

Nonetheless, recurrent primary sclerosing cholangitis (rPSC) can occur after liver transplantation (rPSC) with considerable morbidity often leading to retransplantation. In the past decade large cohorts of patients with PSC undergoing OLT were analysed to identify risk factors for rPSC. The current systematic review and meta-analysis was conducted to summarise all available data to define risk factors for rPSC.

**Methods:** The search of the following databases was performed: PubMed, Embase, Web of Science, Cochrane library for articles published until March 2018 using the medical subject headings sclerosing cholangitis, recurrence, liver transplantation, risk and risk factors. Studies addressing risk factors for developing rPSC after liver transplantation were eligible for inclusion in the review. Studies able to provide data to calculate hazard ratios (HR) and 95% confidence intervals (95% CI) were included in the meta-analysis. Quality of included studies was independently evaluated by two authors with the Newcastle Ottawa Scale (NOS) for cohort studies. Statistical analysis was performed using Cochrane Review Manager.

**Results:** The electronic database search yielded 449 results. Sixteen retrospective cohort studies met the inclusion criteria for the review. Twelve studies were included for meta-analysis. Studies scored a median of 8 points (6–9) on the NOS. After excluding possibly overlapping cohorts we analysed recurrence a total cohort of 1899 patients, with median age ranging from 31 to 49 years, 1330 were male (70.0%) and 321 developed rPSC (16.9%). We found that colectomy before OLT, HR 0.63 (95% CI: 0.41–0.99), presence of cholangiocarcinoma (CCA) before OLT, HR 2.81 (95% CI: 1.34–5.87), presence of inflammatory bowel disease (IBD), HR 1.76 (95% CI: 1.19–2.61), donor age, HR 1.02 (95% CI 1.01–1.04), MELD score per point, HR 1.05 (95% CI: 1.02–1.08) and development of acute cellular rejection (ACR), HR 2.37 (95% CI: 1.30 – 4.32) were associated with the risk of rPSC.

**Conclusions:** IBD presence, CCA before transplantation, donor age, MELD score and development of ACR were risk factors for recPSC. Performing a colectomy before liver transplantation was protective for rPSC.

## P390

### The impact of anti-TNF therapy in adjuvant setting on postoperative recurrence patterns over decades in complicated Crohn's disease

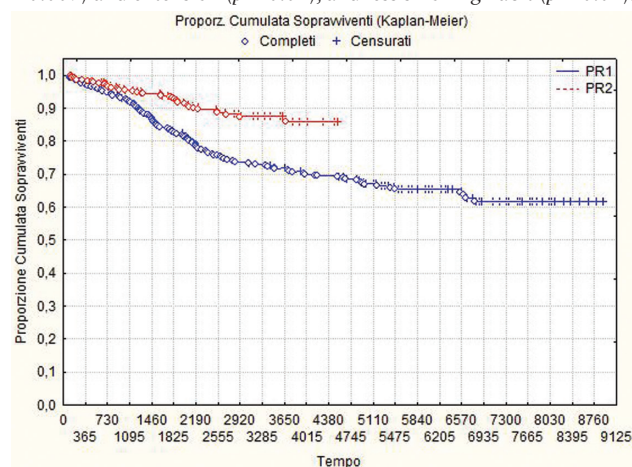
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**Background:** Surgical resection of diseased bowel in complicated Crohn's disease (CD) is frequently not curative and post-operative recurrence remains a significant problem in a large amount of patients. The aim of the study was to evaluate the impact of anti-TNF therapy in the prevention of CD patients' surgical recurrence in a Tertiary Italian IBD Center over decades.

**Methods:** The Prospective Sacco Database for Surgery of CD (ProSaDS-CD) was retrospectively reviewed to analyse primary (Pr) and re-operative (Re) characteristics of patients operated on in

the two decades 1994–2004 (Pr1–Re1) and 2005–2015 (Pr2–Re2). Gender, age, location, behaviour, smoking habit, perianal disease (PCD), time to surgery, indication for surgery, number and length of intestinal locations, number of resection and strictureplasty (SP), postoperative adjuvant therapy, and 25 years surgical recurrence were analysed using the chi-square test, Fisher exact test, Student's *t*-test, Kaplan–Meier time-to-event estimates, and log-rank test where appropriate.

**Results:** From the ProSaDS-CD, 807 primary and 154 recurrent patients were divided in Group-Pr1 (*n* = 337), Group-Pr2 (*n* = 470), Group-Re1 (111), and Group-Re2 (43). Group-Pr2 patients have more frequent diagnosis at A1 and A3 ages (*p* = 0.01), same Location (*p* = 0.5) and Behaviour (*p* = 0.74), longer disease duration (*p* = 0.001), less smoking habit (*p* = 0.0007), more intestinal locations (*p* = 0.0001) and extension (*p* = 0.0001), more anti-TNF- $\alpha$  adjuvant therapy (*p* < 0.0001), and lower long-term surgical recurrence (*p* = 0.0001). Overall surgical recurrence at 10 and 20 years was 20% and 32%. At 10 years, Group-Re1 and Group-Re2 have 30% and 12% recurrence, respectively (*p* = 0.0001). At time of recurrence, Group-Re2 patients have more penetrating indication to surgery (*p* = 0.05), more SP procedures (*p* = 0.002), more small bowel locations (*p* = 0.007) and extension (*p* = 0.02), and less smoking habit (*p* = 0.04).



Period 1 (Pr1) vs. period 2 (Pr2) postop 25 years recurrence.

**Conclusions:** In the last decade, surgery for CD has increased in paediatric patients and in the elderly, with a more aggressive pattern in terms of number and extension of locations, and penetrating complications. Strictureplasties in recurrent patients may reduce further intestinal damage. Anti-TNF- $\alpha$  adjuvant treatment and stop smoking seems to significantly change the course of recurrent disease.

## P391

### Are cut-off ranges of Infliximab serum levels in Crohn's disease always the same in clinical practice?

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