Roux-en-Y Gastric Bypass Is Associated With Increased Hazard for De Novo Alcohol-related Complications and Liver Disease

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Goal: The goal of this study was to determine if bariatric surgeries are associated with de novo alcohol related complications.

Background: Bariatric surgery is associated with an increased risk of alcohol use disorders. The effect of bariatric surgeries on other alcohol related outcomes, including liver disease, is understudied.

Materials and Methods: Using the IMS PharMetrics database, we performed a cohort study of adults undergoing bariatric surgery or cholecystectomy, excluding patients with an alcohol related diagnosis within 1 year before surgery. The primary outcome was any alcohol related diagnosis after surgery. We fit a multivariable Cox proportional hazards model to determine independent associations between bariatric surgeries [Roux en Y gastric bypass (RYGB); adjustable gastric band; sleeve gastrectomy] versus cholecystectomy and the development of de novo alcohol related outcomes. We further fit complication specific models for each alcohol related diagnosis.

Results: RYGB was significantly associated with an increased hazard of any de novo alcohol related diagnosis [adjusted hazard ratio (AHR) 1.51, 95% confidence interval (CI) 1.40–1.62], while adjustable gastric band (AHR 0.55, 95% CI: 0.48–0.63) and sleeve gastrectomy (AHR 0.77, 95% CI: 0.64–0.91) had decreased hazards. RYGB was associated with a 2 to 3 fold higher hazard for alcoholic hepatitis (AHR 1.98, 95% CI: 1.17–3.33), abuse (AHR 2.05, 95% CI: 1.88–2.24), and poisoning (3.14, 95% CI: 1.80–5.49).

Conclusions: RYGB was associated with higher hazards of developing de novo alcohol related hepatitis, abuse, and poisoning compared with a control group. Patients without a history of alcohol use disorder should still be counseled on the increased risk of alcohol use and alcohol related complications, including alcohol related liver disease, following RYGB, and should be monitored long term for the development of alcohol related complications.

Key Words: bariatric surgery, alcohol use, alcoholic hepatitis, alcoholic cirrhosis

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