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Using a modified Delphi process to explore international surgeon-reported benefits of robotic-assisted surgery to perform abdominal rectopexy*

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Introduction: Robotic-assisted surgery (RAS) offers improved visualization and dexterity compared to laparoscopy. As a result, RAS is considered an attractive option for performing rectopexy, particularly in the confines of the lower pelvis. The aim of this study was to explore the benefits of RAS in rectopexy by analyzing the views of a group of surgeons will have published on robotic rectopexy.

Methods: A three-round Delphi process was performed. Particular areas that were studied included: clinical aspects of patient selection, technical aspects of using RAS to perform rectopexy, ergonomic factors, training, and consideration of the 'learning-curve'. Consensus was defined as agreement>80% among participants (experienced RAS rectopexy surgeons identified using PubMed).

Results: Twenty international surgeons participated. Participants had median operative experience of 75 rectopexies and 11robotic-rectopexies. All participants agreed that patient-reported functional outcomes and improved quality-of-life were the most important outcomes following rectopexy. Participants agreed the most significant benefits offered by RAS for rectopexy were improved precision due to better visualization (80%), dexterity (90%) and overall accuracy e.g., for suture placement (90%). Ninety percent agreed that the superior ergonomics of RAS rectopexy improved their performance on several steps of the operation, in particular: mesh fixation (85%) and rectovaginal dissection (80%). Consensus on the learning curve for RAS abdominal rectopexy was not achieved: forty-five percent (n=9) reported the learning curve as 11–20 cases and 55% (n=11) as 21–30 cases.

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Conclusions: A panel of surgeons who had published on RAS view that it positively improves performance of rectopexy in terms of technical skills, improved dexterity and visualization and ergonomics.

**winner of the Best Oral Presentation prize*

Divergent enhanced recovery after surgery (ERAS) protocols after minimally invasive esophagectomy (MIE) and robotic assisted minimally invasive esophagectomy (RAMIE) and their effect on perioperative outcomes: a systematic review

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Introduction: ERAS protocols aim to improve patient outcomes by optimizing perioperative care. In Minimally Invasive Esophagectomy (MIE) and Robotic-Assisted Minimally Invasive Esophagectomy (RAMIE), many divergent ERAS strategies are employed, yet their comparative effectiveness on perioperative outcomes remains unclear. This systematic review evaluates the impact of divergent ERAS strategies on perioperative outcomes in patients undergoing MIE and RAMIE.

Methods: PubMed, EMBASE, Cochrane Database, Scopus, and CINAHL were searched using the terms "Enhanced Recovery After Surgery or ERAS", and "minimally invasive (o)esophagectomy or MIO or MIE", and "robotic assisted minimally invasive oesophagectomy or RAMIO or RAMIE". Papers were further narrowed to include only randomized control trials (RCTs) and peer-reviewed retrospective and prospective

cohort studies. Eligible studies were reviewed for ERAS strategy components and their effects on outcomes such as postoperative complications, length of hospital stay, and recovery times.

Results: A total of 11 studies were included, displaying significant divergence in ERAS protocols. Variability was seen in the timing of enteral nutrition, postoperative mobilization, and pain management. ERAS protocols incorporating early feeding, no nasogastric tube, and structured early mobilization generally reported fewer complications, namely cardiopulmonary complications, shorter lengths of hospital stay (LOHS)- apart from Liu and Tang's ERAS protocols- and better overall pain control.

Conclusion: Divergent ERAS strategies in MIE and RAMIE impact perioperative outcomes to varying degrees. Differences in protocol implementation and outcome reporting emphasize the need for more standardized ERAS strategies to guide research in determining the most effective components for optimizing patient recovery while also minimizing complications.

Outcomes Following Angioplasty for Access Site Stenosis in Haemodialysis Patients

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Introduction: Haemodialysis access in the form of arterio-venous fistulas (AVF) or arterio-venous grafts are considered the safest form of access. Unfortunately, AVFs in particular

are complicated by the development of access site stenosis, with balloon angioplasty often utilised to maintain access patency. We sought to evaluate AV access survival and associated prognostic factors following balloon angioplasty over a ten-year period.

Methods: A retrospective review was performed on patient data collected from 2013 to 2023. Overall survival curves were generated using the Kaplan-Meier method. Prognostic factors relating to overall survival were assessed by Cox regression analysis. Hazard ratios and associated 95% confidence intervals were computed.

Results: Of 367 vascular accesses formed in this time period, 59 balloon angioplasties of fistulas were performed on 42 patients. Freedom from further access site intervention was found to be 12 months, ranging from 0 to 64+ months, with 34 fistulas still in use. Access age at reintervention and prior reintervention had no significant impact on post-reintervention access survival.

Conclusion: Our study highlights the effectiveness of an endovascular first approach to access site stenosis with acceptable durability, in addition to its capacity for repeated interventions. With its low-cost and low morbidity, we believe it is a valuable option in all cases of AV access stenosis impairing blood flow.

Efficacy of Closed Incision Negative Pressure Wound Therapy versus Standard Dressings in Elective Hip and Knee Arthroplasty: A Systematic Review and Meta-Analysis of Randomised-Control Trials

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Introduction: Closed-incision Negative Pressure Wound Therapy (ciNPWT) is reputed to have positive outcomes on wound therapy. However, limited research supports its effectiveness after Elective Hip and Knee Arthroplasty (THA, TKA).

Methods: Our analysis of randomised-control trials (RCTs) was performed according to the Preferred Reporting Items for Systematic Review and Meta-Analysis, PRISMA. Following quality assessment and data extraction, statistical analysis was completed using the Mantel-Hanzsel random effects model. Heterogeneity was assessed using the I2 value and the P value was kept significant at <0.05.

Results: With three RCTs, involving 400 patients, 186 were treated with ciNPWT and 203 were in the control group. The results showed that ciNPWT was associated with an increased risk of deep surgical infections (RR: 2.73, 95% CI: 0.49-15.05), and an increased risk of wound complications (RR: 1.75, 95% CI: 0.47-6.45), but a decreased risk of prolonged wound discharge (RR: 0.33, 95% CI: 0.08-1.35). Additionally, ciNPWT was linked to a significantly higher risk of postoperative blisters (RR: 8.30, 95% CI: 3.10-22.23).

Conclusion: While ciNPWT has potential benefits in reducing the duration of wound discharge in THA and TKA patients, our research showed that it also increases the risk of developing infections and other wound complications. Nevertheless, further RCTs are needed to determine the effectiveness of ciNPWT in this patient population.

In the Neck of Time: Assessment of the Effects of Maladaptive Neck Posturing in Reconstructive Microsurgeons Using Real-time Ergonomic Monitoring

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Introduction: This study aims to explore the prevalence of neck pain amongst reconstructive microsurgeons, quantify the time spent in a maladaptive posture (neck flexed >30°) during microsurgical free flap raise and inset and lastly, to identify factors associated with symptomatic neck pain.

Methods: Reconstructive microsurgeons were prospectively recruited prior to microsurgical cases at the Department of Plastic & Reconstructive Surgery, Beaumont Hospital, Dublin. The lead surgeon wore the Upright Go 2 device to measure time spent >30° in neck flexion during (a) free flap raise and (b) micro-anastomosis. Surgeon characteristics and procedural factors were collated and the impact on surgeon function assessed using the Neck Disability Index (NDI) questionnaire.

Results: Eight surgeons performed 19 free flap procedures during the study period. Time spent in >30° neck flexion was 79.44%(SD=11.88%) of total procedural time during flap raise (mean time =1.68 hours) compared to 6.5% (SD=10.3%) during micro-anastomosis (mean time =1.2 hours) ($p<0.0001$, Mann-Whitney U test). Older age correlated with a greater prevalence of neck pain ($p=0.011$) and more surgeries per week were correlated with neck pain in the preceding 7 days ($p=0.02$). Older surgeons were more likely to reduce work ($p<0.001$) and leisure ($p<0.001$) activities due to neck pain and were less likely to support ($p<0.001$) or use ($p<0.001$) biofeedback postural training.

Conclusion: Ergonomic maladaptive posturing was significant during free flap raise and raises significant concerns as an occupational hazard. Exploration of interventions is urgently required to mitigate long term musculoskeletal dysfunction in microsurgeons.

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Optimising Pharyngeal Pouch Repair Evaluation with Standardised PROMs

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Introduction: Pharyngeal pouch repair, although common, lacks a standardised approach to evaluating postoperative outcomes. Patient-Reported Outcome Measures (PROMs) may offer clinical utility for assessment of symptom severity and quality of life perioperatively

Methods: This retrospective study analysed pre- and post-operative PROM scores from 17 patients who underwent single-surgeon, transoral pharyngeal pouch repair at a single centre (2015-2024). We utilised paired t-tests to analyse data from the same individuals, comparing pre- and post-operative scores for three validated PROMs: Eating Assessment Tool (EAT-10), Voice Handicap Index (VHI-10), and Reflux Symptom Index (RSI). The surgical technique employed microscope-assisted CO2 LASER partial cricopharyngeal myotomy +/- stapling (pouch depth > 1cm). The mean time interval from preoperative PROMs to surgery was 9 months (range 1-30), and operation date to postoperative PROMs was 24 months (range 2-105).

Results: All PROM scores demonstrated statistically significant improvements postoperatively. EAT-10 measuring swallowing difficulties improved significantly ($p < 0.001$), mean preoperative score of 25.33(± 9.29) decreased to 7.93(± 10.12) post-operatively. Similarly, RSI score reflecting reflux-related throat symptoms, showed significant improvement ($p < 0.001$), a mean preoperative score of 28.53(± 8.46) dropping to 10.2(± 9.58) post-surgery. The VHI-10 score assessing voice difficulties, also

showed a decrease from mean preoperative score of 15.20(± 13.11) to 7.33(± 11.21) post-operatively, reaching statistical significance (p = 0.044).

Conclusion: The results provide support for wider, routine adoption of these three validated and practical PROMs in clinical practice. The authors now plan for systematic, digitised and decentralised PROMs collection linking with a new electronic patient record system.

One-Year Follow-up is Sufficient Time for Patient-Reported Outcomes following Rotator Cuff Repair: A Systematic Review and Meta-analysis**

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Introduction: The purpose of this study was to perform a systematic review to determine whether there were clinically significant differences in patient reported outcomes (PROMs) from 1- to 2-year follow-up following rotator cuff repair (RCR).

Methods: A literature search of three databases was performed based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines. Randomized controlled trials (RCTs) reporting on PROMS at 1- and 2-years follow-up following RCR were included. Meta-Analysis was performed and a p-value < 0.05 was considered to be statistically significant.

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Results: Nineteen RCTs with 2,110 patients were included. There was a statistically significant difference in ASES score between 1-year (mean 87) and 2-year (mean 89.4) follow-up ($p < 0.00001$), but this did not reach the minimal clinically important difference (MCID). There was no statistically significant difference in VAS pain score between 1- (mean 0.9) and 2-year (mean 0.8) follow-up ($p = 0.10$). Additionally, the differences in SST, UCLA, Constant, and WORC index, between 1- and 2- year follow-up did not reach the MCID despite statistically significant differences.

Conclusions: Statistically significant differences in patient-reported outcomes are reported between 1- and 2- year follow up points, although these differences fail to reach minimally clinical important differences. As a result, 1-year follow-up may be sufficient to determine clinical outcomes from rotator cuff repair.

***winner of the Best Poster Presentation prize*