Methods: An exhaustive search of the MEDLINE, Cochrane Library, Embase, LILACS, and CytoSorbents Corporation databases was conducted to identify relevant meta-analyses and systematic reviews. The study focused on randomized controlled trials and case series studies assessing the efficacy of cytokine filtration. Key variables considered were the duration of antibiotic treatment, severity of endocarditis, and surgical treatment rationale. These factors were crucial for evaluating clinical outcomes and patient survival after surgery.
Results: The systematic reviews yielded mixed outcomes. Two found no benefits for hemoadsorption, while one found that it reduced mortality rates and intensive care unit stays based on observational studies. Randomized controlled trials, however, showed no significant impact for cytokine filters on mortality rates or postoperative hemodynamic parameters. In contrast, case series studies reported potential benefits, but these results were confounded by biases in patient allocation and failure to account for critical variables like antibiotic treatment duration, case severity, and surgical rationale. These discrepancies highlight the complexity of evaluating the effectiveness of cytokine filtration in surgical settings.
Conclusions: Randomized and non-randomized controlled trials on the role of cytokine filters in cardiac surgery for endocarditis reported contradictory findings. Only case series studies suggested benefits from cytokine filters, necessitating further high quality research before recommending their widespread use. Understanding the implications of these results is essential, underscoring the need for more rigorous studies to resolve these inconsistencies.

PD124 Genicular Artery Embolization For The Treatment Of Knee Osteoarthritis: A Systematic Review And Meta-analysis

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Introduction: The genicular artery embolization (GAE) procedure has been recently adopted for the management of pain secondary to inflammatory diseases of the locomotor apparatus. The number of studies assessing its use in patients with knee osteoarthritis (KO) has been increasing in recent years.
Methods: We included two randomized controlled trials (RCTs) evaluating the use of GAE in patients with chronic pain secondary to KO. A cost analysis was also conducted to compare the costs of GAE and standard treatment from the perspective of the Spanish National Health System over a time horizon of one year. The potential improvement in quality-adjusted life-years necessary to consider GEA as cost effective for this indication was estimated. We also ran extensive sensitivity analyses.
Results: Estimates for pain showed contradictory results, and no significant differences were observed between the two treatments with respect to overall function, health-related quality of life (HRQoL), and need for pain medication. No serious complications or major adverse events were observed. The quality of evidence was assessed by GRADE as moderate to low. The cost analysis showed that GAE results in an incremental cost of EUR3,432.37 per patient. Sensitivity analyses revealed a wide range within which the incremental cost can vary.
Conclusions: There are insufficient data to discern any differences between GAE and standard treatment for patients with KO in terms of pain, function, HRQoL, need for analgesics, and rates of adverse events and complications. Larger RCTs are required to evaluate the effect of GAE in patients with chronic pain secondary to KO and to determine whether its additional cost is warranted.

PD125 Safety, Efficacy, And Effectiveness Of Robotic Surgery In General And Digestive Surgery

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Introduction: Robotic surgery (RS) is a minimally invasive surgical modality performed with the support of a console and mechanical arms that enable remote control. The advantages of RS are clear from the point of view of surgeons but remain unclear in terms of clinical results. We evaluated the safety, efficacy, and clinical effectiveness of RS compared with open or laparoscopic surgery.
Methods: A systematic review of randomized controlled trials and systematic reviews with meta-analyses was conducted to assess RS in the following surgical procedures: Nissen fundoplication, Heller myotomy, cholecystectomy, rectopexy, splenectomy, pediatric Kasai portoenterostomy, and gastric banding. Outcomes of interest were related to safety (complications, blood loss, and risk of infection) and efficacy or effectiveness (length of hospital stay, quality of life [QoL], recovery, patient satisfaction, conversion to another technique, urinary function, and rates of mortality, readmission, reoperation, and esophageal perforation). The evidence quality was assessed with version two of the Cochrane risk-of-bias tool for randomized trials, AMSTAR 2, and GRADE.
Results: Nissen fundoplication RS was similar to laparoscopy in terms of complication and conversion rates, recovery, and QoL. Heller myotomy RS reduced the rate of esophageal perforations but had similar perioperative blood loss and rates of mortality, conversion, and re-admission to laparoscopy. Cholecystectomy RS was similar to laparoscopy with respect to rates of readmission and complications, blood loss, and risk of infection. Rectopexy RS was similar to laparoscopy in terms of conversion, reoperation, and complications rates, blood loss, recovery, patient satisfaction, and QoL. Splenectomy RS decreased blood loss but was similar in risk of infection and rates of complications and conversion to laparoscopy.

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There were no studies that used open surgery as a comparator or evaluated RS in pediatric Kasai portoenterostomy or gastric banding.
Conclusions: Current evidence on the safety, efficacy, and clinical effectiveness of RS in general or digestive surgical procedures is limited. Multicenter studies with follow-up beyond the immediate postoperative period are needed to evaluate patient outcomes.

PD126 A Systematic Review Of Interval Cancer Rates In Colonoscopy Screening For Colorectal Cancer

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Introduction: Colonoscopy screening has been suggested as a potential primary screening method for colorectal cancer (CRC). A 10-year screening interval has been recommended by some academic societies, but the scientific evidence for this needs to be more comprehensive. We performed a systematic review of interval cancer rates in colonoscopy screening in an asymptomatic population.
Methods: We searched the PubMed and Ichushi-Web bibliographic databases for papers published from inception to September 2022. The search terms were “colorectal cancer screening”, “interval cancer”, and “total colonoscopy”. Randomized controlled trials and observational studies were included. The target population was an asymptomatic average-risk population with no polyps or adenomas at the index colonoscopy. Advanced neoplasia (AN) was defined as CRC or an adenoma at least 10 mm in size with a villous component or high-grade dysplasia. The incidence rates of interval CRC and AN per 100,000 person-years (PYs) were estimated.
Results: Of the 694 potentially eligible articles, 15 were included. Rates of interval CRC and AN were reported in 15 and 11 studies, respectively. For the meta-analysis, 287,602 patients with negative colonoscopy results were included, with an average follow-up of 7.98 years. Negative colonoscopy results were defined as no adenoma present. The incidence rate per 100,000 PYs was 9.57 (95% confidence interval [CI]: 2.06, 29.94) for interval CRC and 311.5 (95%CI: 153.4, 550.7) for AN. Similar results were obtained even when a negative colonoscopy result was defined as no polyps present.
Conclusions: The selected studies were heterogeneous with respect to the target population, follow-up years, and patient characteristics. Although interval AN was reported in all studies, the interval cancer rate was low after a negative result at the index colonoscopy. While the screening interval might be defined as long term, a definitive screening interval could not be recommended because of insufficient evidence.

PD127 A Systematic Review Of The Clinical Effectiveness Of Recombinant Zoster Vaccine For Preventing Herpes Zoster In Adults

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Introduction: The herpes zoster (HZ) virus is associated with significant morbidity. Its incidence and severity are higher among older adults and immunocompromised individuals. This systematic review assessed the clinical efficacy and effectiveness of recombinant zoster vaccine (RZV) for the prevention of HZ and associated complications in adults at least 50 years of age and in adults (≥18 years) at increased risk of HZ.
Methods: Electronic searches restricted to between 2008 and July 2023 were conducted in Embase, MEDLINE, the Cochrane Library, and clinical trial registries. Two reviewers independently screened articles and extracted data. The review adhered to the PRISMA reporting guidelines. Quality appraisal was assessed using version two of the Cochrane risk-of-bias tool for randomized trials tool and the Risk of Bias in Non-Randomized Studies - of Interventions tool. Meta-analysis was undertaken using Cochrane methodology, with preference given to random effects meta-analysis because of study heterogeneity.
Results: Twelve RCTs and five cohort studies were identified. Vaccine efficacy was defined as one minus the incidence rate ratio, multiplied by 100. For the general population, vaccine efficacy was 92 percent (n=29,311 individuals) and vaccine effectiveness was 70 percent (n=43,990,671 individuals). Based on one trial, vaccine efficacy in the general population (aged ≥50 years) waned from an initial 97.7 percent to 73.2 percent by year 10. Two RCTs reported vaccine efficacy for those at increased risk: 68.2 percent in hematopoietic stem cell transplant recipients and 87.2 percent in those with hematological malignancies. Secondary analyses were limited by sample size.
Conclusions: There is clear, consistent evidence that RZV is effective in reducing HZ incidence. Although the vaccine is effective in those who are least 18 years of age and are at increased risk of HZ, efficacy may be lower compared with a general population aged at least 50 years. Secondary analyses (age subgroups, HZ complications, and HZ-related hospitalizations) were limited by small sample size, leading to inconclusive results.

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