

IS THERE AN ASSOCIATION BETWEEN URINARY INCONTINENCE AND DEPRESSION IN THE POSTPARTUM PERIOD?

Hypothesis / aims of study

Urinary incontinence (UI) and depressive symptoms are both highly prevalent in the postpartum period. Prevalence of UI in the first year after delivery ranges from 15% to 30% (1). Postpartum depression is a common and serious mental health problem that is associated with maternal suffering and numerous negative consequences for the newborn with prevalence estimates ranging from 10% to 15% (2). UI has been associated with depressive symptoms in the general population aged equal or more than 40 years (3). However the relationship between UI and depression in the postpartum period is nearly unknown.

The aim of this study was to assess the relation between urinary incontinence and depression six weeks after delivery. We hypothesized that women with UI may be more likely to suffer postpartum depressive symptoms than continent ones.

Study design, materials and methods

A prospective cohort study was undertaken to assess the association between UI and depression six weeks after delivery. The study group was selected from women, who had a vaginal delivery at our Public Health Hospital from October 2012 to September 2013. We excluded multiple pregnancies, gestational age of less than 37 weeks, women who had any complication during pregnancy, delivery or in the first week postpartum, and if the newborn had any complication.

In the follow up visit six weeks postpartum, we used the 2002 ICS definitions to interview the women about urinary symptoms. Women with UI were asked to complete the validated Spanish version of the International Consultation on Incontinence short form questionnaire (ICIQ-UI-SF). During this visit, patients were also prompted to complete the Spanish validated version of the Edinburgh Postnatal Depression Scale (EDPS) to evaluate depression. This self-administered questionnaire is made up of ten questions scored from 0 to 3, and higher scores indicate more depressive symptoms. We also investigated other variables that could modify depression in the postpartum period such as: age, parity, instrumental delivery, breastfeeding, low economic status and history of depression.

Statistical analyses were used for mean comparison (Student's test, Mann-Whitney U test and Kruskal-Wallis test). A Linear regression model was used for multivariable analysis. Statistical significance was set at $p=0.05$.

Results

We recruited 416 women who met inclusion and exclusion criteria. From the total, 385 (92.5%) attended the six weeks follow up visit and formed the study group. Mean age was 32.4 years (range: 17-45) and mean BMI was 23.6 (range: 17.3-48.1). In this group 194 (50.4%) were primiparous and 191 (49.6%) were multiparous. Eleven women reported a history of depression. Six weeks after delivery 63 (16.4%) women had UI distributed as follows: 35 (9.1%) had stress UI; 24 (6.2%) had urgency UI and 4 (1%) had mixed symptoms. The mean ICIQ-IU-SF score was 8.5 (range: 3-16).

The analysis performed to associate postpartum depression with different variables is shown in table 1. We observed that women with urinary incontinence and with low economic status had significantly higher values in the EDPS scale. We built a multivariable model including these variables. This analysis indicated that there was an independent association between UI and depression (mean difference: 1.4; $p=0.009$) and also between IU and low economic status (mean difference: 1.2; $p=0.04$) six weeks postpartum.

Table 1 Results of the univariate analysis performed to associate postpartum depression with different variables

Variables	n	Edinburgh Postnatal Depression Scale (EDPS)		P value	
		Mean	95% CI		
Age (years)					
	≤ 24	30	5.4	3.8-7.0	0,30
	25-34	220	4.8	4.3-5.3	
	≥ 35	135	4.3	3.6-4.9	
Parity					0.24
	Primipara	194	4.9	4.3-5.5	
	Multipara	191	4.4	3.0-5.0	
Mode of delivery					0.26
	Spontaneous	308	4.5	4.1-5.0	
	Instrumental	77	5.2	4.2-6.2	
Low economic status					0.02
	No	334	4.5	4.1-4.9	
	Yes	51	5.8	4.6-7.1	
History of depression					0.53
	No	374	4.7	4.2-5.1	
	Yes	11	5.2	2.6-7.9	
Urinary Incontinence					0.017
	No	322	4.4	4.0-4.8	
	Yes	63	6.0	4.7-7.2	
Breastfeeding					0.11
	No	65	5.7	4.5-7.0	

CI: Confidence interval

Interpretation of results

We have identified an independent association between urinary incontinence and depressive symptoms in the postpartum period. We established this association taking into account other variables that could also be implicated in this psychiatric disorder.

Concluding message

Women with postpartum urinary incontinence have higher scores in the Edinburgh Postnatal Depression Scale, indicating increased depressive symptoms in this particular moment. This relationship becomes more important when we take into account that postpartum depression has a significant impact on the cognitive and emotional development of the newborn.

References

1. Milson I, Altman D, Lapitan MC, Nelson R, Sillén U, Thom D. In: 4th International Consultation on Incontinence (ICI). Paris, France 2009; 37-112
2. Robertson E, Grace S, Wallington T, Stewart D. Hosp Psychiatry 2004; 26: 289-295
3. Coyne KS, Wein AJ, Tubaro A, Sexton CC, Thompson CL, Kopp ZS, Aiyer PL. BJU Int. 2009;Suppl 3: 4-11

Disclosures

Funding: No disclosures **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** Comité Ético de Investigación Clínica (CEIC) del Hospital Universitario Donostia **Helsinki:** Yes **Informed Consent:** Yes