- **Covid-19 vaccination is associated with increased risk of LUTS during acute infection**
- **1 in 3 hospitalized COVID-19 patients experienced moderate-to-severe LUTS**
- **Vaccinated individuals had a 7-fold higher risk of LUTS during acute infection**

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Impact of COVID-19 and Vaccination on Lower Urinary Tract Symptoms

Aims

To evaluate the **prevalence and course of lower urinary tract symptoms (LUTS)** in patients hospitalized with **COVID-19**, and the influence of comorbidities, disease severity, and vaccination.

Methods

Prospective cohort of **168 hospitalized adults**. LUTS were assessed with IPSS, ICIQ-OAB, and ICIQ-UI SF during hospitalization, and at 1 and 3 months post-discharge.

Results

Table 1: Prevalence and evolution of LUTS over time

	Baseline (%)	1 Month (%)	3 Months (%)	p-value
Overall Population				
Moderate to Severe LUTS*	31.0	29.1	21.8	0.240
Impaired QoL (LUTS-related)**	14.3	7.3	5.1	0.017
OAB***	36.9	34.7	29.9	0.434
UUI	19.6	23.3	17.5	0.465
Stress UI	19.6	15.5	11.0	0.117
Men				
Moderate to Severe LUTS*	29.2	24.7	19.2	0.346
Impaired QoL (LUTS-related)**	14.6	6.3	2.7	0.018
OAB***	27.0	21.5	17.8	0.361
UUI	13.5	7.9	8.2	0.516
Stress UI	3.4	0.0	0.0	0.111
Women				
Moderate to Severe LUTS*	32.9	33.1	25.1	0.563
Impaired QoL (LUTS-related)**	13.9	8.5	7.8	0.461
OAB***	48.1	49.3	43.8	0.741
UUI	26.6	35.4	28.1	0.197
Stress UI	38.0	29.1	23.4	0.127

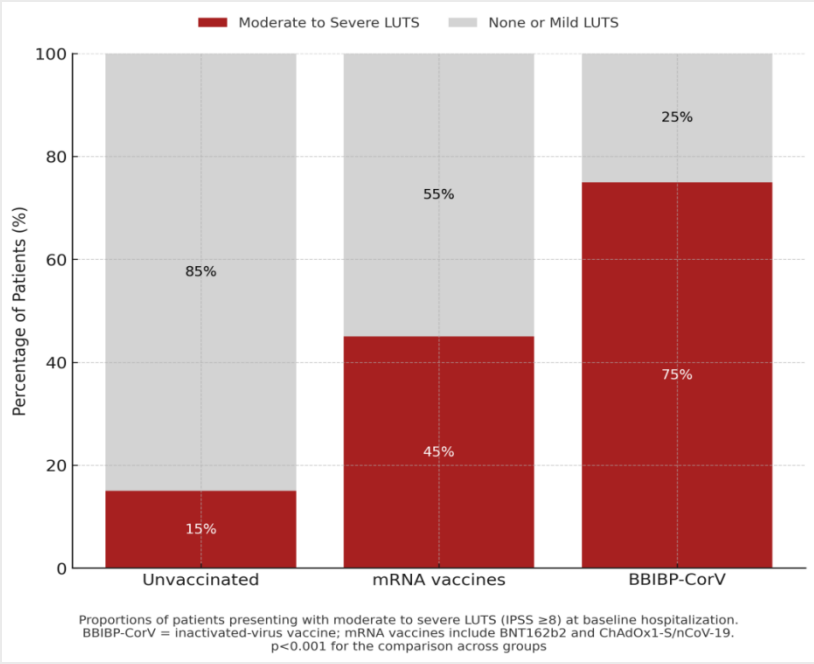
*IPSS=8; **"mostly dissatisfied" or worse; *** ICIQ-OAB>2 and urgency/UUI

Most frequent LUTS: nocturia (54%), urgency (44%), and frequency (37%).

Women: higher urgency (p=0.008), UUI (p=0.006), and SUI (p<0.001).

LUTS were not associated with comorbidities or disease severity.

Vaccination increased risk of LUTS: fully vaccinated OR 6.8 at baseline and OR 2.4 at 3 months. Inactivated-virus vaccines showed the strongest association (adj. OR 10.6).



Proportions of patients presenting with moderate to severe LUTS (IPSS ≥8) at baseline hospitalization. BBIBP-CorV = inactivated-virus vaccine; mRNA vaccines include BNT162b2 and ChAdOx1-S/nCoV-19. p<0.001 for the comparison across groups

Conclusions

LUTS, mainly storage symptoms, are frequent during acute COVID-19 but tend to improve. Vaccination, especially with inactivated-virus vaccines, was associated with higher LUTS risk. Urological monitoring during and after COVID-19 is recommended.