Old people treated due to fractures have high alcohol intake - A prospective cohort study using objective assessment of consumption

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Background:

Alcohol increases the risk of falls and complications, but data on alcohol intake amongst our patients is unreliable. Phosphatidylethanol (PEth) is a biomarker accumulating through repeated alcohol intake, i.e. suitable for screening long-term consumption.

Aim:

To describe alcohol consumption and study association between alcohol, frailty and 30-day-confusion after fractures.

Material & Methods:

This prospective observational cohort study included those ≥65 years admitted due to acute fall-related fracture 01.02.2023 – 01.03.2024. PEth was taken at admission. Predefined norm values classified low/no consumption as <0.05, intermediate 0.05-0.30 and hazardous consumption >0.30 µmol/L. Patients were assessed by Clinical Frailty Scale (CFS).

Results:

PEth was measured in 360/799 patients, mean age 82 years. 13% women (31/235), 10% men (13/125) had hazardous consumption. 21% women, 25% men displayed signs of continuous alcohol intake. 35% of non-frail (CFS 1-4) had elevated PEth compared to 18% of frail.

Elevated PEth was inversely associated with confusion in a univariate logistic regression analysis (OR 0.29, CI 0.10 – 0.85). Frailty was strongly associated with confusion (OR 3.65, CI 1.61 - 8.30).

Discussion/Conclusion:

In a national population sample 2022, 8% women,13% men 65-84 years and 2% of both sexes >84 years reported hazardous alcohol consumption.

Hazardous consumption was frequent in elderly women and men after fall injuries. Routine PEth-tests in non-frail patients, in particular, indicated a consumption above the age-matched population. Acute confusion was associated with frailty and not with alcohol.