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Systematic Review and meta-analysis of Interventions for Benign Large Non-Pedunculated Colonic Polyps (BLNPCP)

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Aim: To examine the efficacy of treatment options for benign large non-pedunculated colonic polyps (BLNPCP).

Background: BLNPCP may harbour covert malignancy and opinions differ about the optimal treatment modality, be it endoscopic mucosal resection (EMR), endoscopic submucosal resection (ESD), combined endoscopic laparoscopic surgery (CELS) or surgical resection (SR). Despite the widespread availability of endoscopic resection (ER) techniques, rates of surgery in the UK remain high.

Methods: This review is reported in line with PRISMA guidelines (PROSPERO registration: CRD42021148944). EMBASE, CENTRAL, and MEDLINE databases were searched from January 2000 to January 2020 to evaluate interventions for treating BLNPCP in adults. The primary outcome was recurrence, adverse events were secondary outcomes. Meta-analysis was performed using a random effects model expressed as a percentage with 95% confidence interval. Quality assessment was performed using ROBINS-I.

Results: Ten studies (2499 polyps in 2327patients) were included (five assessed EMR, four SR, two CELS, two ESD). All studies were at moderate risk of bias. SR, ESD and CELS had the lowest recurrence rates 0% CI:0-1, 1% CI:0-2 and 2% CI:0-12 respectively. EMR had the highest (15% CI:9-22). SR complication rate was 12% CI:7-19, ESD 12% CI:9-15, CELS and EMR 11% CI:0-45 and 7% CI:5-9 respectively. Rescue surgery for complication or finding of invasive cancer was 17% CI:5-35 for ESD, CELS 14% CI:3-30, EMR 11% CI:7-15, SR 4% CI:2-6.

Conclusion: These data provide information that should be taken into account when considering the choice of intervention. It will allow a more robust shared decision-making process to occur.