

Coloproctologie

Negatieve marges en botresectie belangrijkste prognostische factoren voor overleving na bekkenexenteratie bij lokaal recidief rectumcarcinoom

Factors affecting outcomes following pelvic exenteration for locally recurrent rectal cancer; The PelvEx Collaborative; BJS 2018; 105 (6); 650-657.

Pubmed ID: 29529336

BACKGROUND

Pelvic exenteration for locally recurrent rectal cancer (LRR) is associated with variable outcomes, with the majority of data from single-centre series. This study analysed data from an international collaboration to determine robust parameters that could inform clinical decision-making.

METHOD

Anonymized data on patients who had pelvic exenteration for LRR between 2004 and 2014 were accrued from 27 specialist centres. The primary endpoint was survival. The impact of resection margin, bone resection, node status and use of neoadjuvant therapy (before exenteration) was assessed.

RESULTS

Of 1184 patients, 614 (51.9 per cent) had neoadjuvant therapy. A clear resection margin (R0 resection) was achieved in 55.4 per cent of operations. Twenty-one patients (1.8 per cent) died within 30 days and 380 (32.1 per cent) experienced a major complication. Median overall survival was 36 months following R0 resection, 27 months after R1 resection and 16 months following R2 resection ($P < 0.001$, Figure 1). Patients who received neoadjuvant therapy had more postoperative complications (unadjusted odds ratio (OR) 1.53), readmissions (unadjusted OR 2.33) and radiological reinterventions (unadjusted OR 2.12). Three-year survival rates were 48.1 per cent, 33.9 per cent and 15 per cent respectively. Bone resection (when required) was associated with a longer median survival (36 versus 29 months; $P < 0.001$). Node-positive patients had a shorter median overall survival than those with node-negative disease (22 versus 29 months respectively). Multivariable analysis identified margin status and bone resection as significant determinants of long-term survival.

CONCLUSION

Negative margins and bone resection (where needed) were identified as the most important factors influencing overall survival. Neoadjuvant therapy before pelvic exenteration did not affect survival, but was associated with higher rates of readmission, complications and radiological reintervention.

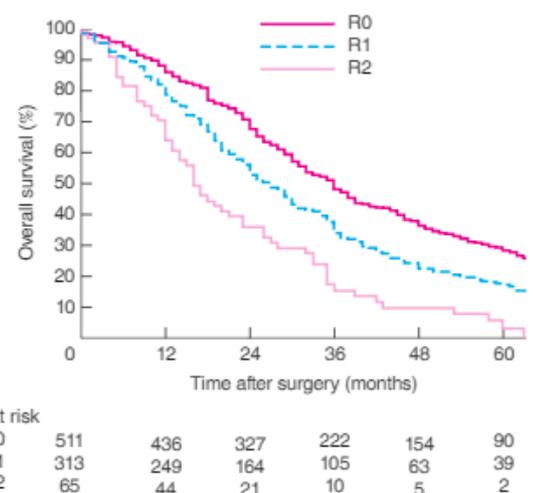


Fig. 1 Kaplan-Meier curves for overall survival according to resection margin status. $P < 0.001$ (log rank test)

CEA-trend beter dan eenmalige CEA meting voor diagnosticeren recurrence colorectaal carcinoom

Serum carcinoembryonic antigen trends for diagnosing colorectal cancer recurrence in the FACS randomized clinical trial; Shinkinset al; BJS 2018; 105 (6); 658-662.

Pubmed ID: 29579327

BACKGROUND

Most guidelines recommend that patients who have undergone curative resection for primary colorectal cancer are followed up for 5 years with regular blood carcinoembryonic antigen (CEA) tests to trigger further investigation for recurrence. However, CEA may miss recurrences, or patients may have false alarms and undergo unnecessary investigation.

METHOD

The diagnostic accuracy of trends in CEA measurements for recurrent colorectal cancer, taken as part of the FACS (Follow - up After Colorectal Surgery) trial (2003 - 2014), were analysed. Investigation to detect recurrence was triggered by clinical symptoms, scheduled CT or colonoscopy, or a CEA level of at least 7 μ g/l above baseline. Time - dependent receiver operating characteristic (ROC) curve analysis was used to compare the diagnostic accuracy of CEA trends with single measurements. CEA trends were estimated using linear regression.

RESULTS

The area under the ROC curve (AUC) for CEA trend was at least 0.820 across all 5 years of follow - up (Figure 2). In comparison, the AUCs for single measurements ranged from 0.623 to 0.749. Improvement was most marked at the end of the first year of follow - up, with the AUC increasing from 0.623 (95 per cent c.i. 0.509 to 0.736) to 0.880 (0.814 to 0.947). However, no individual trend threshold achieved a sensitivity above 70 per cent (30 per cent missed recurrences).

CONCLUSION

Interpreting trends in CEA measurements instead of single CEA test results improves diagnostic accuracy for recurrence, but not sufficiently to warrant it being used as a single surveillance strategy to trigger further investigation. In the absence of a more accurate biomarker, monitoring trends in CEA should be combined with clinical, endoscopic and imaging surveillance for improved accuracy.

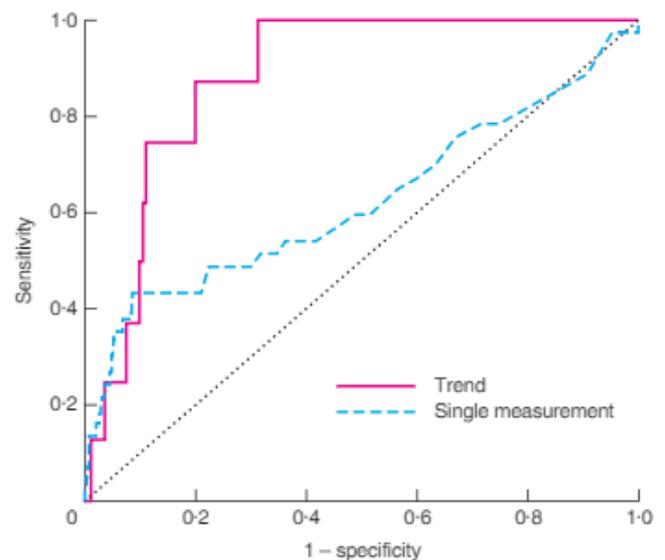


Fig. 2 Time-dependent receiver operating characteristic (ROC) curves for trend in carcinoembryonic antigen compared with single measurement at year 1

UPPER GI

Oesofagectomie volumenorm per chirurg nog niet bruikbaar in praktijk

The Surgeon Volume-outcome Relationship: Not Yet Ready for Policy; Modrall et al; Ann of Surg 2018; 267 (5); 863-867.

Pubmed ID: 28628561

OBJECTIVE

Increasing surgeon volume may improve outcomes for index operations. We hypothesized that there may be surrogate operative experiences that yield similar outcomes for surgeons with a low-volume experience with a specific index operation, such as esophagectomy.

BACKGROUND

The relationship between surgeon volume and outcomes has potential implications for credentialing of surgeons. Restrictions of privileges based on surgeon volume are only reasonable if there is no substitute for direct experience with the index operation. This study was aimed at determining whether there are valid surrogates for direct experience with a sample index operation—open esophagectomy.

METHODS

The Nationwide Inpatient Sample (2003–2009) was utilized. Surgeons were stratified into low and high-volume groups based on annual volume of esophagectomy. Surrogate volume was defined as the aggregate annual volume per surgeon of upper gastrointestinal operations including excision of esophageal diverticulum, gastrectomy, gastroduodenectomy, and repair of diaphragmatic hernia.

RESULTS

In all, 26,795 esophagectomies were performed nationwide (2003–2009), with a crude inhospital mortality rate of 5.2%. Inhospital mortality decreased with increasing volume of esophagectomies performed annually: 7.7% and 3.8% for low and high-volume surgeons, respectively ($P < 0.0001$). Among surgeons with a low-volume esophagectomy experience, increasing volume of surrogate operations improved the outcomes observed for esophagectomy: 9.7%, 7.1%, and 4.3% for low, medium, and high-surrogate-volume surgeons, respectively ($P = 0.016$).

CONCLUSIONS

Both operation-specific volume and surrogate volume are significant predictors of inhospital mortality for esophagectomy. Based on these observations, it would be premature to limit hospital privileges based solely on operation-specific surgeon volume criteria.

Neoadjuvante chemoradiotherapie kan de behoefte voor transthoracale oesofagectomie met uitgebreide lymfeklierdissectie verminderen bij patiënten met slokdarmkanker

Impact of Surgical Approach on Long-term Survival in Esophageal Adenocarcinoma Patients With or Without Neoadjuvant Chemoradiotherapy; Noordman et al.; Ann Surg 2018; 267 (5); 892-897. Pubmed ID: 28350565

OBJECTIVE

To compare overall survival in patients with esophageal adenocarcinoma who underwent transhiatal esophagectomy (THE) with limited lymphadenectomy or transthoracic esophagectomy (TTE) with extended lymphadenectomy with or without neoadjuvant chemoradiotherapy (nCRT).

BACKGROUND

The application of neoadjuvant therapy might change the association between the extent of lymphadenectomy and survival in patients with esophageal adenocarcinoma. This may influence the choice of surgical approach in patients treated with nCRT.

METHODS

Patients with potentially curable subcarinal esophageal adenocarcinoma treated with surgery alone or nCRT followed by surgery in 7 centers were included. The effect of surgical approach on overall survival, differentiated by the addition or omission of nCRT, was analyzed using a multivariable Cox regression model that included well-known prognostic factors and factors that might have influenced the choice of surgical approach.

RESULTS

In total, 701 patients were included, of whom 318 had TTE with extended lymphadenectomy and 383 had THE with limited lymphadenectomy. TTE had differential effects on survival (P for interaction = 0.02), with a more favorable prognostic effect in patients who were treated with surgery alone [hazard ratio (HR) = 0.77, 95% confidence interval (CI) 0.58–1.03]. This association was statistically significant in a subgroup of patients with 1 to 8 positive lymph nodes in the resection specimen (HR = 0.62, 95% CI 0.43–0.90). The favorable prognostic effect of TTE over THE was absent in the nCRT and surgery group (HR = 1.16, 95% CI 0.80–1.66) and in the subgroup of nCRT patients with 1 to 8 positive lymph nodes in the resection specimen (HR = 1.00, 95% CI 0.61–1.68).

CONCLUSIONS

Compared to surgery alone, the addition of nCRT may reduce the need for TTE with extended lymphadenectomy to improve long-term survival in patients with esophageal adenocarcinoma.

HPB

Geen verschil in postoperatieve complicaties tussen neoadjuvant chemoradiatie en stereotactische bestraling voor borderline resectabel of locally advanced pancreascarcinoom

Postoperative complications after resection of borderline resectable and locally advanced pancreatic cancer: The impact of neoadjuvant chemotherapy with conventional radiation or stereotactic body radiation therapy; Blair et al.; Surgery 2018; 163 (5): 1090-1096.

Pubmed ID: 29395234

BACKGROUND AND OBJECTIVE

The impact of neoadjuvant stereotactic body radiation therapy on postoperative complications for patients with borderline resectable or locally advanced pancreatic ductal adenocarcinoma remains unclear. Limited studies have compared neoadjuvant stereotactic body radiation therapy versus conventional chemoradiation therapy. A retrospective study was performed to determine if perioperative complications were different among patients with borderline resectable or locally advanced pancreatic ductal adenocarcinoma receiving neoadjuvant stereotactic body radiation therapy or chemoradiation therapy.

METHODS

Patients with borderline resectable or locally advanced pancreatic ductal adenocarcinoma who underwent neoadjuvant chemotherapy with stereotactic body radiation therapy or chemoradiation therapy followed by pancreatectomy at the Johns Hopkins Hospital between 2008 and 2015 were included. Predictive factors for severe complications (Clavien grade \geq III) were assessed by univariate and multivariate analyses.

RESULTS

A total of 168 patients with borderline resectable or locally advanced pancreatic ductal adenocarcinoma underwent neoadjuvant chemotherapy and RT followed by pancreatectomy. Sixty-one (36%) patients underwent stereotactic body radiation therapy and 107 (64%) patients received chemoradiation therapy. Compared with the chemoradiation therapy cohort, the neoadjuvant stereotactic body radiation therapy cohort was more likely to have locally advanced pancreatic ductal adenocarcinoma (62% vs 43% $P = .017$) and a require vascular resection (54% vs 37%, $P = .027$). Multiagent chemotherapy was used more commonly in the stereotactic body radiation therapy cohort (97% vs 75%, $P < .001$). Postoperative complications (Clavien grade \geq III 23% vs 28%, $P = .471$) were similar between stereotactic body radiation therapy and chemoradiation therapy cohort. No significant difference in postoperative bleeding or infection was noted in either group.

CONCLUSIONS

Compared with chemoradiation therapy, neoadjuvant stereotactic body radiation therapy appears to offer equivalent rates of perioperative complications in patients with borderline resectable or locally advanced pancreatic ductal adenocarcinoma despite a greater percentage of locally advanced disease and more complex operative treatment.

Anatomische ligging gastrojejunostomie van invloed op incidentie delayed gastric emptying

Impact of the gastrojejunal anatomic position as the mechanism of delayed gastric emptying after pancreatoduodenectomy; Nojima et al; Surgery 2018; 163 (5); 1063-1070.

Pubmed ID: 29325788

BACKGROUND AND OBJECTIVE

This study investigated the impact of gastrojejunal anatomic position on the incidence of delayed gastric emptying after pancreatoduodenectomy.

METHOD

A total of 160 patients were included in the retrospective analysis. The relative anatomic position of the gastrojejunostomy was evaluated using coronal and sagittal plane computed tomography images on postoperative day 7; the coronal cardia anastomotic angle and the sagittal fundus anastomotic angle were measured. In the validation study, 64 consecutive patients were enrolled, and gastric emptying was evaluated using water-soluble contrast medium. The extent of gastric emptying was graded as grade I (no gastric dilatation and no stasis), grade II (gastric dilatation but no stasis), or grade III (gastric dilatation and stasis).

RESULTS

Patients with grades B ($n = 8$) and C ($n = 22$) delayed gastric emptying were included in the delayed gastric emptying group ($n = 30$), and the others were included in the nondelayed gastric emptying group ($n = 130$). The coronal cardia anastomotic angle was not significantly different between the 2 groups, whereas the sagittal fundus anastomotic angle was significantly greater in the delayed gastric emptying group compared to the nondelayed gastric emptying group (median 50.3 vs 64.5 degrees, $P < .001$). Multivariate analysis, including various risk factors of delayed gastric emptying, indicated that a sagittal fundus anastomotic angle >60 degrees was the only independent risk factor of delayed gastric emptying (odds ratio, 16.59). In the validation study, the median degree of sagittal fundus anastomotic angle increased as the gastric emptying grade increased (grade I, 44.3 degrees; grade II, 55.3 degrees; grade III, 60.7 degrees; $P = .014$ by analysis of variance).

CONCLUSION

The gastrojejunal anatomic position after pancreatoduodenectomy has a significant impact on the incidence of delayed gastric emptying.

LEVERCHIRURGIE

Hepaticojejunostomie relatief veilige behandeling van galwegletsel

Long-term follow-up and risk factors for strictures after hepaticojejunostomy for bile duct injury: An analysis of surgical and percutaneous treatment in a tertiary center; Booij et al; Surgery 2018; 163 (5); 1121-1127.

Pubmed ID: 29475612

BACKGROUND AND OBJECTIVE

Hepaticojejunostomy is commonly indicated for major bile duct injury after cholecystectomy. The debate about the timing of hepaticojejunostomy for bile duct injury persists since data on

postoperative outcomes, including postoperative strictures, are lacking. The aim of this study was to analyze short- and long-term outcomes of hepaticojejunostomy for bile duct injury, including risk factors for strictures.

METHOD

Analysis of outcome of hepaticojejunostomy in bile duct injury patients referred to a multidisciplinary team.

RESULTS

Between the years 1991 and 2016, 281 patients underwent hepaticojejunostomy for bile duct injury. Clavien-Dindo grade III complications occurred in 31 patients (11%) and 90-day mortality occurred in 2 patients (0.7%). After a median follow-up of 10.5 years (interquartile range 6.7–14.8 years), clinically relevant strictures were found in 37 patients (13.2%). Strictures were treated with percutaneous dilatation in 33 patients (89.2%), and 4 patients (1.4%) were reoperated. The stricture rate in patients undergoing hepaticojejunostomy <14 days, between 14–90 days, and >90 days after bile duct injury was 15.8%, 18.7%, and 9.9%, respectively (Figure 1). The stricture rate for early versus intermediate and late repair did not differ ($P = 0.766$ and 0.431 , respectively). The stricture rate for repair after 14–90 days, however, was higher compared with repair >90 days after bile duct injury ($P = 0.045$). In multivariable analysis male gender was the only independent variable associated with stricture formation (OR 6.7, 95% CI 1.8–25.4, $P = 0.005$).

CONCLUSION

Hepaticojejunostomy is a relatively safe treatment of bile duct injury. Timing of surgery and intermediate repair affect long-term stricture rate; most anastomotic strictures can be treated successfully with percutaneous dilation.

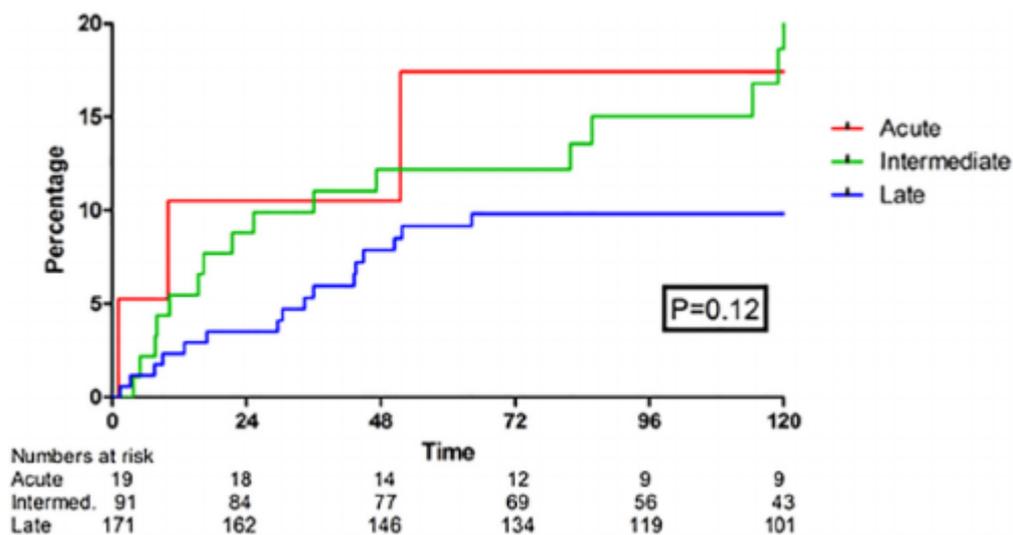


Fig. 1. Kaplan-Meier analysis of stricture formation after reconstructive surgery for bile duct injury in acute (<14 days), intermediate (14–90 days), and late (>90 days) phase.

Meer resecties en beter uitkomsten middels ALPPS dan TSH in patiënten met colorectale levermetastasen

ALPPS Improves Resectability Compared With Conventional Two-stage Hepatectomy in Patients With Advanced Colorectal Liver Metastasis: Results From a Scandinavian Multicenter Randomized Controlled Trial (LIGRO Trial); Sandström, et al; Ann Surg 2018; 267 (5); 833-850. Pubmed ID: 28902669

OBJECTIVE

The aim of the study was to evaluate if associating liver partition and portal vein ligation for staged hepatectomy (ALPPS) could increase resection rates (RRs) compared with two-stage hepatectomy (TSH) in a randomized controlled trial (RCT).

BACKGROUND

Radical liver metastasis resection offers the only chance of a cure for patients with metastatic colorectal cancer. Patients with colorectal liver metastasis (CRLM) and an insufficient future liver remnant (FLR) volume are traditionally treated with chemotherapy with portal vein embolization or ligation followed by hepatectomy (TSH). This treatment sometimes fails due to insufficient liver growth or tumor progression.

METHODS

A prospective, multicenter RCT was conducted between June 2014 and August 2016. It included 97 patients with CRLM and a standardized FLR (sFLR) of less than 30%. Primary outcome—RRs were measured as the percentages of patients completing both stages of the treatment. Secondary outcomes were complications, radicality, and 90-day mortality measured from the final intervention.

RESULTS

Baseline characteristics, besides body mass index, did not differ between the groups. The RR was 92% [95% confidence interval (CI) 84%–100%] (44/48) in the ALPPS arm compared with 57% (95% CI 43%–72%) (28/49) in the TSH arm [rate ratio 8.25 (95% CI 2.6–26.6); $P < 0.0001$]. No differences in complications (Clavien–Dindo $\geq 3a$) [43% (19/44) vs 43% (12/28)] [1.01 (95% CI 0.4–2.6); $P = 0.99$], 90-day mortality [8.3% (4/48) vs 6.1% (3/49)] [1.39 [95% CI 0.3–6.6]; $P = 0.68$] or RO RRs [77% (34/44) vs 57% (16/28)] [2.55 [95% CI 0.9–7.1]; $P = 0.11$] were observed. Of the patients in the TSH arm that failed to reach an sFLR of 30%, 12 were successfully treated with ALPPS.

CONCLUSIONS

ALPPS is superior to TSH in terms of RR, with comparable surgical margins, complications, and short-term mortality.

BARIATRISCHE CHIRURGIE

Leeftijd van de chirurg geen invloed op uitkomsten van bariatrische chirurgie

Effect of Surgeon Age on Bariatric Surgery Outcomes; Stevens et al.; Ann Surg 2018; 267 (5); 905-909.

Pubmed ID: 28486391

OBJECTIVE

This study sought to explore the relationship of bariatric surgeon age and patient outcomes.

BACKGROUND

Regulators, policy makers, and patient advocacy groups have recently been pushing to establish clear guidelines for physician retirement in the United States. Although it is often assumed that increasing physician age leads to worse patient outcomes, the relationship is lacking robust evidence, and is still unclear.

METHODS

We conducted a study analyzing all bariatric surgeons in Michigan who participated in a statewide collaborative quality improvement program ($n = 71$) who performed primary laparoscopic Roux-en-Y Gastric Bypass, or sleeve gastrectomy operations, and data on their patients ($n = 60430$) over the past 10 years. Our primary outcomes were 30-day postoperative complications. Odds ratios for overall complications and serious complications were calculated for each age group, and surgery type.

RESULTS

Late career surgeons had more bariatric surgery experience and had a higher average annual case volume than early career surgeons. Considering all cases in the past 10 years, older surgeons performed more Roux-en-Y Gastric Bypass (40%) and less sleeve gastrectomy (38.8%) than younger surgeons (34.7% and 51.5%). When adjusting for patient and surgeon characteristics, there were no statistically significant differences in overall or serious complication rates for either procedure among surgeon age groups (Figure 1).

CONCLUSIONS

When evaluating bariatric surgeons in the State of Michigan, we found no statistically significant association between surgeon age and patient outcomes. Our findings do not provide evidence for age-specific retirement cut-offs, but support the development of guidelines which are holistic, and focus on evaluating and improving physician outcomes at all career levels.

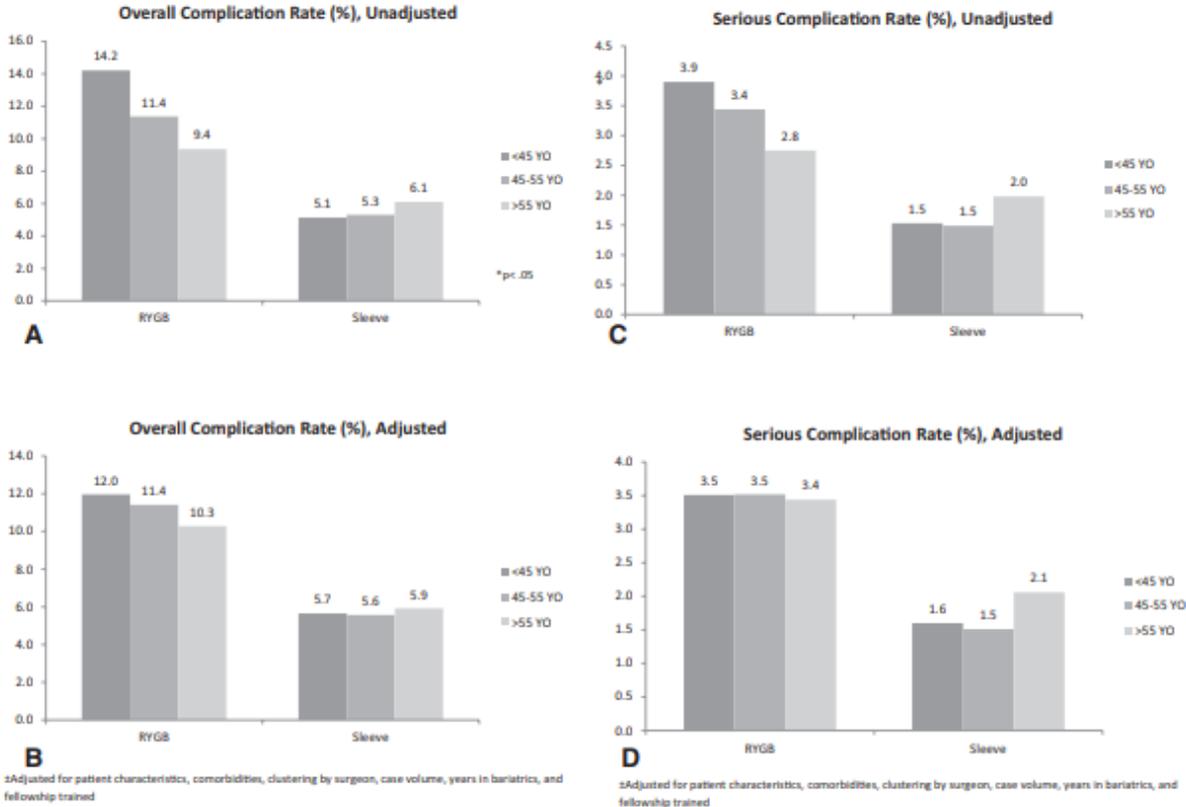


FIGURE 1. ±Adjusted for patient characteristics, comorbidities, clustering by surgeon, case volume, years in bariatrics, and fellowship trained. The asterisk (*) indicating statistical significance is missing for (A) over the RYGB complications rate (11.4) for age group 45–55 years’ old.