**INTRODUCTION:** Surgical site infections (SSI) represent undesired and potentially fatal complications in the context of colorectal surgery. On the other hand, antimicrobial resistance (AMR) is known for increasing the risk of adverse outcomes in several clinical conditions. We aimed to evaluate the association between AMR diagnosis and postoperative outcomes in patients that underwent open colectomy and developed a SSI.

**METHODS:** The National Inpatient Sample was used to identify patients who underwent open colectomy and developed a superficial, deep or organ space SSI in the period 2010-2015. A 1:3 matched cohort of patients with and without an AMR diagnosis was generated using a propensity-score matching (PSM) approach. Differences in the rate of postoperative complications between the matched groups were assessed.

**RESULTS:** A total of 39,089 patients that underwent open colectomy and had a SSI were identified, with 0.23% having a resistant pathogen as the causal agent. A matched cohort of 355 patients (90 in the AMR) was analyzed. Patients with a resistant pathogen as the causal agent of their SSI had a longer length of hospital stay and higher hospital charges compared to those with susceptible pathogens. Mortality risk was not significantly different between the groups.

**CONCLUSION:** The present study results highlight the importance of AMR among patients with SSI after colorectal surgery. Further research is needed to assess the prevalence of AMR by pathogen and its specific sensitivity spectrum in the context of colectomy, contributing to the development of effective measures to mitigate the burden of AMR in this context.

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**Use of a Novel Balloon Overtube for Tumor Excision and Closure of Intestinal Defect in the Right Colon: Preclinical Trial**

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**INTRODUCTION:** ESD, especially in the right colon, is challenging. Devices/techniques for traction could make this procedure easier and safer. In a preclinical model, we evaluated a balloon overtube with two instrument channels, which permit the use of multiple tools, for tumor excision and closure of intestinal defect.

**METHODS:** A 3D-model, porcine colorectum, and colonoscope (Olympus) were used. Tumor excision: Using an ESD knife (Olympus), 3cm lesions at the posterior transverse colon were removed with or without an overtube. A snare (Boston Scientific) and grasper (STERIS) were passed through the channels. Closure of intestinal defect: Using clips (Olympus), 5-10mm full-thickness perforations within 3cm mucosal defect at the transverse colon were closed with or without an overtube. Two graspers were passed through the channels. Colon was insufflated to measure the bursting pressure. We compared the overtube group (OT) with the standard group (STD).

**RESULTS:** Tumor Excision: OT group had a significantly shorter procedure time (OT (n=8) vs. STD (n=8) = median 15.6 min vs. 39.4) and fewer number of injuries (0 vs. 2) than the STD group. Defect Closure: Procedure time was significantly shorter in OT than in STD (OT (n=8) vs. STD (n=8) = 11.9 min vs 15.0). OT showed higher bursting pressure (45.7 mmHg v 0) than STD, despite fewer clips (9 vs. 13).

**CONCLUSION:** In a preclinical model, the use of a novel overtube appears to be safe, feasible, and effective for tumor excision and closure of intestinal defect in the right colon.

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**Vestibular and Perineal Fistula: Outcomes of Single-stage Repair with Early Feeding and Limited Postoperative Antibiotics**

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**INTRODUCTION:** The purpose of this study was to assess outcomes of single-stage repair of vestibular fistula (VF) or perineal fistula (PF) with early initiation of feeding and limited postoperative antibiotics.

**METHODS:** A retrospective review of patients with isolated anorectal malformations (ARM) with VF or PF from 2017 to 2020 was conducted. All underwent single-stage repair via anoplasty (AP) or posterior sagittal anorectoplasty (PSARP) without protective colostomy. The variables analyzed were age at time of repair, duration and use of postoperative antibiotics, initiation of feeds postoperatively, and length of stay (LOS). Outpatient follow-up variables included wound infection, wound dehiscence, emergency room visits, unplanned return to operating room, and length of follow-up.

**RESULTS:** 19 patients with isolated ARM repaired as single-stage with AP or PSARP without colostomy were identified. Median age
during repair was 92 days (IQR 1.3: 9.193). Median postoperative antibiotic duration was 24 hours (IQR 1.3: 0.24), median postoperative day for initiation of feeds was day 0 (IQR 1.3: 0.1), and median LOS was 1 day (IQR 1.3: 1.45). 95% (18/19) of cases followed-up, with follow-up ranging from 20-707 days. No wound infection, wound dehiscence, or recurrent fistulas were reported. No patients were seen in the emergency room postoperatively. 10% (2/19) of cases required unplanned return to operating room for anal dilation.

CONCLUSION: Single-stage repair without colostomy is an approach for low ARM with VF or PF. Limited postoperative antibiotics and early initiation of feeds results in a shorter length of stay without compromising short or long-term outcomes.