Pharmaceutical intervention on switching treatment from intravenous to oral antibiotics

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Background

Conversion from intravenous (i.v.) to oral therapy has many advantages, such as avoiding the adverse events attributed to i.v. therapy and using less costly drugs. It is also more comfortable, requires less human resources and it has potential shortening in the length of hospital stay. However it is very important not to have any contraindication for oral therapy. The drugs involved must have excellent bioavailability following oral administration.

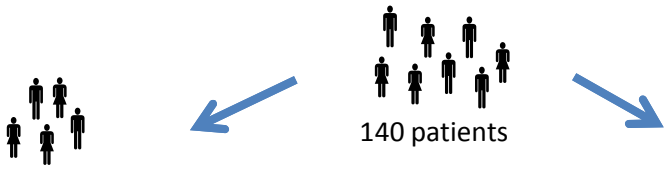
Purpose

To evaluate the results of a pharmaceutical intervention on sequential therapy from i.v. to oral antibiotics.

Methods

Prospective and comparative study, it was carried out over 3 months (between March and May 2012). Consisted of a phase of observation and another phase of intervention. We collected demographic data, diagnosis, antibiotic dosage and treatment duration, signs and symptoms related to infection improving and oral tolerance to medication and nutrition. We selected all the patients on treatment with i.v. levofloxacin, ciprofloxacin, metronidazole and clindamycin. Over the intervention phase and after 48-72 hours of the intravenous therapy, we consulted the physician for approval to oral drug. Statistical analysis was performed using IBM® SPSS® Statistics 19.0.

Results



44 patients
Observation

96 patients
Intervention group

72.8 (95% CI 66.0–79.6)	**Mean age (years old)**	71.8 (95% CI 68.5–75.7)
	Diagnoses n (%)	
24 (54.5)	Respiratory infection	45 (46.8)
10 (22.7)	Gastrointestinal infection	21 (21.8)
2 (4.5)	Urinary tract infection	6 (6.25)
8 (18.1)	Others	24 (25)
6.5 (interquartile range, 3-11)	**i.v. therapy duration (days)**	**4** (interquartile range, 3-9)

It shows a tendency in the decrease in the number of days of i.v. administration (p=0,068)

Conclusion

Pharmaceutical intervention reduces i.v. therapy. Therefore, pharmacist managed intravenous to oral step down program may be a good tool to reduce costs and potential adverse events attributed to i.v. therapy. This could be an example of the importance of pharmaceutical care in hospitalized patients.

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