Regression of Fibrosis after Disappearance of Nash in Morbidly Obese Patients: A Prospective Bariatric Surgery Cohort with Sequential Liver Biopsies.

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Abstract Text

Background: Bariatric surgery induces disappearance of NASH from nearly 85% of patients and reduced the pathologic features of the disease after 1 year of follow-up. The outcome at 5 years in NASH patients is not established

Methods: From May 1994 through May 2017, 198 morbidly obese patients with biopsy-proven NASH underwent bariatric surgery at the University Hospital of Lille, France (the Lille Bariatric Cohort). Clinical, biological, and histologic data were collected before, at 1 and 5 year after surgery

Results:

Among 198 patients with NASH at baseline, 69% and 55% of patients performed respectively their 1 and 5 years liver biopsy. In a sensitivity analysis, patients with and without liver biopsy at follow up were not different in terms of: BMI, AST, HbA1c (A1c glycated hemoglobin), NAS and Brunt fibrosis score at baseline as well as for BMI, AST, HbA1c at follow-up 1 and 5 years.

At 1 year after surgery, NASH had disappeared in 86% of patients, steatosis improved (58±20 vs 18±20), as NAS (Nafld Activity Score) (4.7±1.3 1.7±1.4) and fibrosis (Brunt score: median 2 [1-3] vs 1[0-2.5] ) (For all p<0.001).

At 5 years, the rate of NASH disappearance was identical (85%) than at 1y. Conversely, fibrosis still improved between 1 and 5 years: 1 [0-2.5] vs 0 [0-1] (Brunt score in median, p<0.001). In the subgroup of patients with fibrosis at baseline, the mean improvement at 1 and 5 years was -0.58 ± 0.91 and -1.08 ± 1.32 respectively. The improvement of fibrosis (defined as at least -1 stage of Brunt score at 5 year) was associated with better response to surgery at 1 year with a higher weight loss (deltaBMI: 12.2 [10.5-14.7] vs 8.9 [5.8-10.1] p=0.03) and a better histological improvement (delta NAS: -2 [-3; -1] vs -4 [-4; -3], p=0.002).

The clinical, the metabolic profile and the liver blood test improvement observed at 1 year were also sustained between 1 and 5 years after surgery: BMI (37.7±7 vs 36.6±8), AST (23±8 vs 26±14), y-GT (32±23 vs 41±60), LDL (2.7±0.9 vs 2.8±0.9), HDL (1.29±0.29 vs 1.33±0.29) and mean insulin resistance index (HOMA-IR: 1.86±2.6 vs. 1.65 ±1.25), HbA1c (6±0.9 vs 6±0.9%) (P>.05 for each comparison).

Conclusion: The rate of disappearance of NASH after bariatric surgery (85%) is sustained until 5 years. The regression of fibrosis after surgery continued to improve between 1 and 5 years. The improvement of fibrosis is associated a better control of the disease and a higher weight loss at 1 year.

Disclosures

Sebastien Dharancy – Intercept: Board Membership; Novartis: Speaking and Teaching; Nanobiotix: Advisory Committee or Review Panel; Abbvie: Speaking and Teaching; Astellas: Speaking and Teaching; Chiesi: Board Membership

The following people have nothing to disclose: Guillaume Lassailly, Alexandre Louvet

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