POSTERS ABSTRACTS

 $(18.31\pm4.69 \text{ kg})$ was significantly lower compared to that of the control group $(31.54\pm6.12 \text{ kg})$. There was a significant positive correlation between magnesium levels and hand grip strength (r=0.74, p<0.05) in the hip fracture population.

Conclusion: Hand grip strength as measured by handheld dynamometer was significantly lower in geriatric hip fracture patients, and there is a significant positive correlation between magnesium and hand grip strength.

P420 LACTOSE MALABORSORPTION AS AN ADDITIONAL RISK FACTOR OF OSTEOPOROSIS AND OSTEOPOROTIC FRACTURES IN PATIENTS WITH TYPE 1 DIABETES MELLITUS A. B. Andrusha¹

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Objective: To assess the probability of osteoporotic fractures (POPF) and the degree of osteodeficiency in patients with type 1 diabetes mellitus (DM) with lactase malabsorption (LM).

Methods: The study included 34 patients with DM type 1, which were divided into 2 groups depending on the presence or absence of LM (16 patients were group I and 18 patients group II). To diagnose LM, we used a glycemic load test with lactose, a test for hydrogen content in exhaled air, and an analysis of stool acidity. BMD was assessed by DXA, and the POPF was calculated by the FRAX and QFracture tools. The statistical significance of differences in the studied parameters was evaluated by the nonparametric method (by χ^2 criterion).

Results: The DXA results revealed a significant difference in the frequency of osteoporosis between the groups. In the first group 81.3% of patients had osteoporosis, while in the second group - 55.6% (χ^2 =4.864, df=1, p=0.027). POPF was equally high in both groups of patients when evaluated with FRAX, while there was a significant difference in POPF among both groups using QFracture - in 87,5% patients of the first group and 61.1% of patients of the second group had high or medium values of POPF (χ^2 =9.01, df=1, p=0.003). According to the QFracture algorithm, the cutoff values for the beginning of antiosteoporotic treatment were noted in 31.3% of the respondents of the first group, and the indicators that require BMD evaluation (the result is in the so-called "yellow zone") in 56.3%.

Conclusion: Patients with DM type 1 and LM are more likely to have osteoporosis and a significantly higher POPF compared to patients with isolated DM type 1. POPF does not always correspond to low BMD, indicating deterioration in bone quality. When deciding on the need for antiosteoporotic therapy of patients with DM type 1 and LM, it is necessary to take into account not only the results of DXA, but also the POPF assessed by the QFracture tool.

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PRE-OPERATIVE COGNITION IS INVERSELY CORRELATED WITH POST-OPERATIVE DELIRIUM IN ELDERLY PATIENTS WITH ACUTE HIP FRACTURE

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Objective: Delirium is common in post-operative hip fracture patients. It is associated with increased mortality, morbidity, length of stay and greater likelihood of institutionalization. Risk factors that predict greater likelihood of post-operative delirium include pre-operative dementia and cognitive impairment, presence of multiple co-morbidities, use of psychoactive medications. This study aimed: 1. To determine the relationship between pre-operative level of cognition and post-operative delirium in hip fracture patients; 2. To explore whether gender affects this relationship.

Methods: A retrospective, cross-sectional analysis was carried out on sequential patients with acute hip fracture attending a district general hospital between January 2019 and December 2019. Data was manually extracted from anonymized electronic health records. The 10 point Abbreviated mental test score (AMTS) was used to measure pre-operative cognitive function and the 4-point abbreviated test looking at cognition, attention span, alertness and acute fluctuation in mental function (4-AT) delirium screening tool was used to screen for post-operative delirium. SPSS 27 software package was used for statistical analysis. Descriptive statistics were used to analyse baseline patient characteristics and spearman correlation co-efficient and linear regression analysis were used to measure correlation between pre-operative AMTS and post-operative levels of 4-AT.

Results: 310 patients 60 years and over were analysed - 83 males and 227 females. Mean age was 82.2 y \pm 8.48. There was a statistically significant negative correlation between pre-operative AMTS and post-operative 4-AT (r=-0.510; p<0.001). This effect persisted when gender was taken into account but was stronger in females than in males (r=-0.687; p<0.001) and (r=-0.260; p=0.02) respectively.

Conclusion: Pre-operative cognitive functioning negatively predicts post-operative delirium in elderly hip fracture patients. This effect is more marked in elderly hip fracture women than in the men.

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