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## **Sport as tool for symptom reduction in patients with systemic mastocytosis - is it feasible? - Results of a multicenter survey of the East German Study Group for Hematology and Oncology (OSHO #97)**

Sport zur Symptomlinderung bei Patienten mit Mastozytose - geht das? - Ergebnisse einer multizentrischen Befragung der Ostdeutschen Studiengruppe Hämatologie und Onkologie (OSHO #97)

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**Background:** Systemic mastocytosis (SM) is characterized accumulation of clonal mast cells within various organs with different degrees of organ involvement +/- dysfunction. The release of mast cell mediators can lead to a plethora of symptoms including allergic reactions and can be triggered by various factors such as physical exertion. Whether sports can help to reduce SM symptom burden - as described for other clonal (neoplastic) diseases - has yet not been investigated.

**Methods:** A multicenter SM patient (pts;  $\geq 18$  years) survey was conducted between 03 and 12/2022 in cooperation with the Mastocytosis Self-Help Network (DRKS 00023698). Recorded were: demographics, clinical data, symptom burden, quality of life (QoL), triggers and fears in connection with sports, the level of information on "physical activity in SM" and -using the Transtheoretical Model of Behavior Change- the motivation for regular exercise. Sporty active and inactive pts were compared.

**Results:** The analysis included 159 questionnaires (134 (84%) female, mean age  $51 \pm 11$  years). No group differences with regard to demographic and clinical data were observed. Sporty active pts ( $n = 60$ , 38%) showed lower symptom burden and better QoL compared to inactive pts ( $n = 99$ , 62%;  $p = 0.018$ ). Within the sport inactive pts, light sporting activities were significantly more likely to trigger symptoms compared to the active pts (30% vs. 17%), but 19% stated that sport was not a trigger and 21% were unaware. More inactive than active pts were afraid of allergic reactions in the context of sport (59% vs. 40%,  $p = 0.026$ ). Overall, 66% of pts stated that they were insufficiently informed about the topic "physical activity in SM".

**Discussion:** The majority of pts with SM are sport inactive. The reasons for this are fear of symptoms, especially allergic reactions, lack of motivation and possibly unawareness of the beneficial effects of sport. The data suggest that sport is feasible for many pts with SM and may reduce symptom burden.

**Conclusion:** Intervention studies are justified and necessary to investigate the effects of sport on SM symptom burden.