

Prospective validation of the Polycystic Liver disease complaint-specific assessment (POLCA) score: Influence of Menopause and Somatostatin-analogues.

Introduction

Polycystic liver disease (PCLD) can lead to extensive hepatomegaly, often associated with severe complaints. Indication for somatostatin-analogues (SA) or liver transplantation is in part based on subjective, patient-reported symptoms. In 2014 the PCLD-complaint-specific assessment (POLCA) score was developed as a self-report instrument to objectively capture the presence and severity of disease-specific complaints (Temmerman F, J Hepatol 2014). Previous studies have shown that liver volume in PCLD tends to decrease after menopause and with use of SA.

Aim

The aim of this study was to highlight the correlation between the POLCA severity of perceived illness (SPI) score and the changes in liver volume in PCLD.

Methods

A five year prospective multi-centric study in 21 hospitals in Belgium gathered a cohort of 266 PCLD patients. Sequential data including POLCA score, liver volumetry and the need for volume-reduction therapy were recorded. Participants were asked to complete the POLCA questionnaire, as available online (<https://www.uzleuven.be/polca>). Liver volume was measured using CT-volumetry and adapted as height-adjusted total liver volume (htLV). Combined liver-kidney transplant patients (n=9) were excluded. Menopause was defined as 52 years of age or more. Effect of menopause on htLV was calculated in women with consecutive volumetry, after excluding those who were receiving SA to reduce confounding.

Results

For 198 patients, serial POLCA scores were available. The study group consisted of young ($54.8y \pm 11.3$), mostly female (83%) patients with predominant autosomal dominant polycystic kidney disease (ADPKD) (63%). Median time of follow-up was 48 months. Liver volumetry was available for 96 patients, showing a median htLV of 1967ml.

Overall, there was a significant correlation (Spearman's rank) between the POLCA severity of perceived illness score (POLCA SPI) and htLV ($r=0.48$; $0.30-0.63$) and longitudinal data showed a significant correlation between the change in POLCA SPI score and the change in htLV ($r=0.45$; $0.26-0.61$). Patients who underwent liver transplantation (n=18) had higher htLV (3607ml vs 1707ml; $p<0,0001$) and significantly higher results on all POLCA subscores: severity of perceived illness score (POLCA SPI) (23.5 vs 10; $p<0,0001$); reflux related complaints (7 vs 2; $p<0,0001$); impact on food intake (6 vs 2; $p=0,0004$); perception of enlarged liver volume (10 vs 6; $p<0,0001$). POLCA SPI score ≥ 16.5 predicted the need of LT with a sensitivity of 81.3% and a specificity of 88.9%.

Women treated with SA (n=62) showed a decrease in htLV after 12 months ($-121ml$ vs $+74ml$; $p<0,0001$). A significant reduction in htLV ($-80ml$) by SA resulted in a decrease in POLCA SPI score (-6.0 vs $+4.5$; $p<0,0001$).

In premenopausal (n=20) vs postmenopausal women (n=14) the change in htLV per year was significantly different ($+152ml/y$ vs $-6ml/y$ respectively; $p<0,0009$) and premenopausal women had higher POLCA SPI scores (13 vs 9; $p=0,0050$).

Conclusions

This study further demonstrates the correlation between the POLCA score and objective changes in liver volume. Menopause and treatment with SA decrease liver volume in patients with PCLD and reduce symptom burden as is reflected by the POLCA score. Our findings highlight the potential of the POLCA score as a tool for longitudinal follow-up of PCLD patients and as a guide for clinicians when evaluating the need for medical or surgical intervention.

Moderator : T. Vanwolleghem (UA)

- 14:00 **Marc Hautekeete Lecture: Cessation of Nucleos(t)ide Analogues in chronic HBV: do's and don'ts" (Title TBC).**
Harry Janssen -UHN Toronto, Canada

Moderators : J. Delwaide (ULiege), R. Reynaert (VUB)

- 14:30 A15 **Abstinence is associated with better outcome in patients with alcohol-related hepatocellular carcinoma.**
A. Donati (1), J. Henrion (2), M. Regnier (1), P. Delftenre (3), A. Marot (1) / [1] CHU Mont-Godinne, [2] Hôpital Jolimont, [3] Saint-luc Bouge, Namur
- 14:40 A16 **The evolving pattern of hepatocellular carcinoma in a general hospital from central Belgium... The history of our region made the difference!**
E. Kaze, J. Henrion / Hôpital Jolimont
- 14:50 A17 **Point of care screening tests for hepatitis B and commitment of a dedicated nurse lead to successful linkage to care of ethnic minorities.**
A. Vanderlinden, E. Ho, L. Govaerts, B. De Fooz, P. Van Damme, P. Michielsens, T. Vanwolleghem / UAntwerp/UZ Antwerpen
- 15:00 A18 **Excellent outcome and vaccination rate in patients with autoimmune hepatitis during the COVID-19 pandemic.**
H. De Sutter, H. Degroote, H. Van Vierberghe, X. Verhelst / UZGent
- 15:10 A19 **Is insulin resistance the predisposing factor for fatty liver disease in type 1 diabetes?**
J. Mertens, M. Spinhoven, E. Dirinck, L. Vonghia, C. De Block, S. Francque / UAntwerpen/UZAntwerpen
- 15:20 A20 **Assessment of a transient elastography in predicting the graft fibrosis after liver transplantation and validation of the Venturi score in an adult population.**
C. Dumont (1), N. Lanthier (1), S. Iesari (2), G. Henin (1), E. Bonaccorsi-Riani (1), O. Ciccarelli (1), L. Coubeau (1), P.baldin (1), S. Aydin (1), G. Dahlovist (1) / [1] UCL Saint-Luc, [2] Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Italy
- 15:30 A21 **Prospective validation of the Polycystic Liver disease complaint-specific assessment (POLCA) score: Influence of Menopause and Somatostatin-analogues.**
A. Billiet (1), F. Temmerman (1), W. Coudyzer (1), N. Van Den Ende (1), I. Colle (2), S. Francque (3), H. Thien Anh (4), S. De Maeght (5), F. Janssens (6), H. Orient (7), D. Sprengers (8), J. Delwaide (9), S. Decock (10), C. De Vloo (11), S. Van Der Merwe (1), J. Verbeek (1), F. Nevens (1) / [1] UZLeuven, [2] ASZ, Aalst, [3] UZAntwerpen, [4] UCL, Brussels, [5] Grand Hopital de Charleroi, [6] Jessa Hospital, Hasselt, [7] AZ Sint-Jan Brugge-Oostende, Brugge, [8] GZA, Antwerp, [9] CHU Liege, [10] AZ Sint-Lucas Brugge, [11] AZ Delta, Roeselare
- 15:40 **BASL Best Basic and Clinical Presentation Prize**
- 15:40 **BASL General Assembly**

THURSDAY 10/02