EFFECT OF CIS-PLATINUM(II) AMINE PHOSPHONATE COMPLEXES ON IN VITRO PLATELETS REACTIVITY

ABSTRACT

Introduction: The aim of this study was to investigate the effect of anti-tumour platinum(II) complexes described by the general formula cis-[Ptam₂Cl₂], am-being diethyl (2-, 3-, 4-) pyridylmethylphosphonate as amine ligands, on the in vitro platelets functions, i.e. morphological parameters, adhesion and aggregation induced by adenosino-diphosphate (ADP).

Material and Methods: Water solutions of cis-platinum(II) amine phosphonate complexes and cisplatin were added to platelet rich plasma. Human and pig blood was used in platelets tests.

Results: Even after prolonged incubation time with different concentrations of examined complexes of cisplatin no significant effect on platelets morphological parameters and adhesion (to human fibrinogen and two types of collagen) were found. Cis-[Pt(4-pmpe)₂Cl₂] did not affect platelets aggregation directly. However, under a certain combination of dose and incubation time it may differentially, but not markedly, influence ADP-induced platelets aggregation.

Conclusions: The obtained data indicate that in vitro tested cis-platinum(II) amine phosphonate complexes did not exert significant effect on platelet reactivity.

Key words: new platinum derivatives, platelets morphological parameters, adhesion, aggregation

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