

Quality of drug treatment in older people

Focus on hip fracture patients and multi-dose drug dispensing

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- II. Sjöberg C, Wallerstedt SM. Improving treatment with fracture-preventing and fall-risk-increasing drugs in older hip fracture patients: effects of medication reviews performed by a physician – a randomised controlled study.
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- III. Sjöberg C, Ohlsson H, Wallerstedt SM. Association between multi-dose drug dispensing and drug treatment changes.
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- IV. Sjöberg C, Edward C, Fastbom J, Johnell K, Landahl S, Narbro K, et al. Association between multi-dose drug dispensing and quality of drug treatment - a register-based study.
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ABSTRACT

The aim of this thesis was to describe the quality of drug treatment regarding fall-risk-increasing and fracture-preventing drugs in older hip fracture patients, to evaluate a method for improving such treatment, and to study the effects of multi-dose drug dispensing on drug treatment changes and on quality of drug treatment.

A descriptive study of fall-risk-increasing and fracture-preventing drugs in a cohort of older hip fracture patients preceded a randomised controlled trial, in which the effects of an intervention regarding fall-risk-increasing and fracture-preventing drugs were investigated. A case-control study compared drug treatment changes of drugs prescribed via multi-dose drug dispensing or via ordinary prescriptions. In a register-based cross-sectional study quality of drug treatment was compared in patients with or without multi-dose drug dispensing regarding five indicators of prescribing quality.

In older hip fracture patients fall-risk-increasing drugs were common, whereas fracture-preventing drugs were scarce. Medication reviews performed by a physician improved the treatment with fracture-preventing drugs after one year, but did not affect the treatment with fall-risk-increasing drugs. The odds for a drug to remain unchanged after six months was greater for drugs prescribed via multi-dose drug dispensing. Potentially inappropriate drug treatment according to indicators for prescribing quality was more common for patients with multi-dose drug dispensing, also after adjustments for important covariates.

Quality of drug treatment in older hip fracture patients may be improved regarding fracture-preventing drugs, whereas extensive use of fall-risk-increasing drugs is more difficult to affect. Multi-dose drug dispensing is associated with poor quality of drug treatment, *i.e.* fewer drug treatment changes and higher prevalence of potentially inappropriate drugs. These findings need to be further evaluated and taken into account when designing multi-dose drug dispensing systems.

Keywords: older people, hip fracture, osteoporosis, medication review, prescribing, multi-dose drug dispensing, drug treatment, quality indicators

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