

IS THERE A LINK BETWEEN POSTPARTUM DEPRESSION AND URINARY INCONTINENCE? A COHORT STUDY.

Hypothesis / aims of study

Urinary incontinence is common after childbirth. In most cases postpartum urinary incontinence remains moderate and regresses after a few months. However it can also persist and lead to impaired quality of life and a demand for care in later life [1]. The fear of postnatal urinary incontinence may lead obstetricians or pregnant women to request a elective caesarean despite there is no medical indication. The postpartum is also a period at risk for some severe depressive symptoms. It is possible that postpartum urinary incontinence occurring de novo in women continent before pregnancy causes or exacerbates depressive syndrome. Several studies show that postpartum urinary incontinence is associated with depressive symptoms. However these works do not determine whether there is a causal link between the two situations, or if these symptoms share a common origin. Our objective in this cohort analysis is to clarify whether de novo urinary incontinence postpartum is accompanied by changes in mood or taking psychotropic drugs and whether this association is maintained or grows over time.

Study design, materials and methods

Data are from the EDEN mother-child cohort which has recruited 2002 pregnant women from 2003 to 2006 in 2 maternity units in France. Written consent was obtained from each participant upon the inclusion in the survey. Were included in our analysis, women who responded to questions about urinary incontinence, asked by postal questionnaire 4 months after birth and who reported having no urinary incontinence before pregnancy. Urinary incontinence 4 months after birth is defined by the positive response to question "during the past month, have you had any involuntary leakage of urine?" The severity of incontinence was assessed by the severity index Sandvik. Depression was assessed by postal questionnaires at 4 and 12 months postpartum using Edinburgh Postpartum Depression Scale (an EPDS score > 13 defines a probable depression) and consumption of psychotropic drugs (sleeping pills, tranquilizers, anxiolytics, or antidepressants) in the last month. The link between de novo postpartum urinary incontinence (UI) and postpartum depression was studied by comparing the proportions of new cases of depression at 12 months postpartum (EPDS score > 13) in women with postpartum UI and those without UI after exclusion cases of postpartum depression at 4 months. The mean change in EPDS scores between the 4th and 12th months postpartum was compared in women with urinary incontinence de novo postpartum in 4 months and others. We have also analyzed new cases of psychotropic drug use.

Results

Of the 2002 women, 1387 (69%) meet our criteria and were included in this analysis, 379 were excluded because they did not respond to questions about urinary incontinence and 236 were excluded because they reported a pre-existing UI. They were aged 17 to 44 years with a mean of 29.5 years. They were 189 (13.6%) to declare a de novo urinary incontinence at 4 months postpartum. Among these cases of UI, 73% (138) were mild, 27% (51) moderate and none serious. For 84% (159) of women involved, urinary leakage occurs during physical exertion, coughing or sneezing and 56% (106) reported that urinary leakage could occur by urgency. At 4 months postpartum, 8.6% of women have an EPDS score > 13, the difference was not significant between those who reported postpartum UI (10.8%) and others (8.2%). In contrast, the mean EPDS score was higher for women with postpartum urinary incontinence (Table). At four months postpartum, 4.2% (49) of women consume psychotropic drugs with no significant difference between those with postpartum UI (5.7%) and others (4.0%). At one year postpartum depression score worsened by 1.62 on average for all women and this increase was less pronounced among women who reported UI at 4 months (Table). There was still difference on the average EPDS score between women with incontinence at 4 months and the other, but it was halved (0.71 against 1.43). New incident cases of depression (EPDS > 13) at 12 months were similar in women who had UI at 4 months postpartum and others (Table). Regarding new case of taking psychotropic drugs at 12 months, there was no difference in consumption between the incident women with UI in 4 months and others (Table).

Postpartum depression	Without postpartum UI		With postpartum UI		P
	N	% mean	N	% mean	
4 months postpartum					
EPDS ≥ 13	1039	8.2%	166	10.8%	0.25
Mean EPDS		4.85		6.28	0.0003
Psychotropic drugs	1009	4.0%	157	5.7%	0.30
12 months postpartum					
EPDS ≥ 13	1039	9.0%	166	9.0%	
Mean EPDS		6.57		7.28	0.02
Increase of EPDS 4-12 months		+1.71		+1.01	0.058
Psychotropic drugs	1009	6.6%	157	5.1%	0.46
New cases at 12 months					
EPDS ≥ 13	954	6.8%	148	6.1%	0.74
Psychotropic drugs	969	4.4%	148	3.4%	0.53

Interpretation of results

From our sample we observed that UI at 4 months postpartum was mainly mild, although it was associated with postpartum depressive mood. The following of these women one year postpartum shows that postpartum UI is not accompanied by more new cases of depression or consumption of psychotropic drugs. At one year postpartum, the mean score of depression is different in women who had postpartum urinary incontinence and the others, but the difference decreased by half. EDEN cohort allows through successive questionnaires to explore the temporal relationship between urinary incontinence and postpartum depression. However the questionnaire on urinary incontinence was not repeated at 12 months which prevents us from exploring the influence of postnatal depression on incident UI. We did not answer the question about the meaning of the relationship between urinary incontinence and postpartum depression. It could be, contrary to our initial hypothesis, that depression may be a predisposing factor for urinary incontinence rather than the reverse. Postnatal urinary incontinence observed at 4 months postpartum was not accompanied by an over-risk of depression or new consumption of psychotropic drugs 8 months later. Such an effect would be expected if the urinary incontinence was an effective contributing factor to postpartum depression. A cohort study in a population of older women (average age 60) shows that depression is associated with urinary incontinence incident while urinary incontinence is not associated with incident depression [2]. Furthermore inhibitor antidepressants serotonin reuptake, duloxetine, is used to treat stress urinary incontinence with significant results on the number of leaks reported by the patient [3].

Concluding message

Postpartum urinary incontinence is mild in most cases 4 months after delivery and is not followed by more new cases of depression or psychotropic drug consumption at 12 months.

References

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<i>Is this a clinical trial?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	Yes
<i>Specify Name of Ethics Committee</i>	The EDEN study received approval from the ethics committee (CCPPRB) of Kremlin-Bicêtre (France) on December 12th, 2002.
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes