

The Risk of Dupuytren's Disease is Lower in Obese Patients

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Objective

Known risk factors such as increased age, male gender and northern European ethnicity are well established.

Very little data exist regarding BMI and Dupuytren's disease

The purpose of the study was to test the hypothesis that lower BMI is associated with increased rates of Dupuytren's contracture

Methods

Using the electronic medical record (EMR) and administrative database, all the patients in the Southern California Kaiser Permanente healthcare system diagnosed with Dupuytren's disease (ICD-9-CM diagnosis code 728.6) from 2007-2014 were identified.

Basic demographic data including age, sex, ethnicity and BMI were collected. Univariate logistical regression analysis and multivariate logistical regression analysis were performed to evaluate for associations between Dupuytren's disease and BMI.

Results

2,049,803 patients aged 18 and older were included in the study

14,844 patients were identified to have Dupuytren's disease during 2007-2014.

Our data was consistent with known demographic trends in Dupuytren's (increased rates of disease seen in males, caucasians, and patients aged 50-70+).

Multivariate analysis showed the risk of Dupuytren's disease was inversely proportional to BMI.

An increase of 1 unit of BMI decreases the odds of Dupuytren's diagnosis by 3% (P<0.0001).

Discussion

Low BMI is clearly associated with lower rates of Dupuytren's diagnosis.

Low BMI is potentially a risk factor for Dupuytren's disease.

Further work will be required to determine the role of body fat percentage and the physiologic factors related to obesity, which may be protective against the development of Dupuytren's disease.

Odds Ratios of Dupuytren's Diagnosis and BMI Table 1

BMI	Adjusted Odds Ratio	P value
<18.5	0.88 (0.75, 1.02)	0.0934
18.5-24.9	1.00 (Reference)	NA
25.0-29.9	0.93 (0.90, 0.97)	<0.0001
30.0-34.9	0.75 (0.71, 0.79)	<0.0001
40+	0.53 (0.48, 0.58)	<0.0001
One Unit BMI increase	0.971 (0.968, 0.974)	<0.0001

