بسم الله الرحمن الرحيم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

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شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

بالرسالة صفحات لم ترد بالاصل

Study of some biochemical markers of bone metabolism on asthmatic patient on inhaled corticosteroids

Thesis

Submitted for partial fulfillment to Ms.C. in chest diseases

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I would like to present my work to the spirit of my father and to my mother.

List of Abbreviations

-ALP: Alkaline phosphatase.
-APC: Antigen presenting factor.
-BAL: Bronchoalveolar lavage.
-BDP: Beclomethasone dipropionate.
-BGP: Bone Gla protein (osteocalcin).
-BMD: Bone mineral density.
-COPD: Chronic obstructive pulmonary disease.
-DEXA: Dual energy X-ray absorbitometry.
-D-pyr: Deoxypyridinoline.
-EAR:Early (acute) asthmatic response.
-ECF: Extracellular fluid.
-ECP: Eosinophil cationic protein.
-EIA: Exercise induced asthma.
-ELISA: Enzyme linked immunosorbent assay.
-FEV 1: Forced expiratory volume in the first second.
-FGF: Fibroblast growth factor.
-FP: Fluticasone propionate.
-FRC: Functional residual capacity.
-FVC: Forced vital capacity.
-GERD: Gastro-esophageal reflux disease.
-GFR: Glomerular filteration rate
-GM-CSF: Granulocyte-macrophage colony stimulating factor.
-ICAM-1: Intercellular adhesion molecule.
-ICTP: Cross-linked carboxy terminal telopeptide type I collagen.
-IL: Interleukin.
-INTP: Cross-linked amino-terminal telopeptide type I collagen.
-LAR: Late asthmatic response.
-LT: Leukotriens.
-MBP: Major basic protein.

-MCP-1:Monocyte chemotachi protein-1
-NADP: Nicotinamide adenine dinucleotide phosphate.
-NAP-2: Neutrophil attractant protein-2.
-NSAIDS: Non steroidal anti-inflammatory.
-Oc: Osteocalcin.
-PABM: Peak adult bone mass.
-PAF: Platelet activating factor.
-PDGF: Platelet-derived growth factor.
-PEFR: Peak expiratory flow rate.
-PG: Prostaglandin.
-Pyr: Pyridinoline.
-RIA: Radioimmunoassay.
-RSV: Respiratory syncytial virus.
-RV: Residual volume.
SCF: Stem cell factor.-
-SRS-A: Slow reacting substance of anaphylaxis.
-TGF-β- :Transforming growth factor.
-TNF-α : Tumor necrosis factor.
-TX: Thromboxane.
Uca: Urinary calcium.
-VCAM-1:Vascular cell adhesion molecule.

Introduction

Corticosteroids have been used in treatment of asthma for nearly half a century ***(Crompton, 2000)***

The treatment of asthma with systemic corticosteroids in sufficiently high doses to control symptoms led to development in many patient of numerous adverse effects which ionically were all outside the respiratory tract ***(Crompton, 2000)***.

Prolonged treatment with oral corticosteroids is associated with a reduction in bone density, osteoporosis and a risk of fracture ***(Medici et al, 2000)***.

This stimulated the pharmaceutical search for a drug that was locally active in the control of asthma when inhaled but not absorbed from the lungs or gastrointestinal tract in sufficient quantity to have the same degree of systemic side effects ***(Crompton, 2000)***.

There can be no doubt that the development of inhaled corticosteroids revolutionized asthma therapy ***(Crompton, 2000)***.

Inhaled steroids can help to achieve optimal asthma control, reduce air way hyperresponsiveness, potentially

prevent irreversible airway damage and reduce the needs of oral steroids *(Boulet et al, 1994)*.

Inhaled corticosleroids are recognized as the most effective anti-inflammatory therapy in patients with asthma and their early introduction is recommended by national and international guide lines *(Efthimiou. et al 1998)*.

Inhaled corticosteroids are absorbed into the systemic circulation but the extent which, they have adverse effects on bone is uncertain *(Wong et al, 2000)*.

The long term effect of inhaled corticosteroids on bone metabolism must be evaluated *(Woodcock 1998)*.

Attention has recently been paid to their influence on bone metabolism *(Boulet et al 1994)*.

Biochemical markers of bone formation and resorption might give complementary information to the mineral bone density measurement *(Weilenmann et al, 1999)*.

Biochemical markers of bone metabolism have been assessed in many short term studies even though the relevance of these markers to the risk of development of osteoporosis in the distant future is far from clear *(Seaton 2000)*.

The aim of the work

Is to study the effect of some biochemical markers of bone metabolism on bone formation & bone resorption in patients receiving inhaled corticosteroids.


Review