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# Association between Cancer-related fatigue and falls in patients with myeloproliferative neoplasms - a multicenter survey from the East German Study Group for Hematology and Oncology (OSHO #97)

Zusammenhang zwischen Cancer-related Fatigue und Stürze bei Patienten mit Myeloproliferativen Neoplasien – Ergebnisse einer multizentrischen Studie der Ostdeutschen Studiengruppe Hämatologie und Onkologie (OSHO #97)

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**Introduction:** Cancer and its disease- and treatment-related side effects (DTrSE) affect body systems that are important in preventing falls and controlling balance and walking. Modifiable DTrSE, including poor physical and cognitive function, impairments of balance and gait and join-pain, were found to be associated with falls, regardless of age[1,2]. There is a lack of knowledge whether cancer-related fatigue (CrF) has an impact on gait performance and thus on susceptibility to fall. Therefore, this study examined the association between number of falls during the last 12 month and CrF in patients (pts) with myeloproliferative neoplasms (MPN), who are frequently affected by CrF.

**Methods:** This was a cross-sectional study using multicenter based survey data. Multinomial logistic regression sex stratified analysis, were used to investigate the association between determine if CrF and number of falls (None = reference group, 1 fall, > 1 fall). DTrSE such as CrF, concentration problems, and bone pain were measured using single items from MPN Symptom Assessment Form[3], ranging between 0 (absent) to 100 (worst imaginable). Analysis were adjusted for potential effects of health-related quality of life, body mass index, MPN subtype (chronic myeloid leukemia, polycythemia vera, essential thrombocythemia, and myelofibrosis), age, and school education (≤ 10 vs. > 10 years).

**Results:** The final sample comprised 688 pts (mean age 57.4 ± 13.8, 62,4 % female, 43.5 % ≤ 10 years of schooling). Falls occurred at a rate of 16.2 % in women compared to 12.2 % in men (p = .153). There was no difference between females and males in terms of CrF between individual with more than 1 fall, whereas females with 1 fall had a higher CrF compared to those without a fall (RRR = 1.019; 95%CI 1.002; 1.039), respectively.

**Conclusion:** More than one in ten pts reported at least 1 fall within the last 12 months. Women seem to be more susceptible to fall than men. The association between CrF and occurrence of a fall was significant for women but not for men. More research should be done to extend the evidence for exercise training to reduce falls in pts with cancer.

**References:**

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