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KRATOM AND ALCOHOL DEPENDENCE: CLINICAL SYMPTOMS, WITHDRAWAL TREATMENT AND PHARMACOLOGICAL MECHANISMS- A CASE REPORT

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Aim:

1. To present selfmedication of alcohol dependence related withdrawal symptoms with the plant powder kratom of *Mitragynosa speciosa* and treatment of kratom withdrawal symptoms.

2. Pharmacological mechanisms of kratom.

1. A alcohol and kratom dependent patient used kratom (15g/d) to limit alcohol dependence related withdrawal symptoms and was admitted for withdrawal treatment. Kratom and urine was analysed by GCMS, withdrawal symptoms by Opioid Withdrawal Scale (OWS), sleep by Pittsburgh sleep quality index (PSQI) , mood by MADRS. Medical treatment was done with doxepine with one additional diazepam dos.

2. 3H-DAMGO radioligand binding assay of kratom, mitragynine and paynantheine with morphine transfected HEK 293 cells.

Results: GCMS-urine screening on day 1: mitragynine, paynantheine, on day 3: monochlorbenzodiazepine, doxepine. The patient benefits regarding sleep quality and quantity (PSQI day 6 (12), day 20 (6) and mental symptoms (MADRS on day 6 (18) and on day 20 (5)). The OWS Score shifts from 17 (day 1) to 2 (day 14). The blood pressure and heart rate decrease from 150/90 and 100/bpm (day 2) to 100/70 and 64/bpm (day 14). The GCMS analysis of kratom showed five indolalcaloids: mitragynine, 7-hydroxymitragynine, paynantheine, speciogynine, speciofoline, and unspecified plant contents. The 3H-DAMGO-radioligand-bindungsassay of kratom-powder showed 350-fold less affinity to μ -opiatereceptor than morphine.

Conclusion: The patient's selfmedication with kratom prevented alcohol withdrawal symptoms most probably by action on μ -opioidreceptors. 15g of kratom seems to be equivalent to 45mg of morphine. Withdrawl treatment with doxepine (and diazepam) clearly prevented withdrawal symptoms of dependence of kratom and alcohol.