

MILD HEMOPHILIA A AND JOINT HEALTH IN REAL LIFE: IS THAT AN EMERGING ISSUE? A SINGLE CENTER EXPERIENCE

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Background. mHA, defined by FVIII between 0.05 and 0.40 IU/mL, is characterized by sporadic bleeds that rarely lead to arthropathy. Definition of mHA includes different bleeding phenotypes with manifestations that can vary between patients. The aim of this study is to investigate joint status in our cohort of mHA patients, to detect any sign of arthropathy and to explore any relationship between joint health and FVIII, body mass index (BMI) and age. Furthermore, we perform a quality of life (QoL) assessment to detect any impairment health related.

Methods. Patients with mHA between 18 and 65 years old referred in our center in 2025 were included. Elbows, knees and ankles were evaluated by HJHS (Hemophilia Joint Health Score) and by HEAD US score (Hemophilia Early Arthropathy Detection with Ultrasound). Data regarding FVIII, BMI and pain (according to NRS scale) were also collected. Variables were analyzed globally and splitted according to age (< 49 yo and > 50 yo) and FVIII levels (from 0.05UI/ml to 0.20IU/ml and from 0.21IU/ml to 35IU/ml). EQ-5D-3L, SF36 and IPAQ questionnaires were administered to explore QoL and physical activity.

Results. Of the 96 mHA patients treated at our center, 42 patients were enrolled in the study. We found low joint health scores; median HEAD US= 2(IQR 0-5), median HJHS=2(IQR 0-5). However, only 15 (36%) patients had no

joint damage (HEAD US=0), 27 (64%) had at least one joint with a HEAD-US ≥ 1 . No differences were found in HEAD US and HJHS according to FVIII, but we found that for elderly patients and for whom with higher BMI there is a statistically significant increase in HEAD-US. 20 patients fulfilled all QoL questionnaires: 14/20 (70%) showed no impairment in QoL, 6/20 (30%) expressed discomfort related to musculoskeletal criticalities. In the IPAQ evaluation, 15/20 (75%) were classified as quite/very active and 5/20 (25%) inactive. We observed a correlation trend between high HJHS and worse QoL perception. No correlation between QoL and FVIII, HEAD US, age or BMI were found.

Conclusions. Our data suggest that mHA show better joint status compared to severe or moderate HA patients, without differences according to FVIII deficiency. We found a significant correlation between HEAD US and age and BMI, identifying these two parameters as risk factors for early arthropathy development. mHA patients showed good QoL, with only critical issue pain and/or musculoskeletal impairment, suggesting that the disease burden is related to articular health rather than the disease itself. In conclusion, US joints alterations, even without clinical sign of arthropathy, should be routinely investigated in mHA patients in order to prevent/detect reversible damage, especially in adulthood and in overweight patients and can affect QoL.

	all	FVIII			age			BMI		
		5%-20%	21-35%	p	< 49 yo	> 50 yo	p	< 25	> 25	p
Age	49 (33-60)	50 (33-62)	49 (34-58)		33 (29-46)	60 (57-63)		42 (30-50)	60 (56-64)	
FVIII	15(10-20)	12 (10-15)	26 (21-30)		15 (12-20)	14 (10-21)		15 (12-20)	14 (9-22)	
HEAD US	2 (0-5)	2 (0-5)	0 (0-4)	0.14	0 (0-2)	4 (1-7)	<0.001	0 (0-3)	4 (1-8)	<0.005
HJHS	2 (0-5)	2 (0-5)	1 (0-2)	0.15	1 (0-2)	2 (0-5)	0.09	2 (0-2)	2 (0-5)	0.16
NRS	0 (0-2)	0 (0-2)	0 (0-0)	0.28	0 (0-1)	0 (0-3)	0.29	0 (0-0)	0 (0-5)	0.10
BMI	25 (23-27)	24 (22-27)	25 (24-26)	0.35	24 (21-25)	27 (24-29)	<0.001	24 (21-25)	28 (27-30)	<0.001