

PREVALENCE AND SEVERITY OF SYMPTOMS OF URINARY INCONTINENCE (UI) IN MEN AND WOMEN WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

Hypothesis / aims of study

To investigate the prevalence of urinary incontinence (UI) and to evaluate the awareness of treatment in male and female patients with chronic obstructive pulmonary disease (COPD). It was hypothesised that high intra-abdominal peak pressure caused by chronic cough in patients with COPD might be associated with a higher prevalence of UI. The secondary outcome was to evaluate the initiation of adequate treatment in case of UI.

Study design, materials and methods

This retrospective study included 115 patients with COPD recruited by a mailing survey and 327 patients with COPD recruited by an online survey. One hundred and thirteen patients, who underwent lung resection because of lung cancer stage I served as a control group.

The presence or absence of UI, type of symptoms of stress urinary incontinence (SUI), urge urinary incontinence (UUI) and mixed urinary incontinence (MUI), the Sandvik's Severity Index (SSI), the International Consultation on Incontinence Questionnaire (ICIQ-UI-SF) and the COPD Assessment Test (CAT) were recorded. Furthermore the awareness of treatment options in case of UI was evaluated.

Results

Fifty-nine percent (68/115) in the patients with COPD of the mailing survey and 77% (245/327) of the patients with COPD in the online survey reported symptoms of UI compared to 40% (46/113) in the control group. The incidence of UI in the middle aged (41-60 years) was significantly higher in both COPD groups compared to the control group and the normal population of another representative survey [1]. Results for different age groups are summarized in table 1. Of those who reported some UI, 69% in the COPD mailing group, 84% in the COPD online group and 50% in the controls reported symptoms of SUI. UUI and MUI were much less reported in all COPD groups. The prevalence of SUI was surprisingly high in the incontinent male patients with COPD (56% in the COPD mailing group respectively 74% in the COPD online group). In both COPD groups a relationship was found between the severity of UI and the severity of cough, but not in controls. SSI-scores vs. CAT-scores for the COPD mailing group, the COPD online group, and controls are shown figure 1. In our study population between 69% up to 84% of the incontinent had never seen a doctor because of UI. Only 9% up to 59% of the incontinent patients reported knowledge about pelvic floor muscle training and between 0% up to 22% of the incontinent patients reported practicing those exercises regularly.

Table 1: Prevalence and incidence of UI in patients with COPD, in the controls and in normal population [1]

	COPD Mailing group	Control group	p =	COPD Online group	Control group	p =	Normal Population [1]
	n = 115	n = 113		n = 327	n = 113		n = 2001
Age group	UI n = (%)	UI n = (%)		UI n = (%)	UI n = (%)		UI n = (%)
18-40 yrs	1	1	-	4	1	-	41 (6,1)
41-60 yrs	29 (70,7)	12 (40,0)	0.010	143 (86,6)	12 (40,0)	<0.001	66 (9,5)
>60 yrs	38 (52,0)	33 (41,2)	0.181	107 (67,7)	33 (41,2)	<0.001	145 (23,0)
Total	68 (59,1)	46 (40,7)	0.005	254 (77,7)	46 (40,7)	<0.001	252 (12,6)

Interpretation of results

The prevalence of UI in patients with COPD is significantly higher compared to controls and published values of a normal population. SUI is the most common finding and the prevalence is surprisingly high in male patients with COPD.

Concluding message

Health professionals should be aware of UI as a vastly underreported comorbidity in patients with COPD. Affected patients should be informed about treatment options for UI.

References

1. Beutel ME, Schwarz R, Braehler E. (2005): Prävalenz der Urininkontinenz in der Deutschen Bevölkerung. Komorbidität, Lebensqualität, Einflussgrößen. Urologe A. 44, 232-238.

Disclosures

Funding: Ethical approval / Funding

This study was approved by the clinical ethics review board of the Faculty of Medicine of the University of Duisburg-Essen in Germany. **Clinical Trial:** Yes **Public Registry:** Yes **Registration Number:** Clinical ethics review board of the Faculty of Medicine of the University of Duisburg-Essen in Germany: No. 11-464. German Register of Clinical Trials(DRK) No. S00003315. World Health Organisation Register of Clinical Trials(WHO) <http://apps.who.int/trialsearch/>. **RCT:** No **Subjects:** HUMAN **Ethics Committee:** Ethical approval / Funding; This study was approved by the clinical ethics review board of the Faculty of Medicine of the University of Duisburg-Essen in Germany. **Helsinki:** Yes **Informed Consent:** Yes

Figure 1: Correlation between severity of cough (CAT) and severity of UI (SSI); (a) COPD mailing group, (b) COPD online group, (c) control group.

