SELECTED ABSTRACTS

Pathologic Outcomes of Laparoscopic vs Open Mesorectal Excision for Rectal Cancer; A Systematic Review and Meta-analysis

Aleix Martínez-Pérez, Maria Clotilde Carra, Francesco Brunetti, Nicola de'Angelis

JAMA Surg. Published online February 8, 2017. doi:10.1001/jamasurg.2016.5665

Objective

To review and analyze the evidence concerning the pathologic outcomes of laparoscopic (LRR) vs open (ORR) rectal resection for rectal cancer.

Methods

The Cochrane Central Register of Controlled Trials, MEDLINE (through PubMed), EMBASE, Scopus databases, and clinicaltrials.gov were searched for randomized clinical trials (RCTs) comparing LRR vs ORR.

Study Selection Only RCTs published in English from January 1, 1995, to June 30, 2016, that compared LRR with ORR for histologically proven rectal cancer in adult patients and reported pathologic outcomes (eg, positive circumferential resection margin, and complete mesorectal excision) were eligible for inclusion. Of 369 records screened, 14 RCTs were selected for the qualitative and quantitative analyses

Data Extraction and Synthesis

Two independent reviewers performed the study selection and quality assessment. Random-effects models were used to summarize the risk ratio (RR) and mean differences.

Results

The meta-analysis included 14 unique RCTs with 4034 unique patients. Of 2989 patients undergoing rectal resection, a positive CRM was found in 135 (7.9%) of 1697 patients undergoing LRR and 79 (6.1%) of 1292 patients undergoing ORR (RR, 1.17; 95% CI, 0.89-1.53; P = .26; I2 = 0%) in 9 studies.

A noncomplete (nearly complete and incomplete) mesorectal excision was reported in 179 (13.2%) of 1354 patients undergoing LRR and 104 (10.4%) of 998 patients undergoing ORR (RR, 1.31; 95% CI, 1.05-1.64; P = .02; I2 = 0%) in 5 studies. The distal resection margin involvement (RR, 1.12; 95% CI, 0.34-3.67; P = .86), the mean number of lymph nodes retrieved (mean difference, 0.05; 95% CI, −0.77 to 0.86; P = .91), the mean distance to the distal margin (mean difference, 0.01 cm; 95% CI, −0.12 to 0.15 cm; P = .87), and the mean distance to radial margins (mean difference, −0.67 mm; 95% CI, −2.16 to 0.83 mm; P = .38) were not significantly different between LRR and ORR. The risk for bias was assessed as low in 10 studies, high in 3, and unknown in 1. The overall quality of the evidence emerging from the literature was rated as high.

Conclusions and Relevance Based on the available evidence, the risk for achieving a noncomplete mesorectal excision is significantly higher in patients undergoing LRR compared with ORR. These findings question the oncologic safety of laparoscopy for the treatment of rectal cancer. However, long-term results of the ongoing RCTs are awaited to assess whether these pathologic results have an effect on disease-free and overall patient survival.

Conclusions

The rate of positive circumferential resection margin (CRM), defined as 1 mm or less from the closest tumor to the cut edge of the tissue, and the quality of mesorectal excision (complete, nearly complete, or incomplete).

Commentary

P.C. Chandrasinghe
University of Kelaniya & Imperial College London

Safety of laparoscopy for rectal cancer surgery has remained controversial despite the gaining popularity of the technique. The two main outcome indicators; completeness of the mesorectum and circumferential margin clearance are regarded as the parameters of assessing safety of rectal cancer surgery. This meta analysis by Martínez-Pérez et al involving over 4000 patients reveals a significantly higher positive CRM and incomplete mesorectal excision in the laparoscopic group. In 2015 a randomized trial (ALaCaRT), produced similar results with T1-T3 tumours [1]. The inferiority of laparoscopic surgery could not be excluded from this trial.

An interesting observation in this study is the authors' classification of nearly complete and incomplete mesorectal excision in to a common non-complete group. The landmark study in this regard by Nagtegall et al in 2002 demonstrated that recurrence rates in the nearly complete cohort were equal to that of complete [2]. Trials having a longer follow up and clinical outcome as end points may answer these concerns.

Another confounding factor that affects a study of this nature is the surgical technique. Precise rectal dissection requires a considerable training and the surgeon factor would significantly affects the end points.

Although these results are unable to issue a verdict it should be considered in the decision making process. However these

findings should not discourage the use of laparoscopy but should rather encourage improvisations such as trans-anal dissection and robotic surgery.

References

1. Stevenson ARL, Solomon MJ, Lumley JW, Hewett P, Clouston AD, Gebski VJ, et al. Effect of Laparoscopic-Assisted Resection vs Open Resection on Pathological Outcomes in Rectal Cancer. JAMA [Internet]. 2015 Oct 6 [cited 2017 Mar 7];314(13):1356.
2. Nagtegaal ID, van de Velde CJH, van der Worp E, Kapiteijn E, Quirke P, van Krieken JHJM, et al. Macroscopic evaluation of rectal cancer resection specimen: clinical significance of the pathologist in quality control. J Clin Oncol [Internet]. American Society of Clinical Oncology; 2002 Apr 1 [cited 2017 Mar 7];20(7):1729–34.

How to select patients and timing for rectal indomethacin to prevent post-ERCP pancreatitis: a systematic review and meta-analysis.

Wan J, et al

BMC Gastroenterology 2017 Mar 15;17(1):43.

Objective

A systematic search was performed in June 2016. Human prospective, randomized, placebo-controlled trials that compared rectally administered indomethacin with a placebo for the prevention of post-ERCP pancreatitis (PEP) were included. A meta-analysis was performed using a random-effects model to assess the outcomes (PEP) using Review Manager 5.0.

Methods

Three hundred ninety-three grade II/III HD patients recruited in 22 centers from 2010 to 2013 were randomized to DGHAL (n = 197) or SH (n = 196). The primary endpoint was operative-related morbidity at 3 months (D.90) based on the Clavien-Dindo surgical complications grading. Total cost, cost-effectiveness, and clinical outcome were assessed at 1 year.

Results

Seven randomized controlled trials met the inclusion criteria (n = 3013). The overall incidence of PEP was significantly lower after prophylactic administration of rectal indomethacin than after administration of the placebo (RR, 0.58, 95% CI, 0.40–0.83; P = 0.004). A subgroup analysis was performed for rectal indomethacin administration compared to a placebo in high-risk patients (RR, 0.46; 95% CI, 0.32–0.65; P < 0.00001) and average-risk patients (RR, 0.75; 95% CI, 0.46–1.22; P = 0.25) and for administration before ERCP (RR, 0.56; 95% CI, 0.39–0.79; P = 0.001) and after the procedure (RR, 0.61; 95% CI, 0.26–1.44; P = 0.26).

Conclusions

This meta-analysis indicated that prophylactic rectal indomethacin is not suitable for all patients undergoing ERCP but it is safe and effective to prevent PEP in high-risk patients. In addition, rectal indomethacin administration before ERCP is superior to its administration after ERCP for the prevention of PEP.

Commentary

Dulantha de Silva
Senior Lecturer in Surgery,
General Sir John Kotelawala Defence University,
Ratmalana, Sri Lanka.

Post-ERCP Pancreatitis (PEP) remains the most common complication of ERCP with an approximate average incidence of 3-5%. A number of patient related and procedure related factors have been identified as being associated with increased risk of PEP. Although much work has been done with regard to the prevention of this potentially life-threatening complication using a number of different techniques, only the use of prophylactic pancreatic duct stenting and prophylactic rectal NSAIDS appear to show any real promise.

This paper is a meta-analysis pooling data from 7 placebo controlled RCTs investigating the use of rectal indomethacin prevention of PEP, comprising of 3013 patients. The authors conclude that while rectal indomethacin is safe and effective in preventing PEP in high risk patients, it may not be useful in average or low risk patients.

There is now fairly convincing evidence that rectal NSAIDS, especially indomethacin is effective in reducing the incidence of PEP in high risk patient as borne out from evidence from a number of meta-analyses including this one. However its efficacy in lower risk patients is controversial.

Some other recent meta-analyses push the contrary view that there is effectiveness in an unselected patient population. Interestingly this paper has not included data from a large multi-centre RCT from China of over 2000 patients which suggests this view. Equally a large retrospective study of 4000 patients from Thiruvendam and colleagues in Pennsylvania also promotes this contention.

In Sri Lanka, there is no clear policy for rectal NSAID use for PEP prevention except in high-risk patients. At the present time, there is perhaps insufficient data to use rectal NSAIDS for PEP prophylaxis in all patients, but further results from on-going RCTs may help give a conclusive answer to this critical question.

Current treatment options for tendinopathy: a systematic review

Joel SVENSSON 1, 2, Praxitelis PRAXITELOUS 1, 2, Paul W. ACKERMANN 1

Published in Minerva OrtOpedica e trauMatOlOgica on March 2017

Background

Tendinopathy, both sports and work related, is increasing in prevalence. Evidence-based treatment options for tendinopathy, however, have been scarce. Here we provide a systematic review, updated on the current treat- ment options for tendinopathy.

Methods

References for this systematic review were searched in June 2016 without year restric- tions and limited to the English language in the following databases: Medline In-Process & Other Non-Indexed Citations (OVID), EMBASE (Elsevier), CINAHL (Ebsco), Cochrane Library including CENTRAL (Wiley), PEDro.

Results

Our search generated 2666 articles and where 97 where selected to be included in this review. Two reviewers independently evaluated the titles and abstracts of the identified publications and the selected full text manuscripts in an un-blinded standardized manner and excluded irrelevant articles (reviews, cadaver studies, technical descriptions, expert opinions). Disagreements between reviewers were resolved by consensus. We excluded articles stepwise based firstly on title, secondly on abstract, and thirdly on full text. Ninety of the selected articles were published in 2000 or later.

Conclusion

This evidence-based systematic review demonstrates that eccentric exercise and extracorporeal shock- wave treatment exhibit the best efficacy, cost effectiveness and fewer side effects and therefore should be the first-line of treatment for tendinopathy.

Commentary

Hiran Amarasekera
Consultant Orthopaedic Surgeon,
Neville Fernando Teaching Hospital,
Malabe, Sri Lanka.

Treatments of tendinopathies are common in orthopaedics and rheumatology

As there are many options sometimes it is difficult to judge what works and what doesn't. This systematic review looks at all options and their efficacies.

The authors have reviewed number of studies that describe number of treatment options that are used including eccentric and concentric exercises, manual therapy, NSAIDS, orthotic devices, bio physical treatments such as shock wave and low intensity ultra sound and Laser therapies, Pharmaco-therapies such as GTN, steroid injections and PRP (Platelet rich plasma) injections in number of different tendinopathies.

These include Shoulder, Elbow (Tennis elbow), Achilles patella tednoapthies, Dequervain's and many other conditions.

Authors conclude that non-invasive methods such as exercises and physio-therapy to be the first line effective treatment and injection such as PRP and steroids to be second line and to give temporary relief and limit surgery to resistant cases when above therapy fails. They also conclude that numbers needing surgery re relatively low.

Full text article is available as open access as "Svensson J, Praxitelous P, Ackermann PW. Current treatment options for tendinopathy: a systematic review. Minerva Ortop Traumatol 2017;68:20-33. DOI: 10.23736/S0394-3410.17.03785-7)"

http://www.minervamedica.it/en/getfreepdf/OIJQOKm%2FFmjNQqT9BohsqXzN3e51W29ij3TtcfpvN0Qj788oMGiSHfkY2x%2FM0jgSLeUVZw6GtVNAHuCRO4T95w==/R14Y2017N01A0020.pdf

---

Trial of Pregabalin for Acute and Chronic Sciatica

Stephanie Mathieson, M.Chiro., Christopher G. Maher, Ph.D., Andrew J. McLachlan, Ph.D., Jane Latimer, Ph.D., Bart W. Koes, Ph.D., Mark J. Hancock, Ph.D., Ian Harris, Ph.D., Richard O. Day, M.B., B.S., M.D., Laurent Billot, M.Sc., M.Res., Justin Pik, M.B., B.S., Stephen Jan, Ph.D., and C.-W. Christine Lin, Ph.D.

The New England Journal of Medicine
March 23, 2017 vol.376 no. 12

Background

Sciatica can be disabling, and evidence regarding medical treatments is limited. Pre- gabalin is effective in the treatment of some types of neuropathic pain. This study examined whether pregabalin may reduce the intensity of sciatica.

Methods

Wwe conducted a randomized, double-blind, placebo-controlled trial of pregabalin in patients with sciatica. Patients were randomly assigned to receive either pregabalin at a dose of 150 mg per day that was adjusted to a maximum dose of 600 mg per day or matching placebo for up to 8 weeks. The primary outcome was the leg-pain intensity score on a 10-point scale (with 0 indicating no pain and 10 the worst possible pain) at week 8; the leg-pain intensity score was also evaluated at week 52, a secondary time point for the primary

outcome. Secondary outcomes included the extent of disability, back-pain intensity, and quality-of-life measures at prespecified time points over the course of 1 year.

Result

A total of 209 patients underwent randomization, of whom 108 received pregabalin and 101 received placebo; after randomization, 2 patients in the pregabalin group were determined to be ineligible and were excluded from the analyses. At week 8, the mean unadjusted leg-pain intensity score was 3.7 in the pregabalin group and 3.1 in the placebo group (adjusted mean difference, 0.5; 95% confidence interval [CI], −0.2 to 1.2; P=0.19). At week 52, the mean unadjusted leg-pain intensity score was 3.4 in the pregabalin group and 3.0 in the placebo group (adjusted mean difference, 0.3; 95% CI, −0.5 to 1.0; P=0.46). No significant between-group differences were observed with respect to any secondary outcome at either week 8 or week 52. A total of 227 adverse events were reported in the pregabalin group and 124 in the placebo group. Dizziness was more common in the pregabalin group than in the placebo group.

Conclusion

Treatment with pregabalin did not significantly reduce the intensity of leg pain associated with sciatica and did not significantly improve other outcomes, as compared with placebo, over the course of 8 weeks. The incidence of adverse events was significantly higher in the pregabalin group than in the placebo group. (Funded by the National Health and Medical Research Council of Australia; PRECISE Australian and New Zealand Clinical Trials Registry number, ACTRN12613000530729.)

Commentary

Dr. Ruvini Abeygunaratne
Consultant Neurosurgeon,
Hope Hospital, Manchester,
Lanka hospitals, Colombo, Sri Lanka.

This is a very interesting and useful trial conducted on a drug, which is widely prescribed for sciatic pain. The patient group size and the double-blinded randomization, gives rise to a solid trial base.

Many specialists in the treatment of sciatica prescribe Pregabalin as a medication. Pregabalin as well as gabapentin is one of the first line treatments in the management of neuropathic pain related to sciatica.

This trial one of the first of its kind, puts into question its use especially taking into account the increase in side effects suffered by those who were prescribed it. This prompts close scrutiny of its use and further larger group trials. I will certainly be making changes in my practice.