

# Does the time of ileal pouch creation in three-stage surgery for ulcerative colitis affect the quality of life?

Yury Kitsenko, Inna Tulina, Petr Tsarkov

I.M. Sechenov First Moscow State Medical University  
Clinic of Colorectal and Minimally Invasive Surgery

## Background

Emergency colectomy in UC patients is not an absolute contraindication to restorative procedure – ileal J-pouch and pouch-anal anastomosis (IPAA). However the policy of our clinic for severe UC patients who demand emergency colectomy is to perform a planned 3-stage surgery: 1 step – colectomy, 2 step – IPAA with ileostomy, 3 step – ileostomy closure with a period of several months between the steps. Still many clinics in Russia don't offer restorative procedures for severe UC patients even in long term after emergency colectomy. These patients

can be unaware of the possibility of IPAA procedure for quite a long time. Some of them receive the restorative procedure in our clinic several years after the initial surgery.

## Aim

To compare quality of life (QOL) in patients with UC who had IPAA as a part of planned 3-step restorative colectomy and patients who had IPAA that was not after emergency colectomy.

## Materials and methods

From prospectively collected database UC patients who underwent IPAA procedure after emergency colectomy were collected. They were divided into two groups:

**Group 1** – patients initially planned for 3-stage surgery.

**Group 2** – patients initially operated elsewhere, who came to our clinic for IPAA procedure.

QOL was evaluated 3 and 12 months after ileostomy closure with SF-36, Wexner score and IBDQ-32 scales.

## Results

In the period from 2008–2017 9 patients had their IPAA as a planned second step of 3-step procedure (all three steps performed in our clinic) and 17 patients had their initial surgery elsewhere and IPAA procedure in our clinic.

|                                     | Group 1   | Group 2    | p     |
|-------------------------------------|-----------|------------|-------|
| Count of patients                   | 9         | 17         | –     |
| Male:female                         | 7:2       | 9:8        | 0.2   |
| Age of UC debut, years              | 28.4±4.6  | 27.2±2.2   | 0.9   |
| Time of treatment, months           | 25.6±7.9  | 29.0±8.1   | 0.6   |
| BMI, kg/m <sup>2</sup>              | 22.3±1.4  | 22.0±1.8   | 0.9   |
| Age at surgery, years               | 30.7±4.1  | 29.8±2.1   | 0.8   |
| Truelove-Witts at surgery           | 2.9±0.1   | 2.5±0.2    | 0.2   |
| 1                                   | 2         | 2          | 0.59  |
| 2                                   | 3         | 4          |       |
| 3                                   | 4         | 11         |       |
| Time from colectomy to IPAA, months | 2.2±0.4   | 44.7±9.5   | <0.01 |
| Urgent surgery                      | 8 (89%)   | 16 (94%)   | 0.6   |
| Reason for urgent surgery           |           |            |       |
| Megacolon                           | 2 (25%)   | 3 (18.75%) | 0.8   |
| Bleeding                            | 3 (37.5%) | 7 (43.75%) | 0.7   |
| Perforation                         | 0         | 4 (25%)    | 0.1   |
| Acute attack                        | 3 (37.5%) | 2 (12.5%)  | 0.2   |

Short-term results on second stage

|                                  | Group 1  | Group 2  | p    |
|----------------------------------|----------|----------|------|
| Operation time, min              | 301±19   | 291±13   | 0.66 |
| Blood loss, ml                   | 222±43   | 372±61   | 0.06 |
| ASA                              | 2.0±0.0  | 2.1±0.1  | 0.16 |
| Laparoscopic approach            | 3 (33%)  | 2 (12%)  | 0.27 |
| Intraoperative complications     | 1(11%)   | 2 (3,2%) | –    |
| Hospital stay, days              | 13.9±1.5 | 14.1±1.8 | 0.93 |
| ICU stay, days                   | 1.1±0.1  | 1.5±0.2  | 0.1  |
| Saving of drainage, days         | 7.1±0.7  | 9.1±1.6  | 0.39 |
| Restoration of peristalsis, days | 1.7±0.2  | 1.6±0.2  | 0.83 |
| First gase, days                 | 2.0±0.2  | 2.1±0.3  | 0.89 |
| First stool, days                | 2.2±0.3  | 2.5±0.4  | 0.58 |
| Active infusion time, days       | 7.6±0.6  | 7.4±1.4  | 0.92 |
| Complications                    |          |          |      |
| Parastomal dermatitis            | 1        | 0        |      |
| Ileus                            | 1        | 3        |      |
| Pouchitis                        | 1        | 3        |      |
| Anastomotic leak                 | 0        | 1 *      |      |

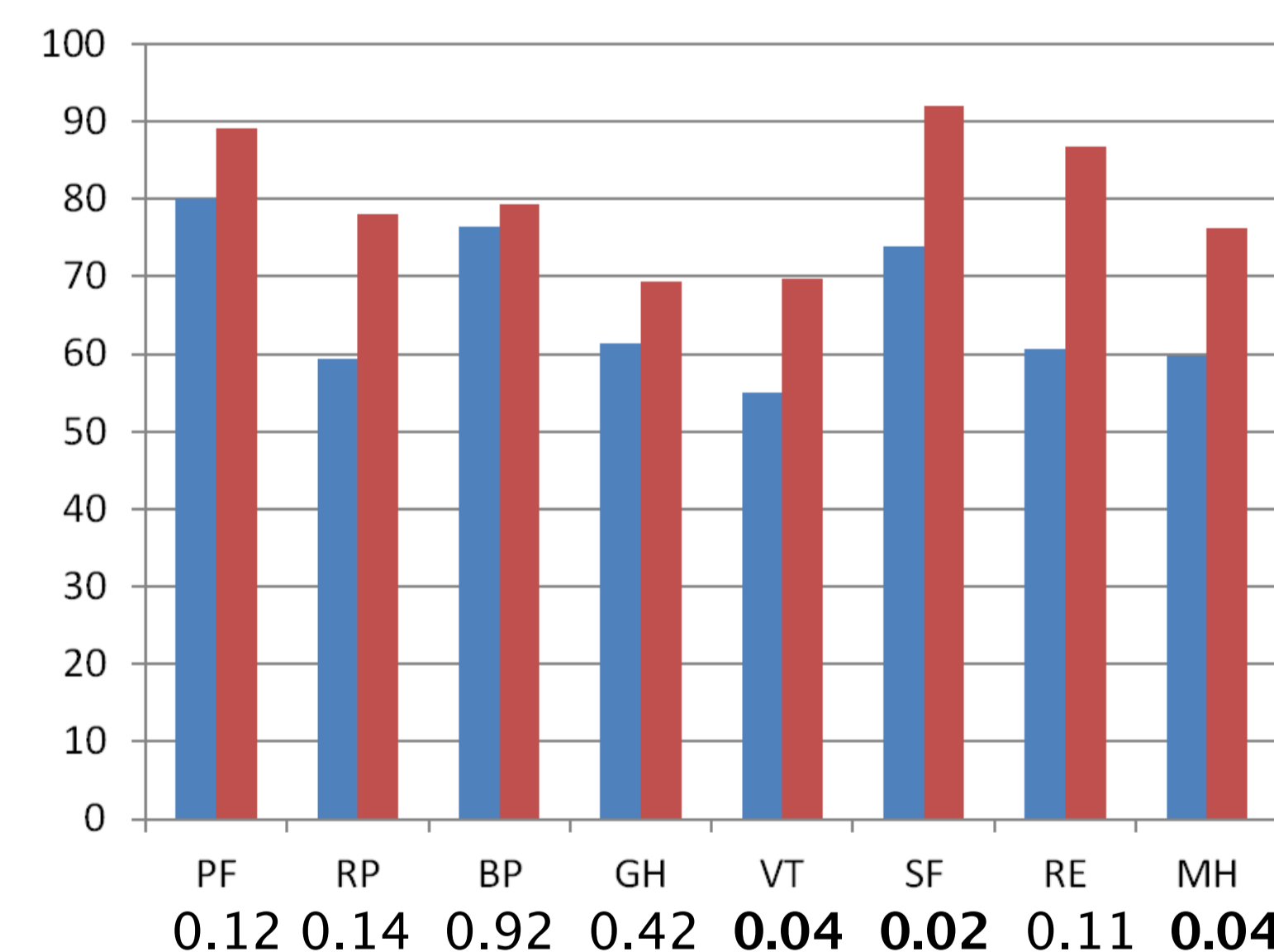
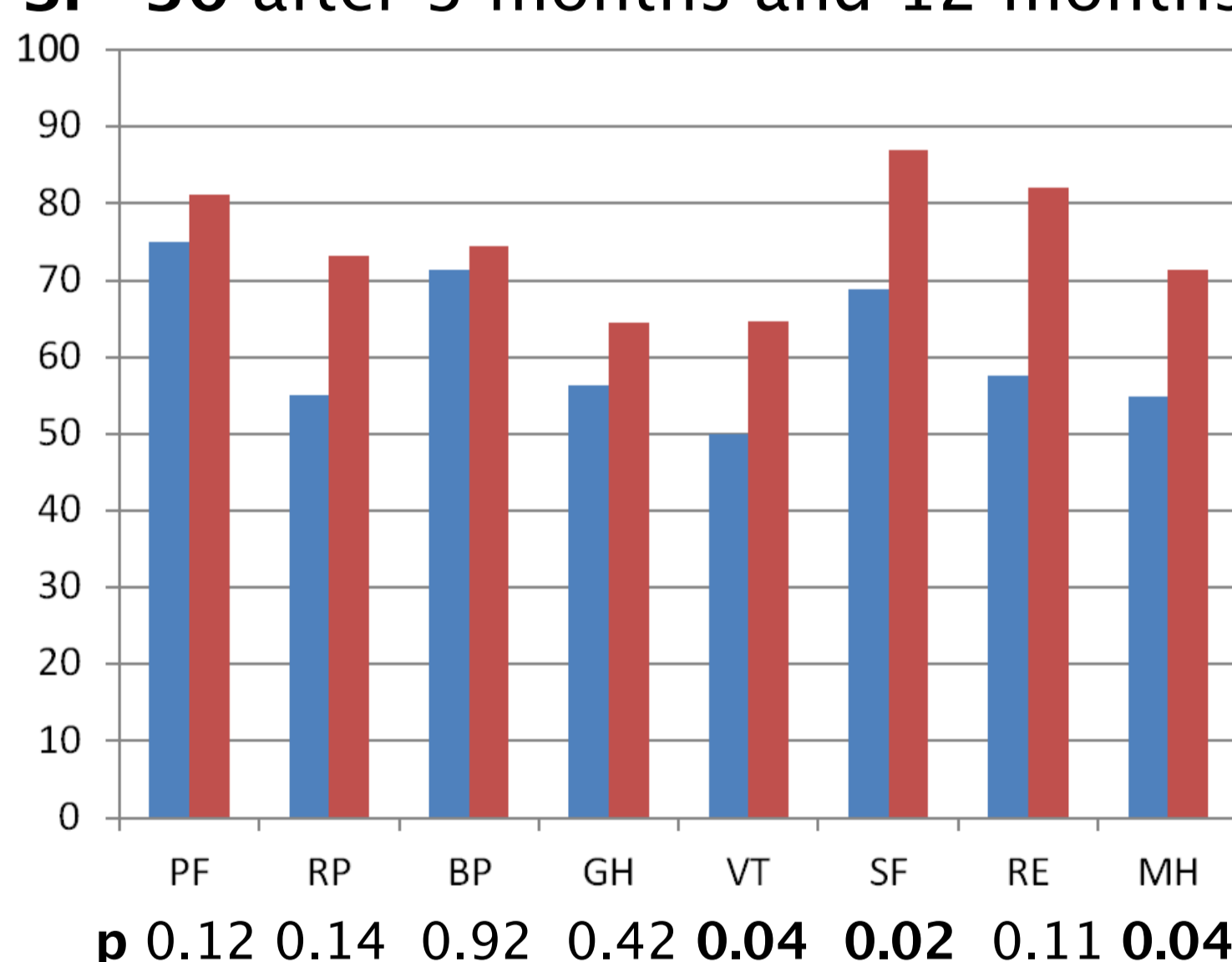
\* Pouch was removed.

**Long-term results** after closure of ileostomy  
Mean time was 56,0±6,7 months.

**Long-term complications:** cuffitis (1 in each group), amiloidosis (1 in second group), dysfunctions of pouch with formation of permanent ileostomy (2 in second group).

## Quality of life after closure of ileostomy

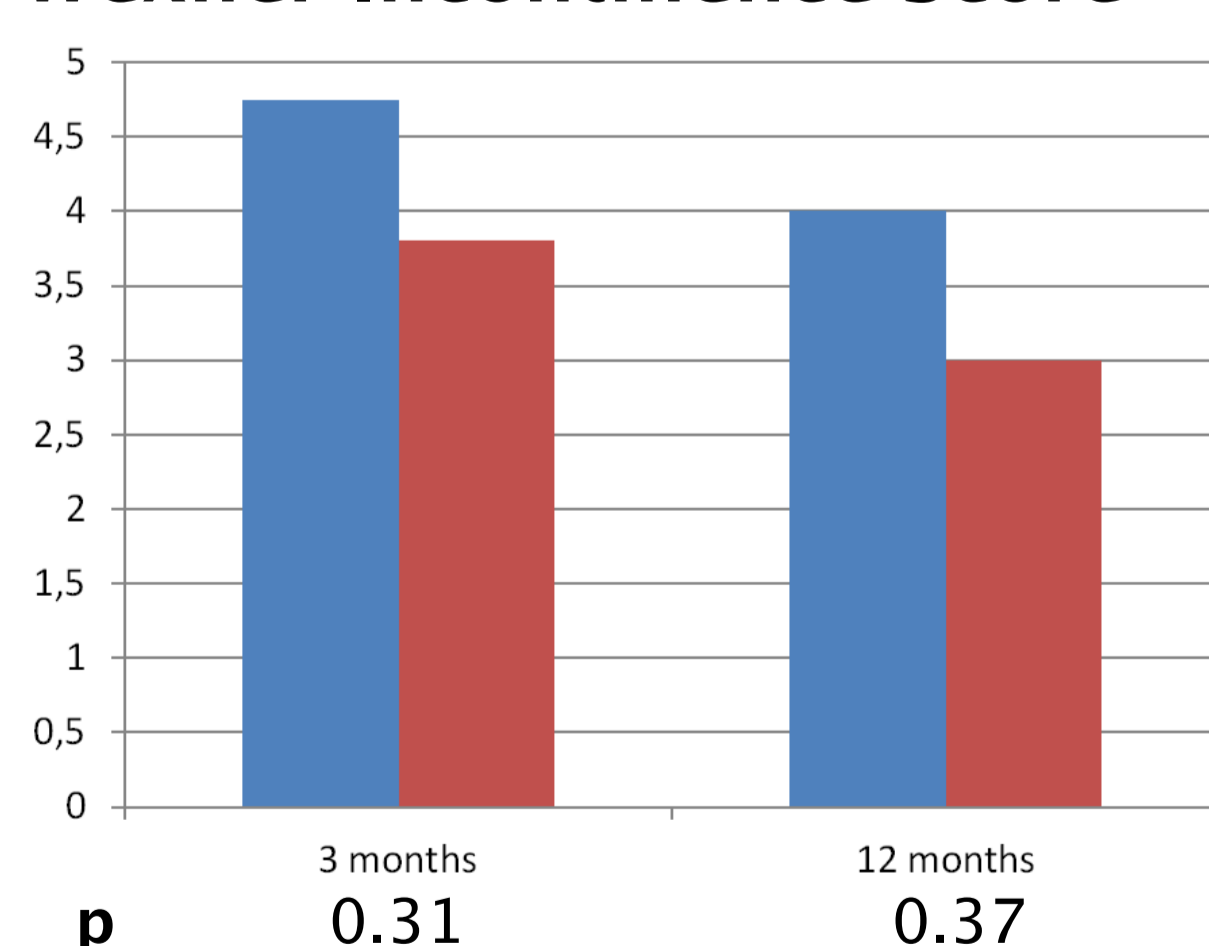
SF-36 after 3 months and 12 months



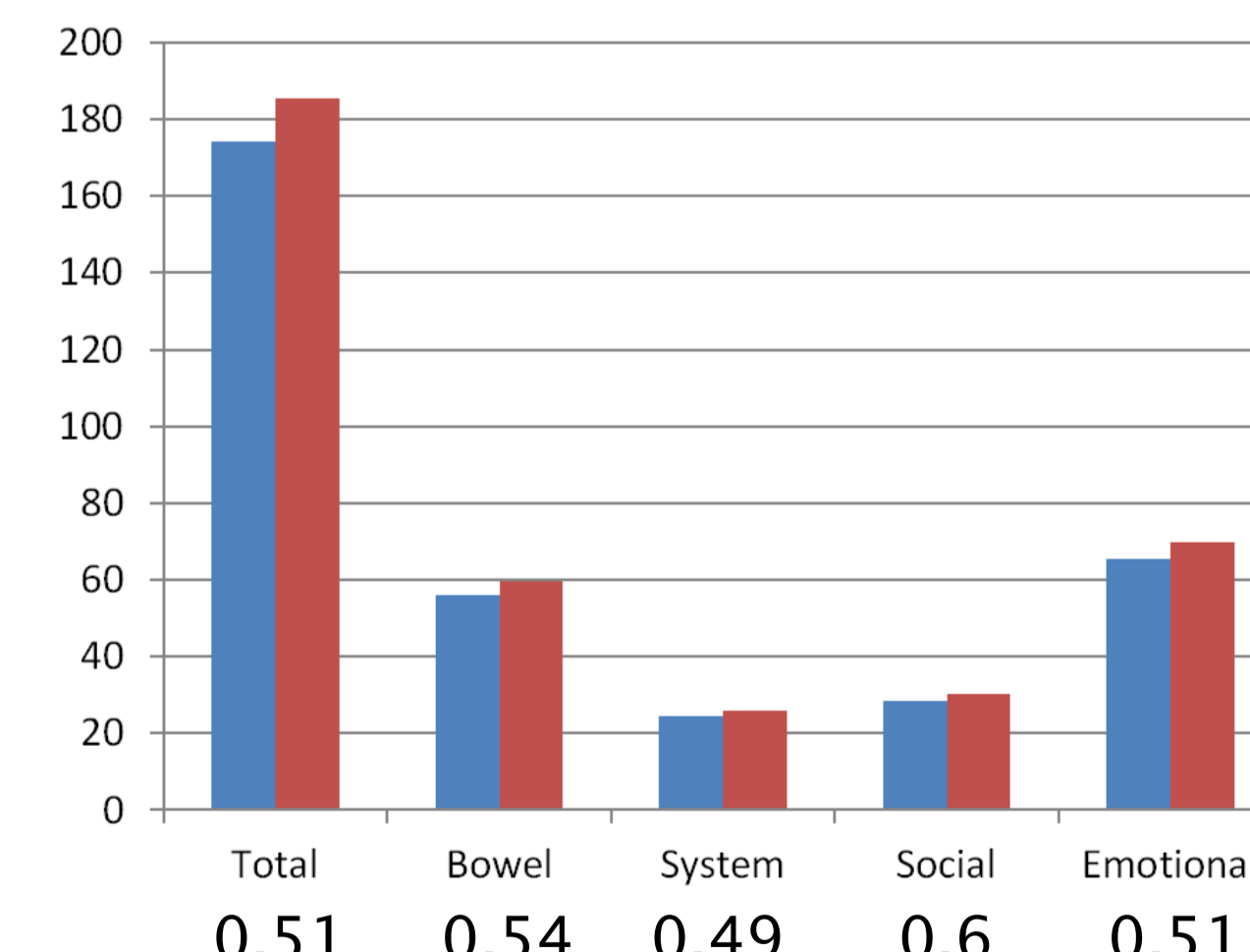
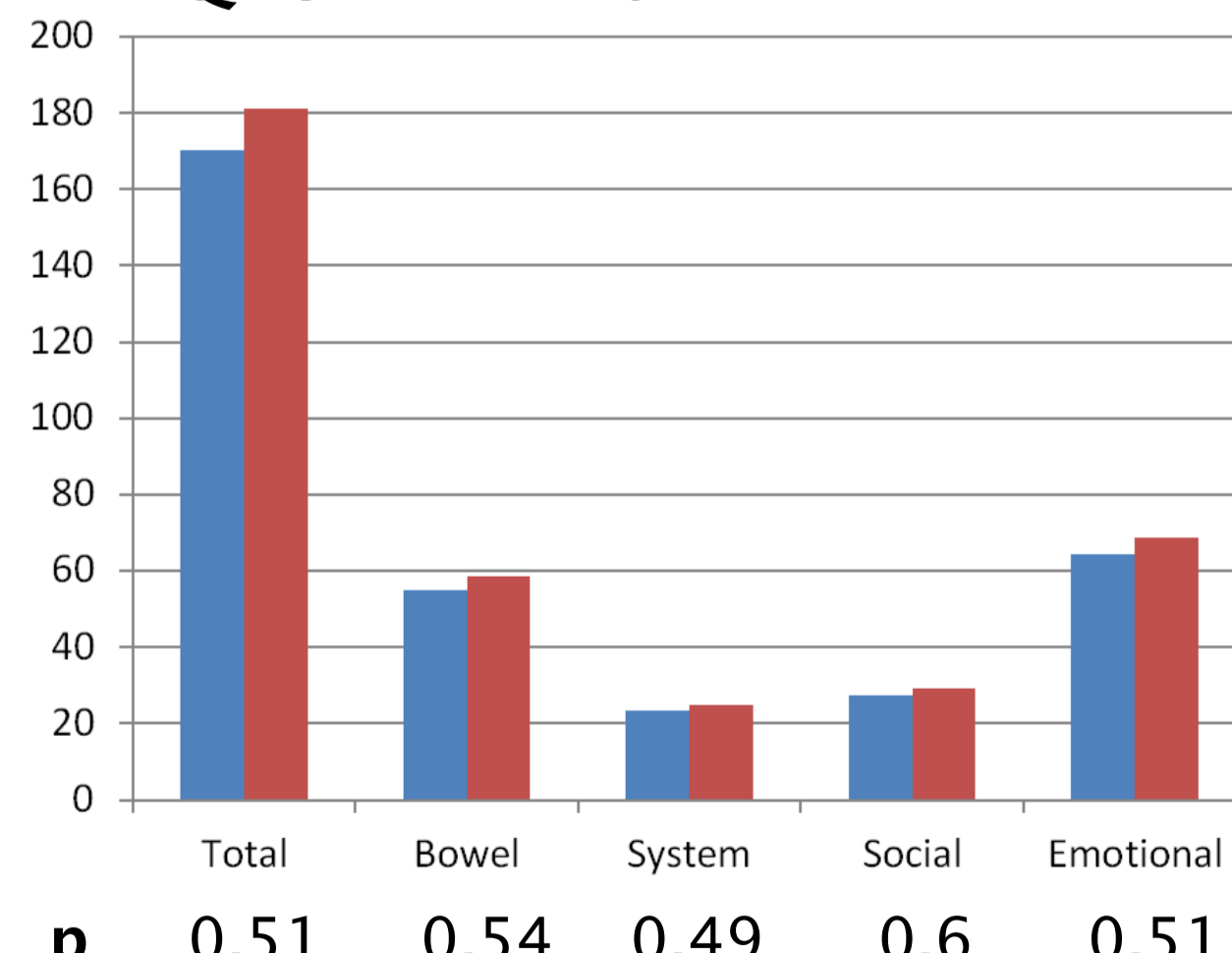
■ Group 1  
■ Group 2

PF – Physical Functioning  
RP – Role-Physical Functioning  
BP – Bodily pain  
GH – General Health  
VT – Vitality  
SF – Social Functioning  
RE – Role-Emotional  
MH – Mental Health

Wexner Incontinence Score



IBDQ-32 after 3 months and 12 months



## Conclusion

1. IPAA created in 3 and more years after initial colectomy is feasible and provides the same functional results as IPAA created as a part of planned surgery.

2. Surprisingly the QOL in patients who were initially planned for IPAA was lower than in patients who received their IPAA quite a long time after colectomy and were initially unaware about the option of reconstruction. Probably this is the result of exaggerated expectations of patients who are initially planned for three-stage surgery and anticipate better QOL

than they finally receive in short-term perspective. Opposite to them patients who had colectomy without any hope for reconstruction and finally receive IPAA several years after, often highly appraise this possibility and present with better perception of QOL.

3. Patients with severe UC who are planned for three-stage surgery may need more extensive consulting before surgery about expected QOL and possible difficulties and complications related to IPAA in order not to exaggerate their expectations.