

#592 RELATION BETWEEN TYPE AND SEVERITY OF URINARY INCONTINENCE AND BODY MASS INDEX



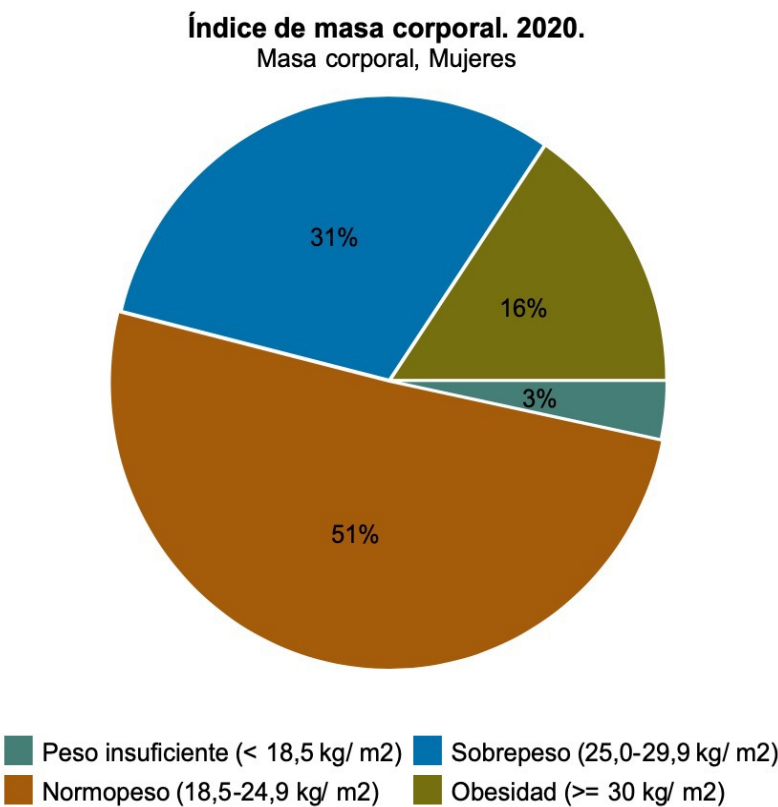
GOMEZ JM , LOPEZ E , GARCIA-MATRES M , MARTINEZ S , ALONSO M , DE CASTRO C , MAINEZ J , GARCIA V , CAMARA N , UNICA I , MARTINEZ-PIÑEIRO L



DEPARTMENT OF UROLOGY. HOSPITAL UNIVERSITARIO LA PAZ

Hypothesis / aims of study

-According to the National Health Survey, the prevalence of overweight in >18 years old women in Spain is 31% and that of obesity is 16% [1].



-Obesity is one of the main risk factors for urinary incontinence (UI) which is usually classified into stress (SUI), urgency (UUI) or mixed (MUI). It has been hypothesized that obesity increases abdominal pressure, thereby stressing the pelvic floor and contributing to SUI.

-However, abdominal pressure could also contribute to UI by causing detrusor instability. The lipotoxicity or adiposopathy hypothesis states that a chronic low-grade inflammation in the bladder of obese women can lead to an altered contractility of the bladder [2,3].

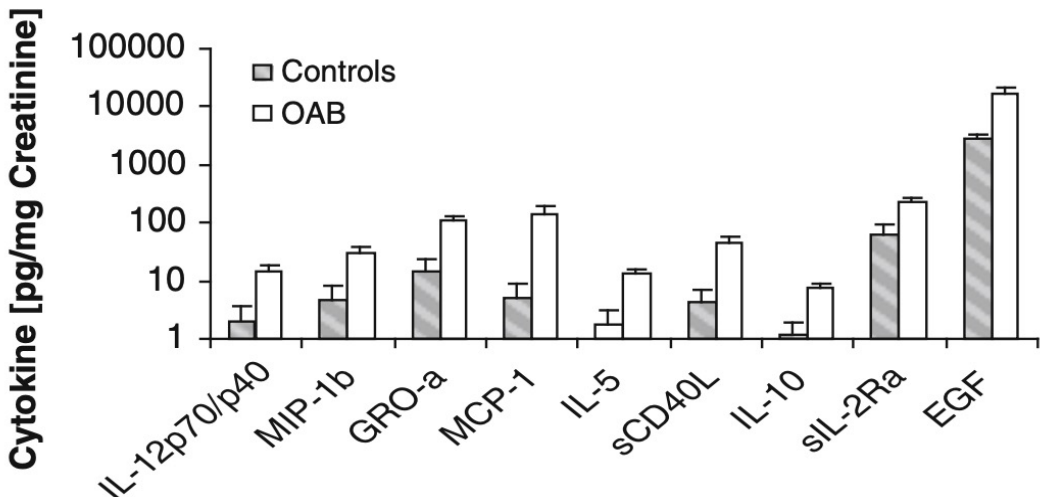


Fig. 1 Mean urine levels of the proteins in asymptomatic controls and OAB patients. The mean urine cytokine/chemokine levels showed at from three- to ten-fold elevation in the OAB patients as compared to controls. Except for EGF, the mean levels for majority of the proteins in the control group were lower than 10 pg/mg creatinine. *Error bars* indicate SEM for each protein in each group

Tyagi P et al, 2010

-The aim of this study is to describe the relationship between Body Mass Index (BMI) and the type and severity of UI.

Study design, materials and methods

-A retrospective analysis was performed on a sample of 308 women whose primary symptom was UI, between October 2022 and January 2024.

-Clinical data, physical examination and scores from the ICIQ-UI (Fig.1) and ICIQ-OAB questionnaires were collected. The ICIQ-UI questionnaire quantifies the frequency, severity and impact on quality of life of UI and allows its classification into the different types of UI: SUI, UUI or MUI. The ICIQ-OAB quantifies the everity and impact on quality of life of polakiuria, nocturia, urgency and UUI.

-BMI (weight/height*height) was calculated and classified into:

- **normal weight (18-24.9)**
- **overweight (25-29.9)**
- **obese (>30).**

-The relationship between BMI and type and severity of UI was calculated (Kruskal-Wallis test).

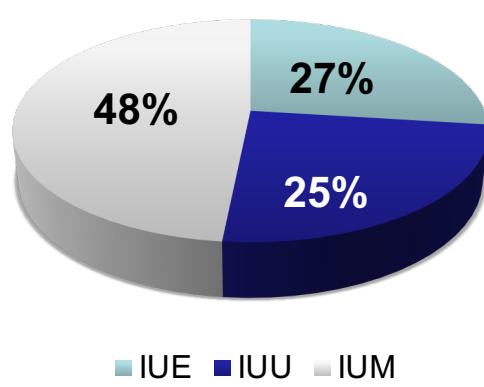
-Similarly, the relationship between BMI and the severity of polakiuria, nocturia, urgency and UUI was determined

Fig 1. ICIQ-UI sf & ICIQ-OAB

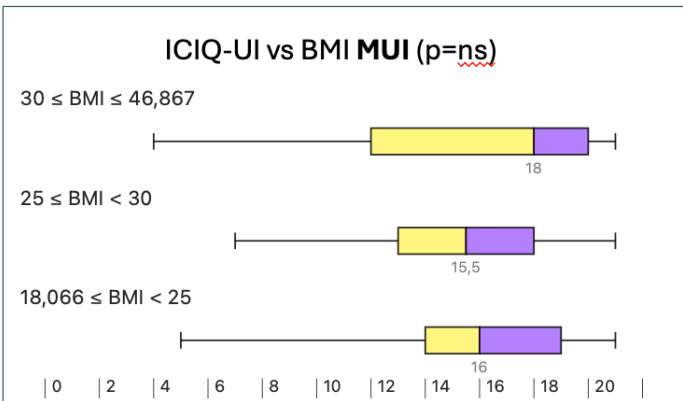
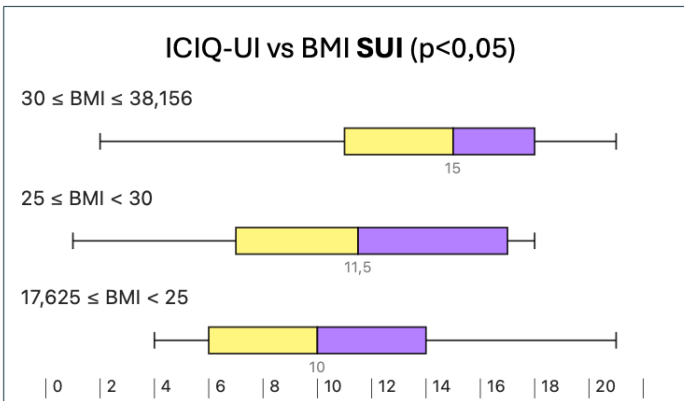
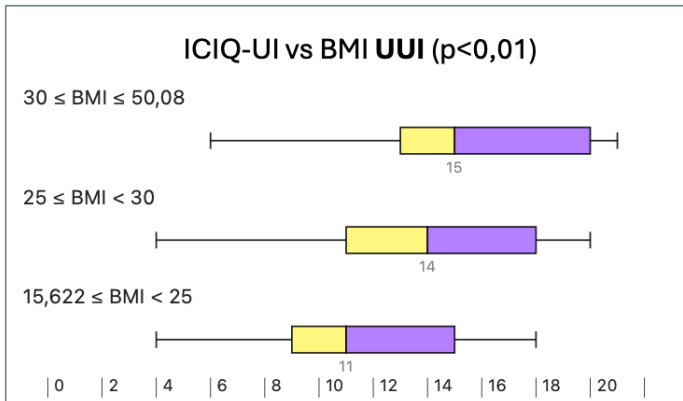
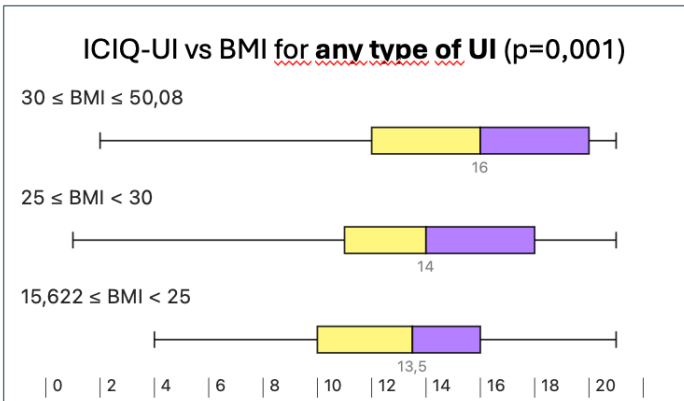
Results and interpretation

-Type of UI sample distribution was:

Type of Urinary incontinence



-A statistically significant relationship was found between BMI and UI severity for any type of UI, SUI and UUI:



-There were significant differences in severity of OAB symptoms by BMI for patients with any type of UI, UUI and MUI:

ICIQ-OAB (0-4)		BMI			p
		NW (<25)	OW (25-30)	Ob (>30)	
Any type	Frequency	1	1	1	ns
	Nocturia	1	2	2	<0.001
	Urgency	2	2	2	ns
	Urgency incontinence	1	1	2	<0.01
Stress UI	Frequency	1	0	1	ns
	Nocturia	1	1.5	1	ns
	Urgency	1	1	1	ns
	Urgency incontinence	1	1	1	ns
Urgency UI	Frequency	2	1	2	ns
	Nocturia	1	2	2	<0.01
	Urgency	2	2	3	<0.05
	Urgency incontinence	1	1	2	<0.01
Mixed UI	Frequency	1	1	2	ns
	Nocturia	1	2	2	<0.05
	Urgency	2	3	2	ns
	Urgency incontinence	1	2	3	<0.05

NW: normal weight; OW: overweight; Ob: Obesity

Interpretation of results

- Severity of UUI and SUI are closely related to BMI
- Severity of nicturia, urgency and UUI are related to BMI in patients with OAB

Conclusions

There is a strong relationship between BMI and UI severity. Severity of OAB symptoms are closely related to BMI in OAB patients

References

1. Enrique GG. "Prevalencia de sobrepeso y obesidad en España en el informe "The heavy burden of obesity" (OCDE 2019) y en otras fuentes de datos". 2019. Spanish Department of Health.
2. Vissers D, Neels H, Vermandel A, De Wachter S, Tjalma W a. A, Wyndaele JJ, et al. The effect of non-surgical weight loss interventions on urinary incontinence in overweight women: a systematic review and meta-analysis. Obesity Reviews. 2014;15(7):610-7
3. Tyagi P, Barclay D, Zamora R, Yoshimura N, Peters K, Vodovotz Y, et al. Urine cytokines suggest an inflammatory response in the overactive bladder: a pilot study. Int Urol Nephrol. septiembre de 2010;42(3):629-35.