

A CASE CONTROL STUDY OF IMPROPER HYSTERECTOMY AND INTERSTITIAL CYSTITIS/BLADDER PAIN SYNDROME BY NATIONAL DATABASE

Hypothesis / aims of study

Higher hysterectomy rate in interstitial cystitis/bladder pain syndrome (IC/BPS) women before their diagnosis was noted in the literature. In this case such procedures maybe improperly because hysterectomy is not a reasonable treatment for IC/BPS. We evaluated if there is improper hysterectomy in IC/BPS women by considering the confounding effect of comorbidities. Then provided the clinician related information of decision making before hysterectomy.

Study design, materials and methods

This case-control study made use of the national insurance database. We included those who are diagnosed of IC/BPS first-time during study period as cases. Women without IC/BPS matched 1:1 with age and eight comorbidities (irritable bowel syndrome, depression, anxiety, stress urinary incontinence, immunological disease, urinary tract infection cystitis, myalgia and myositis, diabetes mellitus) acquired the control group. We defined the hysterectomy within one year before the diagnosis of IC/BPS was improperly. Then retrospective observe the event of hysterectomy within one year before index date and reference date of these two groups. Univariate and multivariate analysis of the hysterectomy rate were compared in case and control groups.

Results

There are 1049 women in each of the case and control group. The crud odd ratio (OR) of hysterectomy is 1.563 (95%CI: 1.150-2.125) for IC/BPS by univariate analysis. The adjusted OR of hysterectomy within one year before the diagnosis of IC/BPS is 2.973 (95%CI: 0.802-11.024) after controlling nine confounding factors.

Interpretation of results

Our results showed that the rate of hysterectomy within one year before diagnosis of IC/BPS was not higher than the general. There was no improper hysterectomy for women with IC/BPS in this area. The higher rate of hysterectomy in IC/BPS before their diagnosis may due to the confounding effect of comorbidities.

Concluding message

There was no improper removal of the uterus for IC/BPS women in this study.

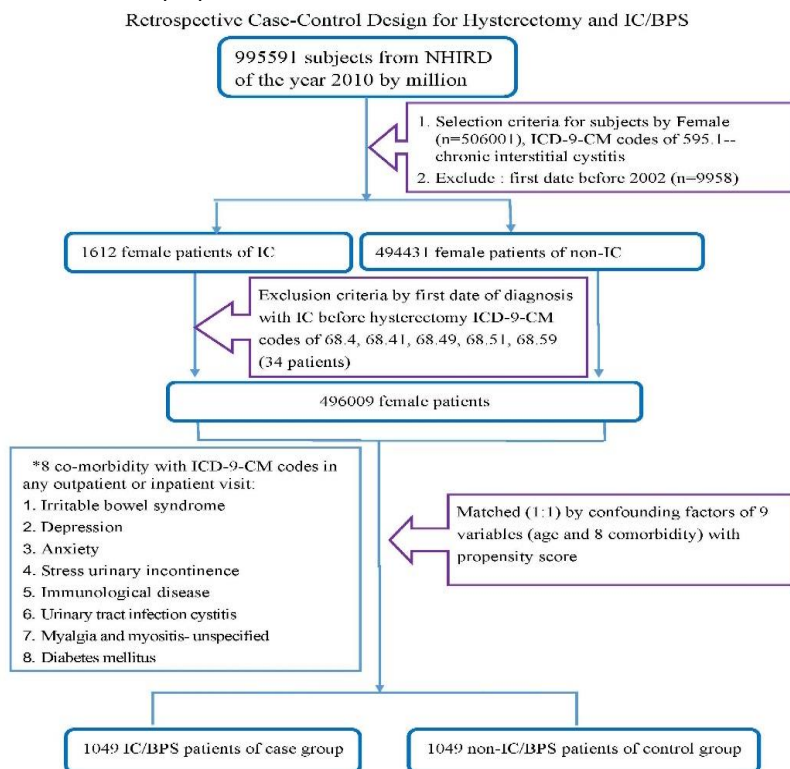


Figure: Flowchart of sample selection

Table 1. Demographic characteristics of patients in IC/BPS case group and non-IC/BPS control group (n=2098)

variable	Case group (n=1118)	Control group(n=1118)	P
Age (y/o)			
Mean	47.20 ± 16.40 (3-98)	47.02 ± 16.42 (0-97)	0.8
Myalgia and myositis			
Mean physician visit (range)	4.35 ± 13.36 (0-317)	4.13 ± 10.61 (0-137)	0.667
Irritable bowel syndrome			
Mean physician visit (range)	0.11 ± 0.58 (0-12)	0.11 ± 0.58 (0-12)	1
Depression			
Mean physician visit (range)	6.02 ± 26.39 (0-373)	4.47 ± 19.14 (0-310)	0.122
Anxiety			
Mean physician visit (range)	5.97 ± 17.48 (0-259)	6.26 ± 17.34 (0-162)	0.588
Stress incontinence			
Mean physician visit (range)	0.87 ± 4.06 (0-57)	0.68 ± 7.63 (0-174)	0.286
Urinary tract infection			
Mean physician visit (range)	0.68 ± 7.63 (0-174)	1.44 ± 14.61 (0-286)	0.137
Diabetes Mellitus			
Mean physician visit (range)	0.14 ± 1.73 (0-42)	0.14 ± 2.43 (0-76)	0.967
Immunological diseases			
Mean physician visit (range)	3.34 ± 27.19 (0-529)	3.27 ± 22.51 (0-363)	0.954

IC/BPS: interstitial cystitis/bladder pain syndrome
 Mean physician visit = (Total number of outpatient visit + Total number of admission) / Total patient number

Table 2. Univariate analysis of the association between hysterectomy and IC/BPS

variable	IC/BPS (n,%)		OR(95%CI)
	no	yes	
Hysterectomy			
no	485930 (98.3%)	1536 (97.3%)	1.563* (1.150-2.125)
Yes	8501 (1.7%)	42 (2.7%)	

IC/BPS: interstitial cystitis/bladder pain syndrome; * indicates P<0.05

OR= odds ratio; 95%CI=95% confidence interval

Table 3. Odds ratio (OR) of hysterectomy within one year before the diagnosis of IC/BPS in the cases compared with the control group (n=2098)

	OR, HR(95%CI)
Hysterectomy (yes/no)	2.973 (0.802-11.024)
age	1.001 (0.993-1.009)
Myalgia and myositis	1.002 (0.864-1.162)
Irritable bowel syndrome	1.004 (0.999-1.008)
Depression	0.997 (0.991-1.002)
Anxiety	1.011 (0.989-1.034)
Stress incontinence	0.989 (0.978-1.001)
Urinary tract infection	0.997 (0.956-1.039)
Diabetes Mellitus	1.003 (0.998-1.008)
Immunological diseases	2.973 (0.802-11.024)

Adjusted confounders: age, physician visit for irritable bowel syndrome, depression, anxiety, stress urinary incontinence, immunological disease, urinary tract infection cystitis, myalgia and myositis, diabetes mellitus. Physician visit = Number of outpatient visits or admissions;

Disclosures

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