

KORO, OTHELLO AND CAPGRAS SYNDROMES IN ONE PATIENT WITH DRUG INDUCED PSYCHOSIS

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A 28-year-old male with a history of multiple drugs abuse was admitted through psychiatric emergency after one week of aggressiveness towards himself and his wife, whom he accused of adulterous conduct. The patient believed, in the last 2 years, that his wife would leave her sleeping body and meet different lovers, all night long. The patient also thought that his wife was replaced by a double, in order to prolong this promiscuous activity, during the day. On mental exam the patient complained of penis shrinking sensation and voices in his head, compatible with tactile and auditory hallucinations, which were explained as voodoo and telepathic phenomena. There was also insomnia and anorexia. Since adolescence that he had been abusing caffeine, nicotine, alcohol, cannabis, MDMA, cocaine and heroin. His father and three half-brothers had previous history of drugs abuse while one cousin and one uncle had undisclosed psychotic disorders. Blood and urine samples confirmed alcohol and cannabinoids recent abuse. CT head scan and EEG showed no changes. Psychological evaluation described normal intelligence in a personality with borderline traits. The patient was diagnosed with psychosis due to alcohol and/or cannabinoids abuse; treatment with daily olanzapine 30mg achieved total remission of symptoms and discharge in two weeks. Later on olanzapine was changed to daily paliperidone 9mg, due to weight gain. After 20 months of follow-up the patient was doing perfectly well.

Koro syndrome is characterized by the belief that the patient's penis is shrinking into the abdomen, and its eventual disappearance will result in the patient's death. Although named after a Southeast Asia's culture-bound syndrome it has been described in European literature since the 1880's (Chowdhury 1998). Brain mechanisms contributing to the subjective experience of penis retraction still remain to be identified. Othello syndrome or delusional jealousy is a disorder in which a person wrongly believes that their sexual partner is being unfaithful without having any real proof to back up their claim. Othello syndrome has been related with gray matter loss in the dorsolateral frontal lobes, particularly in the superior frontal gyri, and the right posterior lateral temporal lobe (Graff-Radford et al. 2012). Capgras syndrome is a delusional misidentification syndrome in which a person holds a delusion that a close person has been replaced by an identical-looking impostor. Capgras

delusion seems to result from bifrontal and/or right hemispheric lesions as confabulation and anosognosis share overlapping mechanisms and anatomic pathology. A dual mechanism is postulated for the delusional misidentification syndromes: negative effects from right hemisphere and frontal lobe dysfunction as well as positive effects from overactivity of preserved left hemisphere areas (Devinsky 2009).

Previous history of alcohol abuse has been reported among patients with Othello (Jiménez-Arriero et al. 2007) and Capgras syndrome (Thompson & Swan 1993) while Koro-like phenomena has already been described in patients with cannabinoids abuse (Kalaitzi & Kalantzis 2006). In the other hand some authors have proposed that both Capgras and Othello syndrome patients may share etiologic similarities. This would be explained by the dual effects, of loss of function of the right hemisphere and release of inhibition of the intact left hemisphere. The functions of the right hemisphere include the ability to relate oneself to the internal and external world, self-monitoring, and the detection of anomalies; thus, the right hemisphere acts as an inhibitor of mentation and behavior. In these patients the left hemisphere creates an interpretation of the world, which could be fueled by false evidence and cause an individual to jump to conclusions (Braun & Suffren 2011). Our patient's combination of symptoms suggests that Koro syndrome may also involve some right frontotemporal impairment, as previously described in Capgras and Othello syndromes. This kind of models shall be looked further in future studies regarding any of the three neuropsychiatric syndromes.

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References

1. Braun CMJ, Suffren S: A general neuropsychological model of delusion. *Cogn Neuropsychiatry* 2011; 16:1–39.
2. Chowdhury AN: Hundred years of koro: the history of a culture-bound syndrome. *International Journal of Social Psychiatry* 1998; 44:181–8.
3. Devinsky O: Delusional misidentification and duplication: right brain lesions, left brain delusions. *Neurology* 2009; 72:80–87.

4. Graff-Radford J, Whitwell JL, Geda YE, Joseph KA: Clinical and imaging features of Othello's syndrome. *Eur J Neurol* 2012; 19:38-46.
5. Jiménez-Arriero MA, Hernández B, Mearin Manrique I, Rodríguez-Jiménez R, Jiménez Giménez M, Ponce Alfaro G: Alcoholic jealousy: an old and current dilemma. *Adicciones* 2007; 19:267-72.
6. Kalaitzi CK, Kalantzis A: Cannabis-induced koro-like syndrome. A case report and mini review. *Urol Int* 2006; 76:278-80.
7. Thompson AE, Swan M: Capgras' syndrome presenting with violence following heavy drinking. *Br J Psychiatry* 1993; 162:692-4.

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