The relationship between obesity and bronchial asthma severity and control in dults

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is a chronic inflammatory disorder of the airways in whichmany cells and cellular elements play a role. The chronic inflammationcauses an associated increase in airway hyper-responsiveness that leads torecurrent episodes of wheezing, breathlessness, chest tightness andcoughing particularly at night or in early morning. These episodes areassociated with wide spread but variable airflow obstruction that is oftenreversible either spontaneously or with treatment.Obesity is defined as(BMI) > 30 kg/m2, BMI = weight (kg)/(height)2Asthma and obesity are important public health problems. Over thepast 30 years, asthma prevalence has more than tripled. The prevalence ofobesity also has increased dramatically over the past 30 years.The increasing prevalence of overweight and obesity is associatedwith many diet-related chronic diseases including diabetes mellitus,cardiovascular disease, stroke, hypertension and certain cancers.The most common respiratory disturbances found in obesityare:Obstructive sleep apnea (OSA),Obesity hypoventilation syndrome(OHS) and Bronchial asthma.Within the last decade, it has become apparent that obesity is a riskfactor for asthma. Numerous cross-sectional studies conductedthroughout the world indicate that the prevalence of asthma is higher inobese versus lean individuals. and the relative risk of incident asthmaincreases with (BMI). Obesity also appears to worsen asthma control andcan increase asthma severity.While weight reduction decreases asthmaseverity and improves its control.-147-SummarySeveral mechanisms that may explain the relationship betweenasthma and obesity.In obesity, lung volume and tidal volume are reduced, events thatpromote airway narrowing. Obesity also leads to a state of low-gradesystemic inflammation that may act on the lung to exacerbate asthma.Obesity-related changes in adipose-derived hormones, including leptinand adiponectin, may participate in these events. Comorbidities ofobesity, such as dyslipidemia, gastroesophageal reflux, sleep-disorderedbreathing, type 2 diabetes, or hypertension may provoke or worsenasthma. Finally, obesity and asthma may share a common etiology, suchas common genetics, common in utero conditions, or commonpredisposing dietary factors.Asthma also can lead to weight gain and obesity because asthmaticpatients avoid exercise since physical activity can trigger their symptoms,and also due to systemic steroids therapy.It was clear from various studies that the relationship betweenasthma and obesity is more common in females.This is a case-control study aiming at assessment of therelationship between obesity and bronchial asthma severity and control inadults,in which 50

adult asthmatic patients were selected ,nonsmokers,and not having any other chronic respiratory disorders such as(COPD),(IPF),pleural effusion,thyroid abnormalities, chest walldeformities,diagphramatic abnormalities and intercostal muscles diseasesor CVS problems causing pulmonary cngesion such as hypertension oand left venricular disorders may affect their pulmonary functions.-148-SummaryThe patients were devided according to BMI into two groups:a) Control group (10)patients with BMI≤24.9 kg/m2.b) Case group (40) patients with (BMI)≥25 kg/m2.History (symptoms,frequency of exacerbations,nocturnalsymptoms,admission to the emergancy room) and clinical examinationwere done for each patient.Body weight in (kg),and height in(m) was measured for eachpatient for calculation of BMI of each.FEV1% and FEV1/FVC% was measured for each patient beforeand 10 minutes after 200mcg salbutamol inhalation through an (MDI) bythe use of "Datospir mod.120a" spirometer.The patients were confirmed to be asthmatic by this reversibilitytest.The results of FEV1% and FEV1/FVC% are compared to theresults of BMI and tabulated for statistical analysis.The study included 24 male and 26 female asthmatic patients,meanage is 43.96 ± 10.93,mean BMI is 34.0 ± 7.81The statistics show that FEV1% and FEV1/FVC%(before and aftermedication) of the case group with higher values of BMI are less than thatof control group with less values of BMI.(P