

The kinetics of salivary elimination of cyclophosphamide in man.

Abstract:

The concentrations of cyclophosphamide in plasma and saliva were determined in seven patients following administration of single doses of cyclophosphamide during chemotherapy for lymphoma. 2 The saliva/plasma ratio was 0.77 ± 0.24 (s.d.) and showed no time-dependence being rapidly established following intravenous and oral administration. 3 The $T_{1/2}$ of cyclophosphamide (8.38 ± 2.25 h) determined from salivary measurements was not significantly different from that in plasma (8.24 ± 2.60 h). It was not possible to estimate the apparent volume of distribution or total body clearance utilizing the salivary cyclophosphamide concentration without appropriate correction for the saliva/plasma concentration ratio. 4 The binding to the plasma protein of normal plasma of cyclophosphamide was $13.4 \pm 5.3\%$. The Scatchard plot for binding to bovine serum albumin indicates only weak binding to non-specific sites. 5 Salivary cyclophosphamide therefore indicates the concentration of the unbound fraction of plasma cyclophosphamide.