

TITLE: OCHRATOXIN A IN DIALYZED PATIENTS SERUMS.

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ABSTRACT:

Ochratoxins, is an important group of secondary metabolites produced by some *Aspergillus* and *Fusarium* species. Ochratoxin A (OTA), the most important toxin of this family, is nephrotoxic, hepatotoxic, teratogenic, and carcinogenic in animals. It was recently classified by the International Agency of Research on Cancer (IARC) as possible human carcinogen (Group 2B). Ochratoxin A is widely distributed in foodstuffs, principally in cereals. Human populations are exposed to OTA by consumption of food commodities that have been directly contaminated. It has been associated with a chronic nephropathy, endemic in the Balkans area. Although the High Performance Liquid Chromatography (HPLC) is the Reference Method for OTA analysis, simpler and less expensive techniques, such as immunochemical assays including ELISA, have recently been developed. The aim of this work was to determine levels of OTA in serum samples from dialyzed patients. Serum samples were obtained from 39 patients (gender: 29 males, 10 females) from two Dialyzed Centers of Posadas city (Argentina). The samples were analyzed using the ELISA RIDASCREEN® commercial kit. Each sample was subjected to an extraction process, based on the methodology described for porcine serum adapted for human serum samples. The competitive ELISA method was used to determine serum OTA levels by measuring the absorbance. All samples and standards were analyzed in duplicate. All of the human serum samples analyzed have detectable levels of OTA. The OTA contents ranged from 2.959 to 0.018 ng/ml. This is the first report on the OTA levels in serum from humans in our region. The results obtained suggest that the studied population is highly exposed to the toxin, which may complicate the underlying disease.

Keywords: dialyzed, mycotoxin, ochratoxin A.

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