Article

Elevated Oxytocin Receptor Blood Concentrations Predict Higher Risk for, More, and Earlier 24-Month Hospital Readmissions after In-Patient Detoxification in Males with Alcohol Use Disorder

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Supplementary Material

Supplementary Table S1. Risk of alcohol-related readmission during the 24-month follow-up period depending on oxytocin and oxytocin receptor serum levels using male-specific Youden cut-off points of 37.6 pg/mL for oxytocin (based on data from [52], resulting in a sensitivity of 0.42, a specificity of 0.78, area under the curve 0.611, standard error under the non-parametric assumption 0.056, $p = 0.046$) and of 0.351 ng/mL for the oxytocin receptor (see text for details; the groups differed significantly in terms of readmission risk, $\chi^2 = 12.6$, $p = 0.006$)

Number (percentage) of male patients with alcohol-related hospital re-admission	OXTR < 0.351 ng/mL	OXTR ≥ 0.351 ng/mL
OXT < 37.6 pg/mL	19 out of 37 (51.4%)	25 out of 36 (69.4%)
OXT ≥ 37.6 pg/mL	3 out of 7 (42.9%)	29 out of 33 (87.9%)

OXT, oxytocin; OXTR oxytocin receptor.

Supplementary Table S2. Comparison of baseline oxytocin receptor serum levels (ng/mL) in male and female in-patients with alcohol use disorder between those with and those without prospective 24-month hospital readmission

	With readmission				Without readmission					
	N	M	IQR		N	M	IQR		U	*p*
Male in-patients with AUD	76	0.456	0.317	0.712	37	0.319	0.185	0.500	939	**0.004**
Female in-patients with AUD	46	0.491	0.288	0.724	41	0.452	0.328	0.749	913	0.799

AUD, alcohol use disorder; the table shows medians (M), interquartile ranges (IQR), and results from Mann-Whitney U tests. $p < 0.05$ in bold.

Supplementary Table S3. Spearman correlations between baseline oxytocin receptor serum levels, number of alcohol-related readmissions, and latency to first alcohol-related readmission during the prospective 24-month period

		Alcohol-related hospital readmission			
		Number		Latency (days)	
	N	ϱ	*p*	ϱ	*p*
Male in-patients with AUD	113	0.249	**0.008**	–0.268	**0.004**
Female in-patients with AUD	87	–0.021	0.848	0.000	0.997

AUD, alcohol use disorder; $p < 0.05$ in bold.

Supplementary Table S4. Baseline oxytocin receptor serum levels (ng/mL) and smoking status in male and female groups of in-patients with alcohol use disorder and healthy control subjects.

	Smoker				Non-smoker					
	N	M	IQR		N	M	IQR		U	$p^{\#}$
Male in-patients with AUD	81	0.412	0.246	0.608	23	0.442	0.302	0.903	745	0.144
Female in-patients with AUD	60	0.411	0.252	0.610	18	0.668	0.470	1.301	267	**0.001**
Male controls	29	0.402	0.304	0.653	104	0.438	0.282	0.700	1380	0.486
Female controls	20	0.253	0.175	0.429	87	0.494	0.250	0.894	503	**0.003**

AUD, alcohol use disorder; medians (M), interquartile ranges (IQR). #Mann-Whitney U tests. $p < 0.05$ in bold.

Supplementary Table S5. Spearman correlations between baseline oxytocin receptor serum levels and age in male and female groups of in-patients with alcohol use disorder and healthy control subjects.

		Age	
	N	ϱ	*p*
Male in-patients with AUD	113	0.026	0.784
Female in-patients with AUD	87	0.039	0.721
Male controls	133	–0.192	**0.027**
Female controls	107	–0.246	**0.011**

AUD, alcohol use disorder. $p < 0.05$ in bold.

Supplementary Table S6. Spearman correlations between baseline oxytocin receptor serum levels, dihydrotestosterone, testosterone, estradiol, and progesterone in male and female groups of in-patients with alcohol use disorder and healthy control subjects

		Dihydro-testosterone		Testosterone		Estradiol		Progesterone	
	N	ϱ	*p*	ϱ	*p*	ϱ	*p*	ϱ	*p*
Male in-patients with AUD	113	0.073	0.445	–0.005	0.956	–0.004	0.964	–0.016	0.864
Female in-patients with AUD	87	0.025	0.819	0.000	1.000	0.119	0.272	–0.010	0.926
Male controls	133	0.189	**0.030**	0.134	0.124	0.057	0.516	0.165	0.057
Female controls	107	0.148	0.129	0.281	**0.003**	0.136	0.163	0.186	0.055

AUD, alcohol use disorder. $p < 0.05$ in bold.