

AN EVALUATION OF PELVIC FLOOR DISORDERS SYMPTOMS IN PREGNANCY

Hypothesis / aims of study

The link between pregnancy and the development of urinary incontinence, fecal incontinence and pelvic organ prolapse remains unclear. This is an ongoing prospective observational study to evaluate the relationship of pregnancy and pelvic floor disorders.

Study design, materials and methods

All nulliparous women presented to the Obstetric clinics at first trimester were invited to join the study. They completed the Pelvic Floor Distress Inventory (PFDI) and the Pelvic Floor Impact Questionnaire (PFIQ) at first trimester (10-12 week), second trimester (26-28 week) and third trimester (35-38 week). PFDI and PFIQ are useful tools in assessing the different types of pelvic floor disorders and the impact on Quality of life in women.(1)

Results

From August 2009, 83 women completed the two questionnaires at all trimesters. The mean age was 30.7 (SD 3.3) years. Table 1 and 2 showed the scoring of PFDI and PFIQ at each trimester of the pregnancy. A one-way repeated measures ANOVA was conducted to compare the scoring of different subscales of PFDI and PFIQ; which showed significant effect for time (first, second and third trimester) on all subscales of UDI and POPDI; significant effect on obstructive and incontinence subscales of CRADI; significant effect on all subscales of UIQ, significant effect on subscale of physical activity of POPIQ, and no effect on all subscales of CRAIQ.

Interpretation of results

There was association between pregnancy and pelvic floor disorders. Urinary symptoms and pelvic organ prolapse symptoms were significant and some colorectal symptoms also occurred during pregnancy; with increasing symptoms as the gestation becomes more advanced. While the urinary symptoms had significant impact on the quality of life of the pregnant women, there is no significant impact on quality of life from colo-rectal-anal aspects, but mild effect from pelvic organ prolapse.

Concluding message

There is association between pregnancy and pelvic floor disorders, with increasing pelvic floor disorders symptoms as the gestation becomes more advanced.

Table I. The scoring of PFDI at first trimester to third trimester

PFDI	Scoring of each subscale			Total score
UDI	Obstructive/discomfort	Irritative	Stress	
1 st	7.3 (7.6)	14.4 (10.2)	1.4 (3.3)	23.0 (17.1)
2 nd	12.8 (10.3)	17.4 (12.5)	3.9 (6.6)	34.1 (23.8)
3 rd	16.8 (10.9)	21.7 (13.2)	5.8 (9.1)	44.3 (28.0)
P-value	<0.005	<0.005	<0.005	<0.005
POPDI	General	Anterior	Posterior	
1 st	14.1 (12.3)	6.1 (9.04)	25.9 (19.6)	46.0 (28.1)
2 nd	23.3 (15.3)	9.5 (12.8)	23.5 (21.3)	56.4 (40.5)
3 rd	31.9 (17.6)	9.6 (11.9)	18.1 (21.6)	59.7 (40.9)
P-value	<0.005	0.01		<0.005
CRADI	Obstructive	Incontinence	Pain/ irritative	Rectal Prolapse
1 st	25.9 (19.6)	4.5 (6.94)	14.3 (11.9)	3.3 (8.75)
2 nd	23.5 (21.3)	6.4 (8.4)	16.7 (13.2)	5.9 (11.3)
3 rd	18.2 (21.6)	6.3 (8.3)	17.7 (14.4)	4.1 (10.0)
				48.0 (31.4)
				52.6 (40.6)
				45.8 (41.5)

P-value 0.01 0.04 0.06 0.29 0.25
 1st/2nd/3rd = first, second or third trimester, UDI = Urinary Distress Inventory, POPDI = Pelvic Organ Prolapse Distress Inventory, CRADI = Colo-Rectal-Anal Distress Inventory. Values are presented in mean (standard deviation)

Table II. The scoring of PFIQ at first trimester to third trimester

PFIQ	Scoring of each subscale				Total score	
	Travel	Social	Emotional	Physical activity		
UIQ	1 st	9.4 (14.7)	3.9 (7.3)	6.2 (9.8)	4.8 (9.5)	24.2 (37.3)
	2 nd	14.1 (17.0)	4.8 (8.8)	8.6 (11.4)	9.6 (14.2)	37.2 (47.2)
	3 rd	18.5 (20.9)	7.1 (10.6)	11.5 (14.6)	13.6 (17.5)	50.2 (59.1)
P-value	<0.005	0.005	0.002	<0.005	<0.005	
CRAIQ	1 st	4.1 (10.7)	2.0 (5.4)	3.5 (10.3)	2.7 (8.0)	12.4 (29.2)
	2 nd	3.4 (10.0)	1.6 (5.4)	3.5 (10.3)	3.0 (9.0)	11.5 (32.2)
	3 rd	4.2 (10.3)	2.2 (6.0)	3.3 (9.4)	3.3 (8.5)	13.1 (31.1)
P-value	0.75	0.48	0.74	0.78	0.87	
POPIQ	1 st	3.2 (8.4)	2.7 (6.1)	4.8 (10.9)	3.3 (8.7)	14.1 (30.2)
	2 nd	4.4 (11.5)	3.0 (7.3)	4.4 (9.8)	4.9 (10.5)	16.7 (36.1)
	3 rd	6.8 (12.7)	4.3 (8.3)	6.4 (11.8)	8.0 (14.7)	25.0 (44.6)
P-value	0.05	0.14	0.08	0.01	0.03	

1st/2nd/3rd = first, second or third trimester, UIQ = Urinary Impact Questionnaire, CRAIQ = Colo-Rectal-Anal Impact Questionnaire, POPIQ = Pelvic Organ Prolapse Impact Questionnaire. Values are presented in mean (standard deviation)

References

1. Barber MD, Kuchibhatla MN, Pieper CF, Bump RC. Psychometric evaluation of 2 comprehensive condition-specific quality of life instruments for women with pelvic floor disorders. Am J Obstet Gynecol 2001;185:1388-95.

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Is this a clinical trial?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	Yes
Specify Name of Ethics Committee	Joint CUHK-NTEC Clinical Research Ethics Committee (CREC)
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	Yes