SUMMARY

SUMMARY

Cis-diamminedichloro-platinum II (cis-platin), a widely used chemotherapeutic agent is a divalent platinum compounds. Most recent interest has been centered on the ototoxic side effects of cisplatin. Many studies suggested that the incidence of cisplatinum ototoxicity ranges from 25% to 86% in adults and 84% to 100% in children.

This study investigate the pattern of ototoxicity of cisplatin on guinea pigs using a new technique for preparing undeclacifid bone sections by embedding the cochlea in Methyl-methacrylate (MMA). Forty four guinea pigs were divided into a control group (8 animals) and 2 study groups (group I and group II), each group comprised 18 animals. The animals of group I (acutely treated group) were injected with 2 intraperitoneal (I.P) injections of cisplatin (7.5 mg/kg/day) separated by interval of 5 days (total dose 15 mg/kg) i.e., a dose largely exceeding the LD50 dose (9.7 mg/kg by a single I.P injection) and the animals of group II (chronic treated group) were injected by a dose (1.5 mg/kg/day) for 10 consecutive days (total dose 15 mg/kg). Results showed that the acute treated group was affected by degenerative changes in the organ of corti, stria vascularis, spiral ganglion cells more than chronic treated group and the affection was more prominent at basal turns more than middle and apical turns. The new method for preparing undecalcified specimens by embedding in MMA had an upper hand in demonstration of fine details of delicate structures of the cochleas more than traditional method which depends on decalcification of bone.