular leakage and oedema, mucus hypersecretion and stimulation of neural reflexes.

Changes in gastro-intestinal microflora can exaggerate this inflammatory process in an already asthmatic children leading to increase in the severity of the attacks. It is important to emphasize that these changes don't induce the asthmatic attacks but only increase the severity of the attacks by many mechanisms :

1- Immunological mechanism:mediated by several enzymes and toxins elaborated by these organisms.

2- Precepitations of respiratory tract infection through aspiration of oropharyngeal secretions or vomitus containing these organisms.

3- Decreasing efficacy of bronchodilators.

Our work aimed to study the effect of changes in gastro-intestinal microflora on the severity of the asthmatic attacks.

This work included 50 asthmatic children and 10 control cases. Their ages ranged from 2-14 years classified into 6 age groups with 2 years interval.

Most of our cases were complaining of gastro-intestinal troubles in the form of vomitting, distention and other G.I.T. symptoms. Patients and control were subjected to through history taking and clinical examination.

The following investigations were done :

Urine and stool analysis, blood picture for peripheral eosinophilia, chest radiogram, skin tests for common allergens, total serum IgE and IgG levels, IgG level in the

stool and stool culture for both aerobic and anaerobic organisms.

Our study revealed the following :

1- The most common precepitating factor was respiratory tract infection (76%) of cases followed by foods (60%), emotions (48%) odours (38%) and excercise (36%) of cases. Most of our cases had more than one factor precepitating their asthmatic attacks.

2- The most prevalent antigen in our study was house dust (56%) of case followed by house dust mite (48%), mixed moulds (38%) feathers (30%), milk (22%) and egg (14%) of cases.

3- Blood eosinophilia was demonstrated in most of the asthmatic children, the mean values was :

Absolute eosinophilic count :

$\bar{X}$ = 566 cell/ml.

S.D. = 547 cell/ml.

The mean value in atopics was :

$\bar{X}$ = 667 cell/ml.

S.D. = 578 cell/ml.

The mean value in non atopics was :

$\bar{X}$ = 352 cell/ml.

S.D. = 415 cell/ml.

There is a significant difference between atopics and non atopics. T.Test 2.19 at ($P<0.01$).

4- The serum level of IgE was increased in asthmatics than control also it is higher in atopics than non atopics.

5- Serum IgG level was slightly higher than control, there is no significant difference between atopics and non atopics.

6- IgG in the stool was detected only in 5 cases (10%).

7- Comparing male and female patients in our study revealed no significant difference as regards serum IgE and IgG levels.

8- Comparing cases with positive family history with that of negative family history revealed a significant difference

as regards serum IgE level but no difference in the serum IgG level.

9- The results of stool culture revealed that organisms isolated from severe cases include E. coli (44%) anaerobic bacteria in the form of bacteroids (20%) clostridia (20%), proteus (8%) and klebsiella (8%). While the main organisms isolated from control and mild cases was mainly E. coli and low concentrations of anaerobes.

RECOMMENDATIONS

From our study it is clear that we must put in our consideration any gastrointestinal troubles in asthmatic children.

These children must be subjected to careful history taking with special stress on gastro-intestinal troubles, stool examination both naked eye and microscopic and stool culture and sensitivity especially in most severe and resistant cases.

These patients must be treated from gastro-intestinal troubles at the same time with treatment of bronchial asthma.