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322.DISORDERS OF COAGULATION OR FIBRINOLYSIS: CLINICAL AND EPIDEMIOLOGICAL

Chronic Disease Outcomes As Predictors of Quality of Life in Patients with Hemophilia A: Data from the Real-World AHEAD International Study

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Background: Hemophilia A (HA), a genetic disorder caused by deficient or defective factor VIII (FVIII) clotting protein, has a significant impact on patients' quality of life (QoL).The international Antihemophilic factor Hemophilia A outcome Database (AHEAD) study (NCT02078427) is an ongoing prospective, non-interventional, multicenter study evaluating the long-term safety and effectiveness of FVIII replacement in patients with HA receiving either octocog alfa or rurioctocog alfa pegol (ADVATE®; ADYNOVATE® [US] / ADYNOVI™ [Europe]; Baxalta US Inc., a Takeda company Lexington, MA, USA) in routine clinical practice.
Aim: This analysis aimed to evaluate the association between chronic disease outcomes and QoL in patients with moderate or severe HA without an active inhibitor and treated with octocog alfa.
Methods: Male patients aged ≥18 years with moderate (FVIII 1-≤5%) or severe (FVIII <1%) HA without an active inhibitor and receiving octocog alfa were included in the analysis. Data were included across study years 1 to 5 for patients with all model variables reported in at least one study year. Cut off was set at year 5 as smaller sample sizes in later years did not allow for appropriate statistical modelling due to natural attrition and loss to follow up. The association between chronic disease outcomes and QoL was estimated using a Mixed Effects Model with repeated measures. The model assessed the impact of chronic pain (classified as no pain [used as the reference], mild pain, moderate pain, or severe pain) and number of problem joints (PJs; identified through the reporting of relevant components of the hemophilia joint health score, Gilbert Score and/or Petterson score) on EQ5D 3L index score (calculated using UK value set), controlling for clinical and demographic characteristics (annualized bleeding rate [ABR], HA severity, body mass index [BMI], and age at visit), in addition to individual patient effect, via the random effects component. The random effects component allows the model to control and account for individual patient effects that may not be measured by available independent variables but that may influence the output of the analysis.
Results: The final analysis included 175 adult male patients with an average (range) of 2.1 (1-5) study years. The majority (70%) of patients had severe HA. At study year 1, the mean ± SD age was 33.6 ± 12.7 years and the mean ± SD number of PJs was 3.8 ± 2.0, while 47% of patients reported some level of chronic pain, with 20% of patients reporting moderate or severe pain levels. Mean ± SD EQ5D 3L index score was 0.77 ± 0.21 at study year 1. Overall, after controlling for demographic and clinical characteristics, and any individual patient effect, chronic outcomes (chronic pain and number of PJs) were found to have a statistically significant negative association with QoL (Table). The negative association of chronic pain with EQ5D 3L index score was greater with increasing pain level (mild, -0.082; moderate, -0.135; severe -0.169; P≤0.001). Number of PJs was also negatively associated with EQ5D 3L index score (P=0.005) with a decrease of -0.018 for each additional problem joint. Age at visit also showed a negative association with EQ5D 3L index score (-0.004; P=0.002). ABR, HA severity, and BMI did not have a statistically significant association with EQ5D 3L index score.
Conclusions: In this Mixed Effects Model, chronic pain level and number of PJs both had a statistically significant negative association with QoL, highlighting the importance of managing these chronic outcomes with effective treatment.

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Table. Mixed effects longitudinal model

EQ5D 3L index score	Coefficient (95% confidence interval)	Standard error	P-value
Chronic Pain Level†			
Mild	-0.082 (-0.129, -0.036)	0.024	0.001*
Moderate	-0.135 (-0.189, -0.080)	0.028	0.000*
Severe	-0.169 (-0.270, -0.068)	0.052	0.001*
Number of Problem Joints	-0.018 (-0.031, -0.005)	0.006	0.005*
ABR	0.002 (-0.004, 0.007)	0.003	0.539
Age at visit	-0.004 (-0.006, -0.001)	0.001	0.002*
BMI	-0.004 (-0.009, 0.001)	0.003	0.136
Severity‡			
Severe	-0.004 (-0.063, 0.055)	0.030	0.894

ABR, annualized bleeding rate; BMI, body mass index
*Significant at P<0.01
†Reference: No pain
‡Reference: Moderate

Figure 1

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