

The pharmacokinetics of cyclophosphamide have been extensively studied in adult man (Grochow et al., 1979). A few studies have been done to compare the pharmacokinetics of this important anticancer agent in children and adults of a comparable population. The present study was designed to investigate the possible differences in the pharmacokinetics of cyclophosphamide that may arise due to age using a specific gas liquid chromatographic method of Juma et al. (1978). The accuracy and convenience of this method have been highlighted by van des Bosch & Vos (1980).

The parents of eight (four female and four male) children between 1 and 4 years in age with lymphoma who had been admitted under the care of the Oncology Unit of Kenyatta National Hospital gave consent for the study. The children weighed between 10-18 kg, and had normal renal and liver functions as verified by standard clinical tests. The children were all receiving cyclophosphamide for the first time and the five patients with Burkitt's lymphoma received cyclophosphamide alone while the rest who had stage II Hodgkins disease received in addition vincristine and prednisone on the second day of treatment. Cyclophosphamide was administered as a bolus dose (5 mg/kg) intravenous via a cannula inserted in the cubital vein. The collection of samples, estimation of cyclophosphamide in biological fluid and data analysis was similar to that reported earlier (Juma & Ogada, 1983).