Study of drug treatments suitable for intravenous to oral switching

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BACKGROUND

Due to several factors intravenous drug treatments (IDT) in hospitals are not always changed to oral administration when possible.

PURPOSE

To determine the frequency of IDT that can be switched to oral administration in a tertiary care hospital and to estimate savings due to switching the administration route of the selected drugs.

MATERIALS AND METHODS

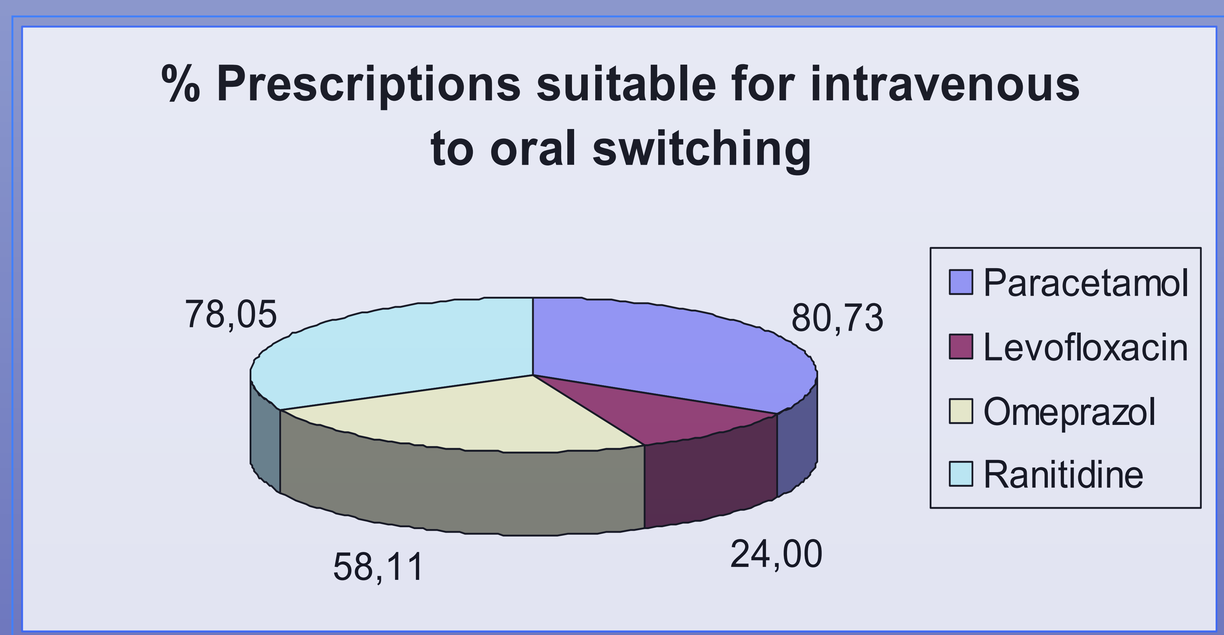
We collected prescription data on a randomly chosen weekday of all inpatients from hospital units with unit dose drug distribution. Four drugs with oral bioavailability greater than 75% were chosen for the study (Acetaminophen/Paracetamol, Levofloxacin, Omeprazole, Ranitidine).

- Variables collected were: Prescribing service, medical specialty, type of diet, number of prescribed drugs administered orally, number of days of IDT and prescription of antiemetics.
- Data was obtained from the pharmacy inpatient program (*Farmatools*®) and the hospital diet request system (*Dietools*®).
- A drug was considered for intravenous-to-oral switch therapy when the patient tolerated oral diet, had two or more drugs prescribed for oral administration, had received I.V. therapy for more than a day and had no antiemetic drugs prescribed.
- Cost evaluation was based on drug prices obtained by the institution.

RESULTS

- Prescriptions of 193 patients were analyzed: 169 of them were likely to be changed to oral administration. (% Prescriptions suitable for I.V. to oral switching: Graph 1).

- Estimated savings of Paracetamol prescriptions on the day of study added up to 296.45€, annual saving estimation of 108,204€. Savings due to levofloxacin would be 11.82€ (4,314€ per year), omeprazole 29.67€ (10,829€ per year) and ranitidine 12.93€ (4,719€ per year).



Graph 1

CONCLUSIONS

Implementation and optimization of an intravenous-to-oral switch therapy program in a selected group of drugs would not only reduce complications associated with intravenous administration but also drug costs.

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