URICA Maintenance subscale and frequency of recent cocaine use independently predict cocaine-positive baseline urine at inpatient detoxification treatment

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BACKGROUND/RATIONALE

Cocaine-positive baseline urine (CPB) at treatment entry is considered a predictor of poor response in the treatment of cocaine use disorders (Ahmadi et al., 2009; Kampman et al., 2002; Sofuoglu et al., 2003). The identification of factors independently associated with CPB could be useful for developing new therapeutic strategies.

RESEARCH QUESTION: Do cocaine-dependent patients with CPB at the start of inpatient cocaine detoxification treatment differ from their counterparts without CPB in terms of cocaine use, motivation to change, and executive functions that regulate emotional/behavioural inhibition?

METHOD

Design: Cross-sectional study. Setting: Inpatient detoxification unit. Participants: Thirty-three cocaine-dependent patients with CPB (CPB-patients), and 10 cocaine-dependent without CPB (Non-CPB patients). Measures: University of Rhode Island Change Assessment (URICA) scale, Word Artency Test, Trail Making Test (parts A and B), Iowa Gambling Task (ABCD and EFGH versions), Heart Beat Perception Task, and Colour-Word Interference Test-Stroop (Delis–Kaplan Executive Functions System). Data Analyses: Variables that significantly differentiated patients with and without CPB at an alpha level of 0.10 in the bivariate analyses were introduced in a binary logistic regression model in order to identify the factors independently associated with the likelihood of CPB.

RESULTS

Descriptive statistics

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<th>CPB-patients (n = 33)</th>
<th>Non-CPB patients (n = 10)</th>
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<tbody>
<tr>
<td>Age (years): mean (SD)</td>
<td>37.16 (7.71)</td>
<td>37.32 (10.65)</td>
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<td>Male gender (%)</td>
<td>72.7</td>
<td>90</td>
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<td>Cocaine use Age of onset (years): mean (SD)</td>
<td>19.52 (5.11)</td>
<td>19.40 (6.87)</td>
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<td>Time of use (months): mean (SD)</td>
<td>177.51 (88.93)</td>
<td>196.37 (97.56)</td>
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<td>Days of use (last 30 days): mean (SD)</td>
<td>14.03 (7.13)</td>
<td>7.90 (7.16)</td>
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<tr>
<td>Cocaine abstinence (months): mean (SD)</td>
<td>34.19 (35.96)</td>
<td>18.62 (15.48)</td>
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URICA

Pre-contemplation 1.54 (0.44) 1.73 (0.67)
Contemplation 4.34 (0.38) 5.21 (1.98)
Action 4.42 (0.38) 4.59 (0.46)
Maintenance 4.02 (0.49) 4.34 (0.50)
Word Artency Test 23.52 (3.64) 24.50 (2.46)
Trail Making Test Part A 32.58 (9.46) 37.20 (9.99)
Part B (Time) 86.03 (31.30) 91.00 (41.56)
Part B (Mistakes) 1.41 (2.38) 2.30 (3.30)
Iowa Gambling Task ABCD -2.50 (30.66) 2.40 (25.45)
EFGH 24.69 (26.86) 14.60 (29.99)
Heart Beat Perception Task 45.10 (23.65) 48.27 (20.91)
Colour-Word Interference Test-Stroop (DKEF-S) Colour/Word Inhibition - Colour Naming 21.79 (10.11) 19.22 (11.11)
Inhibition/Switching - Inhibition 12.30 (12.65) 16.22 (13.11)

CPB-patients reported higher number of days of cocaine use during the prior month to admission than non-CPB patients (14.0 ± 7.1 vs. 7.9 ± 7.2, P = .022). CPB-patients, in comparison with non-CPB patients, also reported more months abstinent from cocaine after the onset of cocaine use (34.2 ± 36.0 vs. 18.6 ± 15.9, P = .060), and scored lower on the URICA subscales of contemplation (4.3 ± 0.4 vs. 4.6 ± 0.3, P = .076) and maintenance (4.0 ± 0.5 vs. 4.3 ± 0.5, P = .082), although these differences did not reach statistical significance. Binary logistic regression analysis (Hosmer and Lemeshow test: \( \chi^2(8) = 6.904, P = .547; \) Nagelkerke’s \( R^2 = .326 \) showed that the likelihood of CPB was independently predicted by the number of days of cocaine use during the prior month to admission (OR = 1.178, 95% CI = 1.026-1.353) and the score of the URICA maintenance subscale (OR = 0.147, 95% CI = 0.024-0.909).

KEY CONCLUSION

In cocaine-dependent patients, cocaine-positive urine at entry to inpatient detoxification treatment is positively associated with the frequency of cocaine use during the last 30 days and negatively with the struggle to maintain changes aimed to reduce cocaine-related problems.

REFERENCES


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