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# What does the future hold for ventral rectopexy? Functional outcome after laparoscopic posterior sutured rectopexy versus ventral mesh rectopexy for rectal prolapse: six-year follow-up of a double-blind, randomised single-centre study

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Although multiple operations have been described for the surgical treatment of rectal prolapse over the past 150 years, there have been very few trials conducted to compare treatments and even fewer to compare the functional outcomes. One of the largest randomised trials conducted in the field of pelvic floor surgery is the well-known PROSPER trial comparing abdominal with perineal approaches. [1] Although there was a clear trend in favour of resection rectopexy with a recurrence rate of 13% (suture rectopexy 26%, perineal rectosigmoidectomy 24%, Delorme's 31%) there was no significant differences declared in the randomised comparisons although substantial improvements in the quality of life were noted following all procedures. However, only 293 of the original target 950 patients were recruited when the trial was stopped. As such it is not appropriate to consider this to be evidence of equivalence between abdominal and perineal approaches for treatment of rectal prolapse.

Ventral rectopexy was not included as one of the choices in the PROSPER trial as it had not been widely performed at the time that the trial was commenced, even though it had been performed by small groups in Europe since the 1950's/1960's. Indeed, the term "ventral rectopexy" was first used in a paper by the German Surgeon F. Deuscher in 1960. [2] A number of centres in Europe and the United Kingdom started performing the modern interpretation of the ventral rectopexy using minimally invasive approaches. [3] The principle advantage of the ventral approach is the avoidance of the posterior mobilisation and preservation of rectal function with avoidance of postoperative constipation. In a follow up to the PROSPER trial, which examined the surgical practices for exter-

nal rectal prolapse in 1997 with 2014, there was a clear change towards abdominal approach. [4] There had also been a dramatic increase in the preference for ventral rectopexy with matching decrease in the number of both posterior rectopexy and resection rectopexy during that time. However, with the recent concerns with mesh complications, some centres have become reluctant to perform ventral rectopexy.

Although excellent longterm data with regard to the safety, functional outcomes and recurrence after ventral rectopexy have been reported [5,6], to date there has only been one randomised trial comparing the preoperative to postoperative functional outcomes for ventral rectopexy (VR) versus posterior suture rectopexy (PSR). This trial was based on a relatively small group of 72 patients from a single centre in Denmark and reported in 2016. [7] This was a well-designed and conducted trial with excellent follow-up. The initial results did not demonstrate any significant difference between the functional outcomes of the two procedures at one year follow up. There was however, a longer postoperative gastrointestinal transit time in the PSR group as well as more patients with internal intussusception of the rectum compared with the VR group.

In this article of *EClinicalMedicine* from the same Danish group, there is a longer follow-up, now at six years, in which the functional outcome after VR has been shown to be significantly superior to posterior sutured rectopexy in patients with full thickness rectal prolapse. [8] Around 85% of the initial cohort of patients completed the long-term follow up questionnaires. Almost all the parameters significantly favoured the VR group at six years including the PAC-QoL, PAC-SYM, ODS and CCCS. Surprisingly, the continence score was not different between the two groups - this differs

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to the recent findings of a comparative study which showed that patients who underwent an operative procedure other than VR had similar outcome as compared with non-operated patients in terms of improvement with faecal incontinence. [9]

Although there was a difference in recurrence, the trial was not sufficiently powered to demonstrate significance, nor in relation to mesh related or other complications.

This study is the first to provide robust evidence that shows the longer-term functional outcomes after VR are superior to that after a posterior approach. In light of recent concerns related to the use of synthetic mesh in the pelvis larger multi centre studies are needed, perhaps now more than ever. Large scale trials for benign, functional pathology have been proven to be difficult to complete in the past. We now have a well-established pelvic floor society in the UK and Europe. Similar groups are now also being formed in other regions of the globe, including North America and the Asia Pacific region. These societies could provide an ideal conduit and platform to conduct such multi centre trials. There are many questions remaining to be answered regarding the type of operation, choice of prosthesis (synthetic versus biologic), robotic or laparoscopic approach and standardisation of technique amongst others. In the meanwhile, it may also be an appropriate time for an update to the previous International Consensus Statement on Ventral Rectopexy. [10]

#### Author's contribution

Dr Stevenson wrote this commentary.

#### Declaration of Competing Interest

No funding was received for this commentary. Dr Stevenson is a proctor/consultant for Applied Medical, Cook Medical, Intuitive

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