

EVALUATION OF A RISK-SCALE FOR ANTICHOLINERGIC SIDE-EFFECTS IN ELDERLY PSYCHIATRIC INPATIENTS

G. Hefner, A. Fellgiebel, C. Hiemke

Department of Psychiatry and Psychotherapy, University Medical Center Mainz, Mainz, Germany

Introduction: Many commonly prescribed drugs have anticholinergic properties which can induce side-effects e.g. delirium, especially in an ageing brain with increased sensitivity. Risk-assessment before starting therapy may prevent such side-effects.

Objectives: We rated anticholinergic pharmacological properties of prescribed medication and compared the theoretical risk with side-effects in clinical practice.

Aims: The scale should improve the safety of pharmacotherapy in gerontopsychiatry.

Methods: Based on five publications that considered anticholinergic properties of drugs, a risk-scale was established. Risk-points for all drugs were summarized to a total score. Patients were selected from TDM-requests and data on patients' side-effects obtained from medical files. Reported anticholinergic side-effects including delirium were assessed retrospectively by the UKU-rating scale. Using linear regression and Spearman's correlation-analysis a possible correlation between risk-score points and severity of side-effects was determined.

Results: The screened sample consisted of 53 patients. 38 patients aged from 64 to 89 years (mean 74 ± 6 , 63.2% women) could be included for analysis. They had 93 plasma-level determinations (mean 2.4 requests per patient). According to their medication, patients attained by mean 4.51 ± 2.98 risk-points (range 0-16). Mean UKU severity-index of side-effects was 0.81 (± 0.99). Risk-points correlated significantly with observed anticholinergic side-effects and delirium ($R^2 = .631$, $P < 0.001$, CI 95%). Spearman correlation-coefficient was 0.731 ($P < 0.01$, CI 95%).

Conclusions: Since the established risk-scale correlated well with reported anticholinergic side-effects we recommend to implement this in the planning of psychopharmacological treatment to improve the safety of pharmacotherapy in gerontopsychiatry. For practical reasons it should be amalgamated with therapeutic drug monitoring as *Geronto-TDM*.