Journal Watch (Medication - Pharmacokinetics)

Pharmacokinetics of High-dose Oral and Intravenous Dexamethasone

Toth GG, Kloosterman C, Uges DRA, Jonkman MF. Therapeutic Drug Monitoring 1999; 21:532-535.

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Abstract:

Pharmacokinetics of intravenous and oral pulsed high-dose dexamethasone were studied in four patients with pemphigus vulgaris. Doses for dexamethasone were varied from 100 to 300 mg. Serum concentrations were measured by high-performance liquid chromatographic procedure with diode assay detection. Bioavailability was assessed by comparing the areas under the serum concentration-time curves following oral administration with those of intravenous administration. Mean bioavailability of high-dose oral dexamethasone was 63.4%. Side effects were minor and were limited to temporary facial flushing both after oral and intravenous administration. Oral administration of dexamethasone in pemphigus patients showed to be more convenient and cost effective than administration by the intravenous route.

Comments:

Strengths/uniqueness:

This study adds to our very scant knowledge of the kinetics of dexamethasone.

Weakness:

The data were collected from only pemphigus patients who were relatively young, from very few patients.

Relevance to Palliative Care:

It is a stretch to extrapolate this kinetic data to our population of patients and to our very common practice of administering this medication subcutaneously. There seems to be little danger in using a larger daily dose. The noted side effect of sleep disturbance is well-known in the palliative care literature. The clinical efficacy remains to be elucidated and will be difficult considering the many clinical indications for this drug.