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Effects of *Acrocomia crispa* Fruits Lipid Extract (D-005) Over Kanamycin Induced Tubular Damage

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D-005 is a lipid extract obtained from the Cuban palm *Acrocomia crispa*, which has shown antioxidant and antiinflammatory effects (1). In a previous study, D-005 prevented histopathological changes induced by renal ischemia-reperfusion (2). This work aims to evaluate the effects of D-005 on kanamycin induced tubular damage in rat kidneys by means of conventional Light Microscopy.

Male Wistar rats were distributed in seven groups (10 rats per group): a negative control group and six groups treated with kanamycin (500 mg/kg, intraperitoneally (ip), during 7 days): a group treated with Tween 65/H_2O (vehicle, orally), four groups treated with D-005 (25, 100, 200 and 400 mg/kg, orally) and a group treated with dexamethasone (reference substance) (1.5 mg/kg, ip). All the treatments (vehicle, D-005 and dexamethasone) were administered one hour before kanamycin. Animals were euthanized on the eighth day and kidneys were removed immediately. Kidneys were processed following the conventional procedure (paraffin embedding, hematoxylin-eosin and PAS stainings) and studied using a Zeiss Primo Star light microscope.

Negative control rats exhibited normal proximal tubules showing intact brush borders (Fig. 1 A). Loss of brush borders, patchy tubular necrosis and inflammatory infiltrate through the middle renal cortex was observed in kanamycin treated animals (Fig. 1 B). Treatments with D-005 promoted the preservation of overall organization of renal cortex parenchyma showing proximal tubule integrity with evident brush borders (Fig. 1C). Histopathological changes induced by kanamycin were also prevented by dexamethasone (Fig. 1 D).

D-005 prevented the histopathological changes induced by kanamycin in renal tubules, which could be associated to its antioxidant effect. This result confirms the usefulness of conventional histological technique as an essential tool for histopathological diagnosis using Light microscopy.

References
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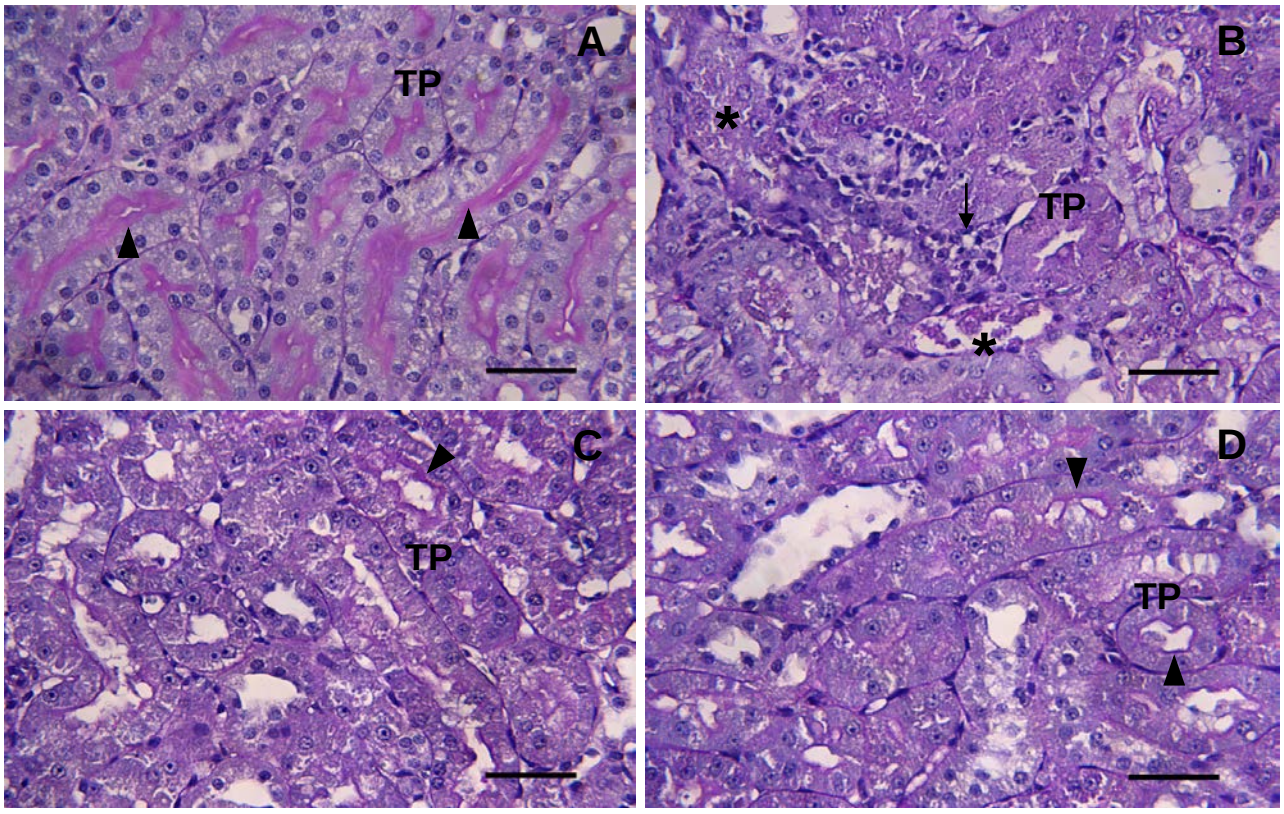

Figure 1. Renal cortex of Wistar rats. PAS staining. A) Negative control, B) Kanamycin + Tween, C) D-005 400 mg/kg + Kanamycin, D) Dexamethasone 1,5 mg/kg + Kanamycin. Proximal tubules (TP), brush border (arrowheads), Tubular necrosis (*), inflammatory infiltrate (arrow). Bars = 50 µm.

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