Summary and conclusion

Summary

Endothelin, comprise a family of recently discovered potent vaso-constricotr peptides ***(Yanagisawa et al ., 1988)*** . Each ET isopeptide (ET-1,2 and 3) consists of 21 amino acids coded for by three separate genes in the human and genomes ***(Inoue et al., 1989 a).***

ET exerts a multitude of effects in a variety of tissues and cells It is known to be stronger than that of any other vaso-active substances reported to date ***(Simonson and Dunn 1990 a)*** .

Bronchial smooth muscle cells possess a single class of specific binding sites for endothelin – 1 two subtypes of which termed ET_A and ET_B .

Airway epithelium when exposed to allergens or toxic substances , can release broncho-constrictive substances , one of these substances may be the potent broncho-constrictive peptide endothelin – 1

Asthma is an inflammatory airway disorder characterized by broncho-constriction and bronchial hyperactivity. Airway wall thickening due to edema and structural remodeling is likely to contribute to both these abnormalities and may in part be explained by the local generation and release of endothelin- 1 in the airways.

This work aimed to study the plasma and bronchoalveolar lavage fluid (BALF) levels of ET- 1 in patient with bronchial asthma and chronic obstructive pulmonary diseases in an attempt to find out the potential role of endothelin-1 in the pathophysiology of bronchial asthma .

Forty individuals were included in this study , including fifteen patients with bronchial asthma, fifteen patients with COPD and ten healthy individuals and were subjectd full clinical examination and pulmonary function testes , chest radiology , bronchoscopy and bronchoalveolar lavage .

The plasma and BALF ET-1 levels, were determ by enzyme immunoassay .

Our results have revealed no statistically significant elevated plasma ET-1 levels in the group of bronchial asthma in comparison with the control group and with group of COPD, which was explained by the local generation, and release of endothelin – 1 in the airways

A statistically significant increase in broncholaveolar lavage fluid (BALF) ET- 1 level was found in with bronchial asthma when compared to COPD group or control group .

This finding could by explained by the endothelin – 1 act as a paracrine hormone rather a circulating endocrine hormone

Conclusion: -

In conclusion we have demonstrated increased BALF ET-1 levels in patients with bronchial asthma .

These results are consistent with the hypothesis that increases in BALF ET-1 and possibly the airway smooth muscle generation and release of ET-1 that may mediate the broncho-constriction and airway obstruction in patient with bronchial asthma

Recommendation: -

Further research are needed to elucidate the role of anti-endothelins in the prevention and management of bronchial asthma .