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COMPARATIVE BIOAVAILABILITY STUDIES ON DIFFERENT BRANDED PRODUCTS OF PHENYLBUTAZONE, PHENYTOIN AND NITROFURANTOIN

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The dissolution rates of twelve brands of Phenylbutazone, six brands of Phenytoin and three brands of Nitrofurantoin were determined using the Stirrer-Flask method (Poole, 1969) This dissolution rate was expressed as the half-time of dissolution (T_{50}) for each of these products.

In the case of Nitrofurantoin the urinary excretion was measured at 1, 2, 4 and 6 hours after oral administration of 100mg of the Ranbaxy brand. The results obtained for the three brands of Nitrofurantoin were compared with those of three other brands which were tested earlier (de Silva et al., 1975).

The dissolution rates of the different branded products of Phenylbutazone varied widely and six of the products tested showed better dissolution than the original branded product "Butazolidin" of Ciba-Geigy.

In the case of Phenytoin two of the branded products tested had shorter dissolution half-times than the original branded product "Dilantin" of Park-Davies.

Only one brand, that of Pharmed (India) showed a shorter dissolution rate than the original manufacturers product "Furodentin" - (Smith, Kline & French). The urinary excretion values confirmed the better absorption of the products which showed better dissolution but all brands reached adequate urinary levels.

Reference

1. Poole, J. W. (1969) Some experience in the evaluation of formulation variables in drug availability. Drug Information Bulletin 3. 8-16,

2. de Silva, K. T. Y . Jayaratne, Rohini, Bibile, S. W. (1975) In vivo : In vitro studies of three brands of Nitrofurantoin tablets. Proc. Sri Lanka Ass Advanc. Sci., I, 6.