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1 **Technical considerations and mid-term follow-up after vaginal hysterocolpectomy with**
2 **colpocleisis for pelvic organ prolapse**

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21 We have no direct or indirect commercial financial incentive associated with publication of
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23

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25 AV and ACP contributed to analysis and interpretation of data and article writing. AL
26 contributed to data collection. BJP and AF contributed to article revision.

27

28 **Abstract**

29 Objectives: At the time of controversies on surgical treatment of pelvic organ prolapse, our
30 aim was to describe an effective technique of hysterocolpectomy with colpocleisis for elderly
31 patients not wishing to maintain vaginal sexual activity and present mid-term results including
32 pelvic floor symptoms and quality of life, patient satisfaction and surgical complications using
33 validated scores.

34 Study design: We conducted a retrospective study of all patients having undergone this
35 surgery between June 2006 and June 2016. Women were examined using POP-Q
36 classification and completed validated questionnaires concerning symptoms and quality of life
37 before and after the surgery. Patient satisfaction was assessed using the PGI-I. Complications
38 were described according to the Clavien-Dindo classification.

39 Results: During the 10-year period, 37 women underwent the surgery with a mean age at
40 surgery of 81.2 years (range: 61-93 years). One per-operative complication occurred (a rectal
41 wound that was sutured) and five Clavien-Dindo grade 3b postoperative complications. Three
42 repeat operations were necessary within 15 days; one suburethral sling had to be lowered
43 because of urinary retention; one tension-free vaginal tape had to be unilaterally sectioned for
44 acute urinary retention; and one woman presented a pararectal abscess requiring surgical
45 drainage. The mean duration of hospitalization was 5.5 (+/-4.2) days. The mean follow-up
46 time was 44.1 (\pm 30.1) months. All symptoms and quality of life scores decreased significantly
47 after the surgery and patient satisfaction was good (PGI-I score=1.55 +/-0.8).

48 Conclusions: Hysterocolpectomy with colpocleisis appears to be an effective treatment with a
49 high level of patient satisfaction among the elderly.

50 **Keywords:** hysterocolpectomy, colpocleisis, pelvic organ prolapse, symptoms, satisfaction

51

52 **Introduction**

53 Cumulative incidence of POP surgery affects 11% of women after 70 years old [1]. Three
54 surgical techniques can be used to repair prolapse: the first is prosthetic surgery by the vaginal
55 or abdominal route (sacrocolpopexy) the main complication of which is mesh erosion [2]; the
56 second is the use of native tissue (autologous repair) which results in prolapse recurrence of
57 the anterior compartment in up to 55% of women [3]; and the third is obliterative surgery
58 (colpocleisis) which is an interesting option for the more elderly patient who does not wish to
59 preserve sexual function. One of the main difficulties of evaluating the satisfaction rates and
60 effectiveness of obliterative surgery is the heterogeneity of the surgical approaches (e.g., with
61 or without hysterectomy, and with or without perineorrhaphy).

62 We describe in this study the technique of vaginal obliteration associating with vaginal
63 hysterocolpectomy (as described by Rouhier) and vaginal vault repair (as described by
64 Campbell) and present mid-term results including pelvic floor symptoms and quality of life,
65 patient satisfaction and surgical complications.

66

67 **Materials and methods**

68 This was a retrospective single-center study of women who underwent hysterocolpectomy and
69 vaginal vault repair and colpocleisis at the Gynecology Unit of a University Teaching
70 Hospital between June 2006 and June 2016. Since 2006, we have systematically collected
71 patient data including evaluation by a standardized questionnaire. All women who underwent
72 the procedure were examined according to the Pelvic Organ Prolapse Quantification (POP-Q)
73 [4] before the surgery. Women completed validated questionnaires including the French
74 validated short version of the Pelvic Floor Distress Inventory 20 (PDFI-20) which evaluates
75 the severity of POP-related symptoms. The mean for the total PFDI-20 score and the mean
76 score for each sub-questionnaire of the PFID-20 (Urinary Distress Inventory (UDI-6), Pelvic

77 Organ Prolapse Distress Inventory (POPDI-6) and Colorectal-Anal Distress Inventory
78 (CRADI-8)) were reported [5]. Most of the patients underwent urodynamics before surgery.
79 This exam was carried out according to good practice [6]. The severity of stress urinary
80 incontinence (SUI) was assessed by the French validated Urinary Handicap Measurement
81 (MHU) questionnaire [7]. It is a graduated scale, completed by the physician, including seven
82 subscales (urgency severity, urge urinary incontinence, day-time and night-time frequency,
83 SUI and hesitancy).

84 *Surgical technique*

85 Following induction of general anesthesia, the patient is positioned in the dorsolithotomy
86 position. A sterile Foley catheter is placed into the urethra.

87 I- ***Anterior dissection.*** The anterior wall is infiltrated with diluted lidocaine injection. An
88 anterior quadrangular colpectomy is performed so the anterior colpocele can be
89 resected from point Aa to the anterior insertion of the cervix, corresponding to the
90 bladder aspect of the vagina [4] (Figure 1a). Halban's fascia is preserved if
91 possible in order to allow subsequent suburethral plication with 2-0 Vicryl sutures.
92 The dissection is pushed caudally by cutting the edge of the vagina medially to
93 free the suburethral part of the vagina. The vesico-uterine septum is identified and
94 opened and the bladder pushed back with compresses. The bladder is then
95 mobilized by disinserting the bladder pillars. An anterior valve is placed in this
96 space.

97 II- ***Posterior dissection.*** The posterior colpocele is infiltrated and a rectangular
98 colpectomy performed of the posterior vaginal wall to allow removal of the upper,
99 Douglas portion of the posterior vaginal wall (Figure 1b). The rectum is carefully
100 pushed down, and the Douglas pouch opened. A posterior valve and a wick is
101 placed in this space.

102 **III-*Hysterectomy***. The uterosacral ligaments on each side are then sectioned individually
103 and retained by wire to preserve them for the apical fixation of the vaginal vault.
104 The cervicovaginal pedicles and then the uterine pedicles are sectioned and
105 coagulated on each side with a thermofusion coagulation instrument. The round
106 ligaments are individualized on each side, sectioned and retained on wire. The
107 utero-ovarian ligaments and Fallopian tubes are sectioned and coagulated. The
108 peritoneum is closed by two continuous sutures of 2-0 Vicryl and extra-
109 peritonization of the uterosacral and round ligaments is performed to leave them
110 free for the following steps.

111 **IV-*Sub-urethrovesical plication***. Suburethral-vesical plication is performed with 3-0
112 Vicryl in one or two parallel planes to correct the distal part of the anterior
113 colpocele. The important point here is to take the plication beyond the neck of the
114 bladder, under the urethra to avoid *de novo* urinary incontinence

115 **V- *Lateral and apical fixations*** (Figure 1c). The two round ligaments are ligated and
116 fastened well forward under the bladder (Crossen technique) with 2-0 Vicryl [8].
117 Then both uterosacral ligaments are shortened, crossed and fastened to the vaginal
118 wall by two sutures of 2-0 Vicryl [9]. The vagina is closed along the sagittal plane
119 by continuous suture with 2-0 Vicryl.

120 **VI-*Posterior colpoperineorrhaphy*** with rectovaginal fascial plication. The tissues are
121 infiltrated and a horizontal perineal incision performed. The anal cap and
122 tendinous center of the perineum are then dissected. The rectovaginal septum is
123 cleaved and the anus identified before performing a quadrangular resection of the
124 caudal part of the posterior vaginal wall. Plication of the prerecti fascia is
125 performed with 3-0 Vicryl. The vaginal angle is reconstituted by myorrhaphy with
126 one or two sutures of 0 Vicryl and superficial perineorrhaphy with one to three 2-0

127 Vicryl sutures, and the natural obliquity of the vagina thus restored. The Foley
128 catheter is removed on postoperative day 1.

129 *Follow-up*

130 The women had post-operative examinations at 1 and 6 months and then yearly. They were all
131 contacted by a letter between June 2016 and October 2016 to evaluate their symptoms and
132 postoperative satisfaction. Both the pre- and postoperative questionnaires included the PFDI-
133 20, POPDI-6, CRADI-8 and UDI-6 scores as well as the Pelvic Floor Impact Questionnaire
134 (PFIQ-7) about the impact of the POP-related symptoms [10]. The International Consultation
135 on Incontinence Questionnaire Short Form (ICIQ-SF) questionnaire was added to explore
136 symptoms of incontinence [11]. Patient satisfaction was assessed using the validated Patient
137 Global Impression of Improvement (PGI-I) questionnaire [12].

138 As this type of surgery is usually performed on elderly and frail women, we used the ADL
139 (Activities of Daily Living) and IADL (Instrumental Activities of Daily Living) scales. These
140 scales were developed to assess capabilities relating to self-care and lifestyle, in order to
141 quantify an approximate level of dependency and frailty [13, 14]. Postoperative complications
142 were described according to the Clavien-Dindo classification [15].

143 *Statistical analysis*

144 We used Chi-2 and Fisher exact tests to compare qualitative variables and Student and Mann-
145 Whitney tests for quantitative variables, with a significance level of 5%. To define risk factors
146 for postoperative satisfaction a binary logistic regression model was constructed comparing
147 very satisfied patients (PGI-I = 1) to others.

148 Analyses were conducted using Stata 13.0 (Stata Corp., College Station, Texas).

149 Ethics committee approval was obtained from the French “Comité d’éthique de la recherche
150 en obstétrique et gynécologie” (CEROG 2018-GYN-0601).

151

152 **Results**

153 *Population characteristics (Table 1)*

154 During the study period, 37 surgical procedures were performed. Eight patients (21.6%) had a
155 history of pelvic surgery including five (13.5%) hysterectomies, two (5.4%) Burch
156 colposuspensions, and three (8.1%) abdominal surgeries for POP (Kapandji and
157 sacrocolpopexy). Thirty-two patients (91.4%) had a grade III cystocele, 25 (71.4%) a grade III
158 uterine prolapse, and 23 (67.7%) a grade II rectocele. Twenty-five patients (67.6%) had SUI
159 before surgery.

160 *Surgery characteristics (Table 2)*

161 All the procedures were performed by two experienced surgeons in pelvic surgery (AF and a
162 Hospital Service Practitioner, GB). The mean operative mean time was 112 mins. Eleven
163 (29.7%) patients were treated for SUI by suburethral sling at the same time. All these patients
164 complained of SUI and had urodynamics to study the intrinsic urethral sphincteric
165 competence and bladder contractility. One intraoperative complication occurred (2.7%): a
166 rectal wound that required suturing. Three (8.1%) new surgical interventions were required
167 within 15 days for serious adverse events. One patient needed her suburethral sling lowered
168 because of urinary retention 5 days after the procedure. She resumed spontaneous urination on
169 postoperative Day 8. On Day 14 another woman developed a pararectal abscess which
170 required surgical drainage. On Day 15 one woman required unilateral section of a tension-free
171 vaginal tape (TVT) for acute urinary retention. Two days after the section, urinary retention
172 was considered fully resolved : postvoid residual volume was < 100 ml with a peak flow rate
173 greater than 20 ml/s. The mean duration of hospitalization was 5.5 +/- 4.2 days.

174 *Functional outcomes and satisfaction*

175 Twenty-nine women returned the survey (78.4% response rate). No difference was noted
176 between responders and non-responders concerning pre- and postoperative characteristics

177 (Table 3). The mean time between the surgery and the last follow-up and the medical survey
178 were respectively: 16.9 months +/- 22.09 [range 1.03-105.53] and 44.09 months +/-30.15
179 [range 3.5-120.8]. All validated questionnaires concerning symptoms and quality of life
180 (POPDI-20, UDI-6, CRADI-8, POP-DI 6) decreased significantly after the surgery (Table 4).
181 The mean PGI-I was 1.55 +/- 0.8 [1-4]. The mean postoperative ICIQ-SF score was 2.15 +/-
182 4.4 [0-17].

183 The mean PGI-I score was 1.55 +/- 0.8 corresponding to patients “much better” or “better”:
184 PGI-I = 1 (“much better”) for 58.6% (17/29) of responders ; PGI-I = 2 (“better”) for 31.0%
185 (9/29) of responders. The only criterion associated with high satisfaction (PGI-I = 1) was the
186 grade of prolapse [3.7 (0.1) versus 3.1 (0.2) p=0.01] (Table 5).

187 *Urinary incontinence.*

188 Among the 37 women, 25 (67.6%) presented UI before the surgery. Among these, 11 (44%)
189 underwent concomitant UI surgery. Of these 11 women, two second surgeries (18%) were
190 required for urinary retention: one to lower the sling, and the other to section one arm of the
191 sling. Two women (18%) needed prolonged intermittent urinary catheters for dysuria.

192 After the colpocleisis, 13 women (35%) described UI but only one (7%) underwent a second
193 procedure. This woman’s preoperative urodynamic testing showed a major sphincter
194 deficiency. The postoperative severe urinary incontinence (ICIQ score = 17) was due to the
195 suburethral plication. A ProACT® sphincter device was implanted but later explanted because
196 of urethral erosion. Retropubic TVT was then inserted and the patient described a 60%
197 improvement in incontinence afterwards.

198 *Complications*

199 One case of rectal injury occurred which was sutured without postoperative complication (no
200 fever, no rectovaginal fistula) suites and one pararectal abscess that required surgical drainage
201 on day 14. One patient had a prolonged hospitalization due to hypokalemia that was

202 secondary to postoperative equilibration of diuretic therapy for high blood pressure. None of
203 the patients experienced prolapse recurrence, although one presented a rectal prolapse
204 requiring surgical management.

205

206 **Discussion**

207 According to this single-center retrospective study in 37 women, we confirmed that
208 colpocleisis is an effective procedure for the treatment of severe POP in women who do not
209 wish to retain coital function.

210 In our study, 58.6% (17/29) of responders declared to be much better (PGI-I=1) and 31.0%
211 (9/29) of them declared to be better (PGI-I = 2).

212 In a prospective cohort study including 40 patients, Hullfish et al. found that 95% of their
213 patients were either “very satisfied” or “satisfied” with their surgical outcome which is in
214 agreement with the 89.6% satisfaction rate (PGI-I \leq 2) we found [16]. In a French cohort of
215 25 women having undergone the same procedure, 56% (14/25) of the patients reported being
216 very satisfied and 32% (8/25) as being satisfied [17].

217 All the scores used in this study showed significant improvement (POPDI-6, CRADI -8, UDI-
218 6, PFDI-20) after surgery. In a cohort of women having undergone colpocleisis without
219 hysterectomy the PFDI-20 decreased from 121.3 (IQR 80.3-167.2) to 33.8 (IQR 12.5-72.9) at
220 6 weeks of follow up (p<0.01) confirming our results [18]. In Hullfish’s cohort, 35% of the
221 women had concomitant surgery for SUI which was similar to our cohort where 44% of the
222 patients had a midurethral sling implanted for preoperative incontinence (11/25) [16].

223 Eighteen percent (2/11) of the women in our study required sling revision surgery for urinary
224 retention and 18% (2/11) required intermittent urinary catheterization. Similarly, Fitzgerald
225 and Brubaker reported that 14% of patients who underwent colpocleisis together with fascial
226 sling placement required sling revision surgery [18]. Oliphant et al. performed a decision

227 analysis based on staged versus concomitant midurethral sling (MUS) surgery to treat women
228 with occult SUI planning to undergo colpocleisis. In their study, fewer than a quarter of the
229 women in the staged group underwent sling placement within 1 year [19]. In our study,
230 among the 13 patients (13/37, 35%) who presented SUI before the POP surgery, only one
231 woman (1/13, 7%) required sling placement later. Van der Ploeg et al. showed that only 52%
232 of women with a diagnosis of occult SUI experienced urinary incontinence after the surgery
233 [20]. However, of the women with occult SUI undergoing POP-only surgery, 13 % needed
234 additional MUS surgery. In Deval's retrospective study of 30 hysterocolpectomy with
235 colpocleisis procedures, no concomitant SUI surgery was performed, only suburethral
236 plication. In this study symptoms of SUI persisted in four cases (13%) and *de novo* SUI
237 occurred in two (6.6%) [17].

238 The risk of a *de novo* UI is an important element to discuss with the patient as some authors
239 found an association between postoperative UI and women's dissatisfaction. Indeed, Hullfish
240 and al. showed a statistical correlation between the postoperative UDI score and mean
241 personal satisfaction goal attainment [16]. Crips et al. used a different satisfaction score: the
242 Decision Regret Scale and the Satisfaction with Decision scale. These authors showed that 12
243 of their 87 subjects (13.8%) described regret or dissatisfaction with eight regrets due to *de*
244 *novo* urinary complaints [21]. We found that the presence of postoperative urinary
245 incontinence tended to limit patient satisfaction, although the study lacked the strength to
246 demonstrate this. In the group of "very satisfied patients" (PGI-I = 1) the proportion of
247 postoperative ICIQ-SF score >1 was 13.3% versus 50% in the PGI-I > 1 group (p=0.06).
248 None of the preoperative scores of symptoms and quality of life influenced patient satisfaction
249 (Table 5).

250 As described in the surgical technique, the creation of a deep ligamentous floor by the
251 Campbell-Crossen technique is essential. It is very important to pull the plication beyond the

252 neck of the bladder, under the urethra to avoid *de novo* incontinence. The suspension of the
253 bladder neck by this natural sling, and the final insertion of the bladder in the abdominal
254 enclosure has the double effect of contributing greatly to the treatment and prevention of SUI.
255 The main complications in our cohort were postoperative dysuria and rectal injury. For the
256 patient with rectal injury sutured at the time of surgery and for the patient requiring
257 postoperative abscess drainage, the PGI-I index was 1. In recent French recommendations,
258 Deffieux et al. estimated the rate of dysuria and the need for intermittent urinary
259 catheterization between 0 and 10% [22]. Von Pechmann et al. observed that concomitant
260 hysterectomy was associated with more blood loss and blood transfusion (35% versus 12%,
261 $p=0.02$) without increasing the rate of other surgery complications [23]. In the cohort
262 conducted by Katsara et al. in 44 women undergoing colpocleisis, five (11.4%) had major
263 complications (four bladder injuries and one bowel perforation) which were sutured during
264 surgery [24].

265 *Strengths and limitations:*

266 One of the strengths of our study was the use of validated instruments designed to assess the
267 impact of surgery. Furthermore, the follow-up period was the second longest period (44
268 months), after the cohort by Hanson et al in 1969, for this type of elderly population with a
269 responders' rate of 78.4% (29/37) [25].

270 Nevertheless, the retrospective nature and the low number of included patients raises some
271 limitations.

272


273 **Conclusions**

274 Hysterocolpectomy with colpocleisis is an effective treatment for POP in a population of
275 elderly women. Better assessment of patient expectations before surgery could improve the
276 satisfaction score. The severity of prolapse appears to be the main satisfaction criterion. The

277 occurrence of urinary complications (incontinence or dysuria) should be discussed with the
278 patients preoperatively as well as concomitant or staged treatment options.

279

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- 346

347 **Legend of Figures**

348 **Figure 1.** Operative technic

349 a. Anterior quadrangular colpectomy of the anterior colpocele between Aa and anterior
350 vaginal fornix

351 b. Rectangular colpectomy of the upper part of the posterior vaginal wall

352 c. Anterior and apical fixation by suburethral vesical plication, Crossen-Campbell technique
353 (round ligaments plications are not visible because they were performed before the uterosacral
354 ligaments were plicated)

355

356 **Legend of tables**

357 **Table 1.** Characteristics of our population

358 **Table 2.** Surgical characteristics

359 **Table 3.** Comparison of pre- and postoperative characteristics between responders and non-
360 responders


361 **Table 4.** Results of symptom and quality of life questionnaires before and after the surgery

362 **Table 5.** Satisfaction criteria based on patient characteristics (bivariate analysis)

363

364

365 **Conflict of Interest:**

366 The authors declare that they have no conflict of interest. 

367

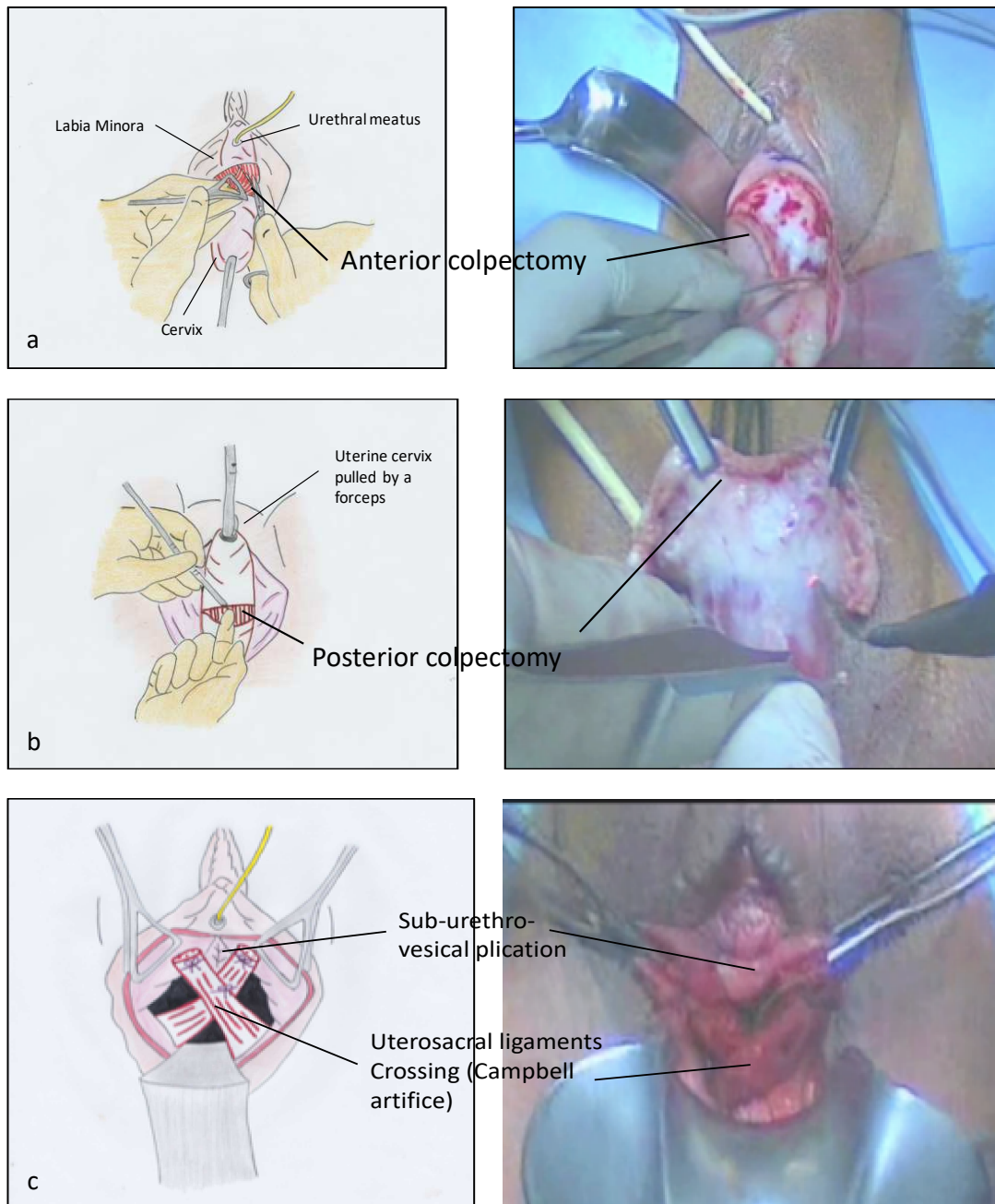


Figure 1. Operative technic

- a. Anterior quadrangular colpectomy of the anterior colpecele between Aa and anterior vaginal fornix
- b. Rectangular colpectomy of the upper part of the posterior vaginal wall
- c. Anterior and apical fixation by suburethral vesical plication, Crossen-Campbell technique (round ligaments plications are not visible because they were performed before the uterosacral ligaments were plicated)

Table 1. Characteristics of our population

		Total (n= 37) Mean (\pm SD) / n (%)
Age at response (years)		84.7 (7.1)
Age at surgery (years)		81.2 (6.0)
BMI (kg/m ²)		25.3 (4.0)
History of pelvic surgery*		8 (21.6)
	Hysterectomy	5 (13.5)
	Burch	2 (5.4)
	Kapandji	1 (2.7)
	Vaginal pelvic organ prolapse surgery	1 (2.7)
	Abdominal sacrocolpopexy	2 (5.4)
Cystocele before surgery†		
	Mean Ba point (cm)	+4.6 (2.5)
	Stage 1	1 (2.9)
	Stage 2	2 (5.7)
	Stage 3	21 (60.0)
	Stage 4	11 (31.4)
Uterine prolapse before surgery †		
	Mean C point (cm)	+4.6 (3.8)
	Stage 1	1 (2.9)
	Stage 2	9 (25.7)
	Stage 3	11 (31.4)
	Stage 4	14 (40.0)
Rectocele before surgery †		
	Mean Bp point (cm)	+0.9 (2.8)
	Stage 1	9 (26.5)
	Stage 2	14 (41.2)
	Stage 3	8 (23.5)
	Stage 4	3 (8.8)
Stress Urinary Incontinence before surgery (positive stress test)		
	No	12 (32.4)
	Yes	25 (67.6)
MHU scores before surgery		
	Urgency score (/8)	1.9 (2.3)
	Pollakiuria score (/8)	1.0 (1.3)
	Stress urinary incontinence score (/4)	1.1 (1.4)
	Dysuria score (/4)	1.8 (1.1)

Mean IADL score (0-8) 7.14 (1.5)

Mean ADL score (0-24) 23.7 (0.7)

BMI, Body Mass Index; IADL, Instrumental activities of daily living; ADL, Activities of daily living

† Grade of prolapse according to the POP-Q classification

* several possible surgeries for the same patient

Table 2. Surgical characteristics

		Total (n=37) Mean (\pm SD) / n (%)
Operating time (min)		112.1 (31.8)
Mean ASA score		2.5 (0.6)
	ASA 1-2	16 (43.2)
	ASA 3	18 (48.7)
Urinary incontinence surgery		
	No	26 (70.3)
	Retropubic tape (TVT)	4 (10.8)
	Transobturator tape (TVT-O)	7 (18.9)
Peroperative complications		1 (2.7)
Mean length of hospital stay (days)		5.5 (4.2)
Postoperative complications (Clavien-Dindo classification)		
	<i>Stage 3b</i>	
	Second intervention for serious adverse events	3 (8.1)
	Lowering of under urethral sling	1 (2.7)
	Section of under urethral sling	1 (2.7)
	Second surgery for urinary incontinence	1 (2.7)
	<i>Stage 3a</i>	
	Pararectal abscess drainage	1 (2.7)
	<i>Stage 2</i>	
	Dysuria (prolonged intermittent urinary catheterization)	2 (5.4)
	Pain	1 (2.7)
	Postoperative urinary incontinence	13 (35.1)

ASA, American Society of Anesthesiologists

Table 3. Comparison of pre- and postoperative characteristics between responders and non-responders

	Non-responders (n= 8)	Responders (n= 29)	p value
Age at surgery (years, mean, SD)	81.7 (1.3)	81.1 (1.2)	0.79
BMI (Kg/m ² , mean, SD)	23.6 (1.9)	25.7 (0.7)	0.20
Preoperative prolapse grade (POP-Q)			
2	0	2 (7.1)	0.50
3	5 (71.4)	12 (42.9)	
4	2 (28.6)	14 (50.0)	
History of pelvic surgery			
No	8 (100.0)	21 (72.4)	0.16
Yes	0	8 (27.6)	
Postoperative events			
No	7 (87.5)	22 (75.9)	0.65
Yes	1 (12.5)	7 (24.1)	

BMI Body Mass Index

Table 4. Results of symptom and quality of life questionnaires before and after the surgery

	Pre-operative (m+/-SD) [min-max]	Post-operative (m+/-SD) [min-max]	p
POP-DI 6	39.8 +/- 17.2 [16.7-66.7]	2.43 +/- 6.6 [0-29.2]	<0.0001
CRADI-8	15.7 +/- 14.2 [0-46.9]	7.55 +/-13.6 [0-43.7]	0.047
UDI-6	35.9+/-19.5 [0-75]	8.42 +/- 9.2 [0-31.2]	<0.0001
PFDI-20	93.3 +/- 46.3 [25-188]	18.4 +/- 24.0 [0-77.1]	<0.0001
ICIQ-SF	.	2.15 +/- 4.4 [0-17]	.

PFDI 20, Pelvic Floor Disorder Inventory; POPDI-6, Pelvic Organ Prolapse-Distress Inventory; CRADI-8, Colo-Rectal-Anal Distress Inventory; UDI-6, Urinary Distress Inventory

Table 5. Satisfaction criteria based on patient characteristics (bivariate analysis)

		Group PGI =1 (n=17) Mean (\pm SD) / n (%)	Group PGI >1 (n=12) Mean (\pm SD) / n (%)	p
Age		82.3 (2.0)	85.2 (1.6)	0.30
BMI* (Kg/m ²)		26.5 (1.0)	23.9 (1.2)	0.11
Grade of prolapse		3.7 (0.1)	3.1 (0.2)	0.01
Duration of hospitalisation		5.6 (0.8)	4 (0.3)	0.12
Hysterectomy	No	8 (47.1)	3 (25.0)	0.23
	Yes	9 (52.9)	9 (75.0)	
Postoperative urinary incontinence	No	11 (64.7)	6 (50.0)	0.42
	Yes	6 (35.3)	6 (50.0)	
Postoperative dysuria	No	15 (88.2)	11 (91.7)	0.76
	Yes	2 (11.8)	1 (8.3)	
IADL**		23.6 (0.2)	24 (0)	0.40
ADL**		6.9 (0.5)	7.7 (0.2)	0.36
Sub urethral sling during the surgery	No	15 (88.2)	9 (75.0)	0.62
	Yes	2 (11.8)	3 (25.0)	
pre-operative EVA		6.8 (0.4)	6.0 (0.7)	0.28
pre-operative MHU (SUI) †		1.6 (0.4)	0.6 (0.4)	0.09
Preoperative PFDI-20 (median) †	< 100	7 (53.8)	3 (37.5)	0.60
	\geq 100	6 (46.2)	5 (62.5)	
Preoperative POPDI-6 (median) †	< 37.5	6 (46.1)	3 (37.5)	0.90
	\geq 37.5	7 (53.9)	5 (62.5)	
Preoperative UDI-6 (median) †	< 37.5	6 (46.1)	4 (50.0)	0.90
	\geq 37.5	7 (53.9)	4 (50.0)	
Preoperative CRADI-8 (median) †	< 14.06	8 (61.5)	3 (37.5)	0.30
	\geq 14.06	5 (38.5)	5 (62.5)	

* BMI: Body Mass Index, **IADL: Instrumental Activities of Daily Living / ADL: Activities of Daily Living

†MHU, Urinary Handicap Measurement; PFDI 20, Pelvic Floor Disorder Inventory; POPDI-6, Pelvic Organ Prolapse-Distress Inventory; CRADI-8, Colo-Rectal-Anal Distress Inventory; UDI-6, Urinary Distress Inventory