Creation of a neovagina in Rokitansky syndrome

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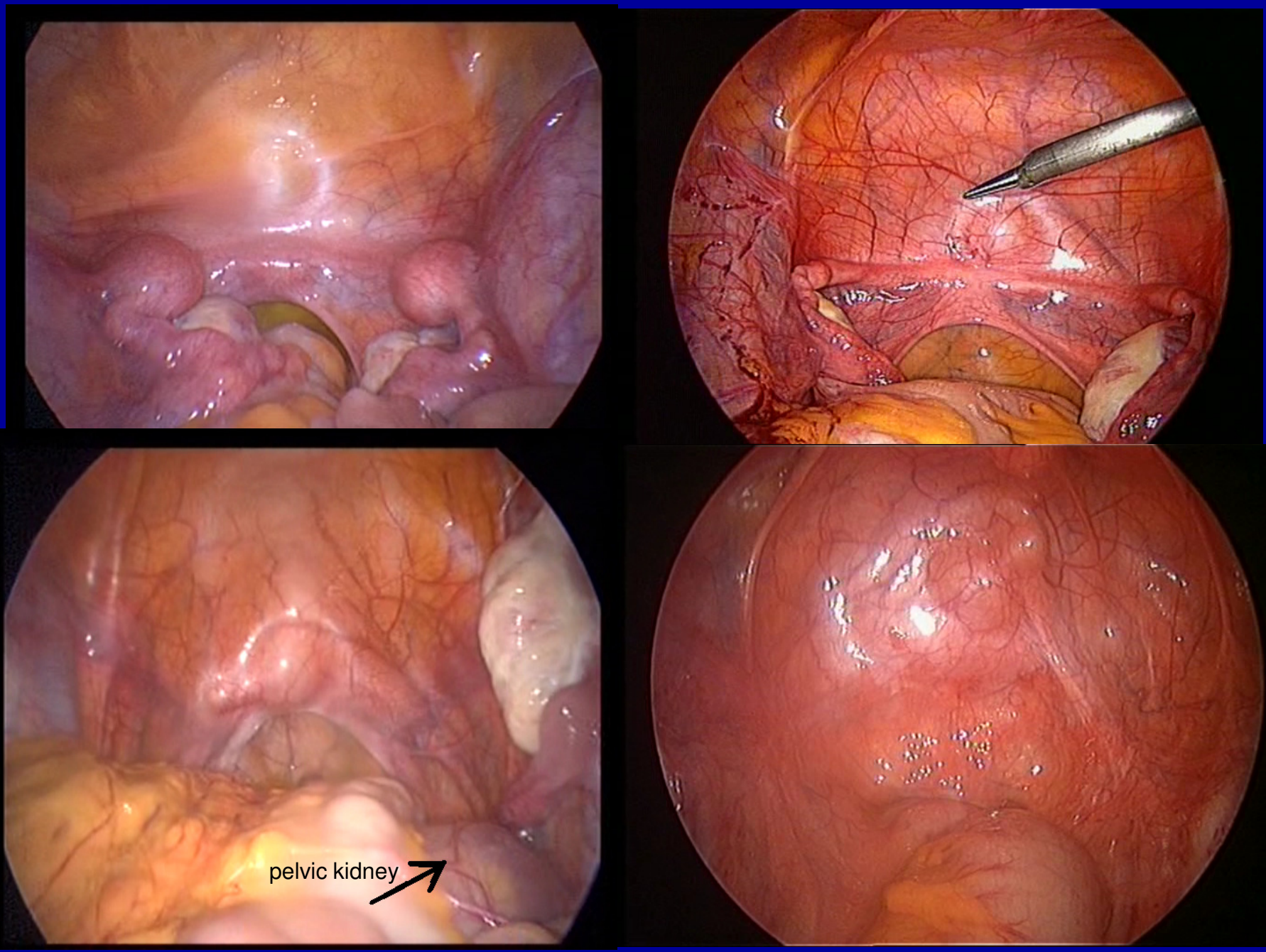

pelvic kidney

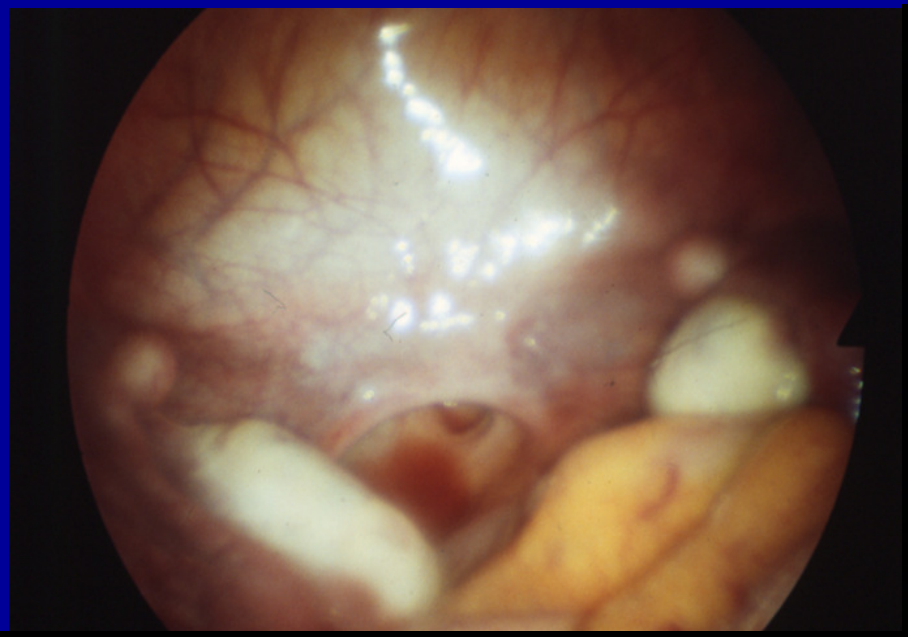
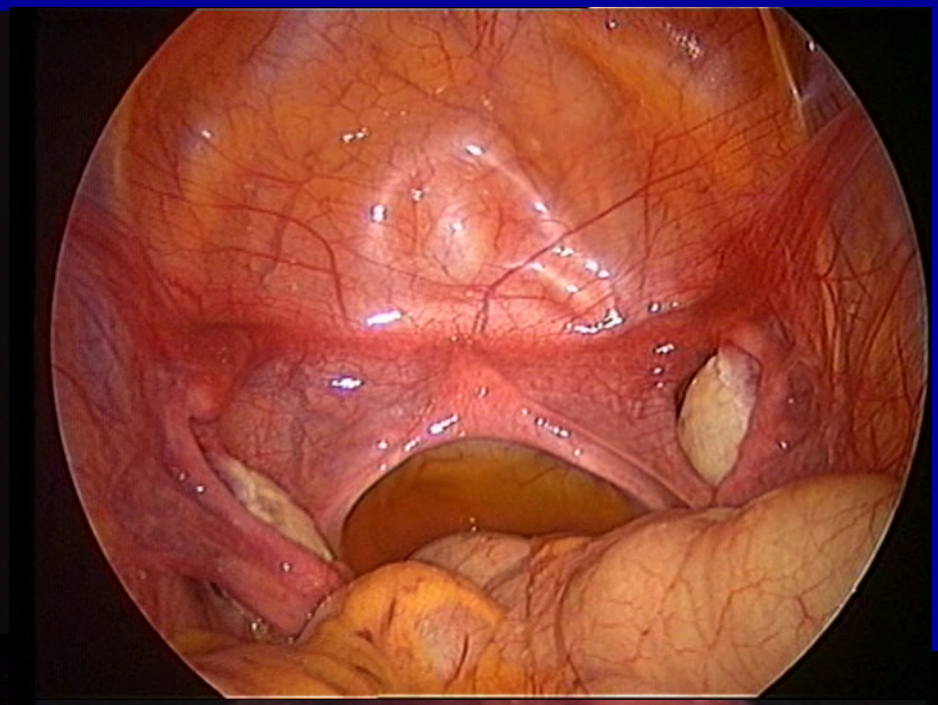
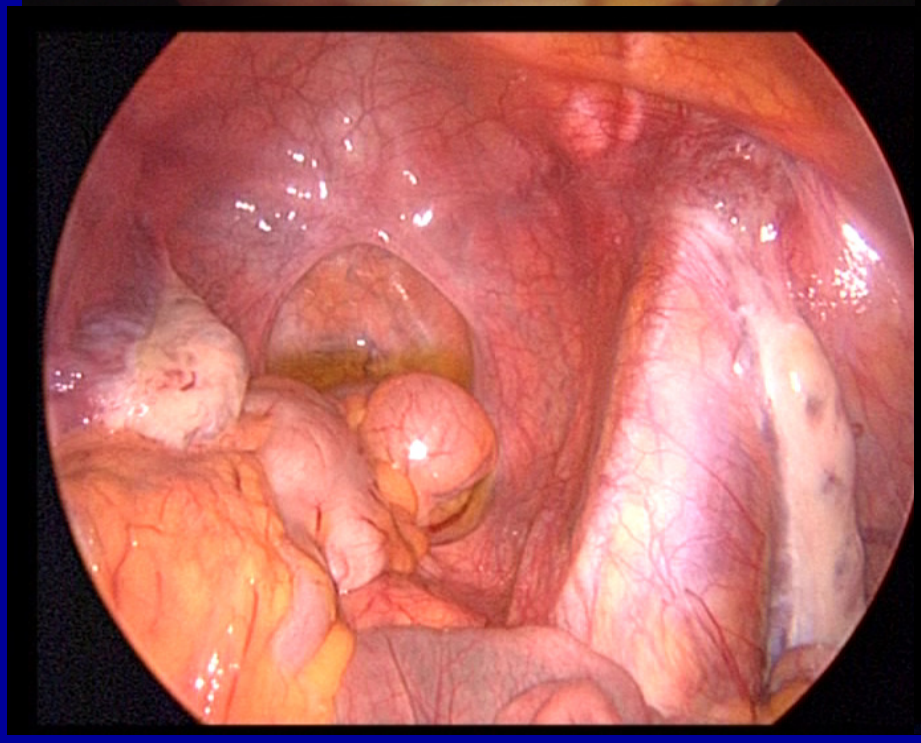





Table 1. Methods for the creation of a neovagina.

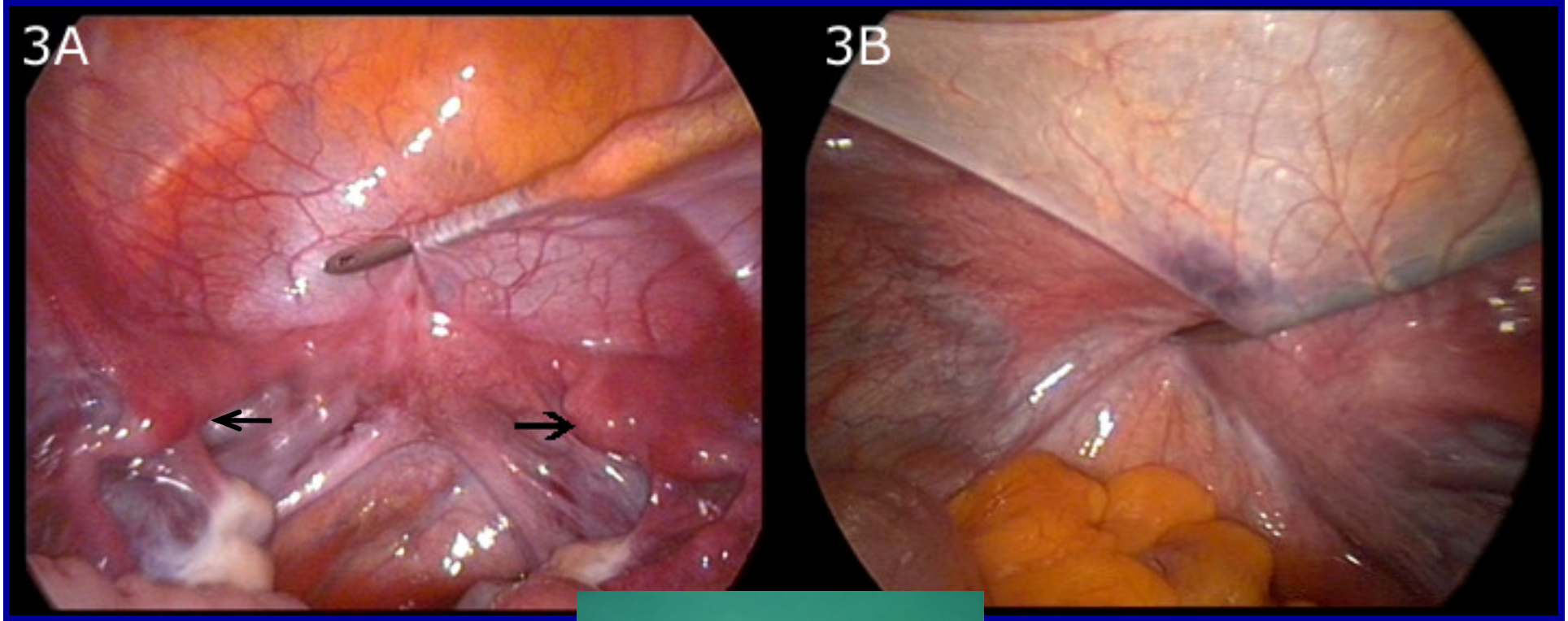
Author	Method
Frank (1931)	Intermittent use of vaginal dilators
D'alberton (1971)	Sexual activity ("functional" method)
Ingram (1981)	Intermittent pressure with bicycle seat
Baldwin (1906)	Double ileal segment transplantation
Popoff (1910)	Rectal segment transplantation
Schubert (1911)	Sigmoid segment transplantation
Graves (1921)	Peduncolated skin flaps from vulva and thigh
Frank & Geist (1927)	Cylindric dermo-epidermal flaps from thigh
Brindeau (1934)	Perineal dissection and transplantation of amniotic membrane and insertion of vaginal stent for continuous dilatation
Wharton (1938)	Perineal dissection and insertion of a balsa wood vaginal stent for continuous dilatation
McIndoe (1938)	Perineal dissection and transplantation of skin flaps and insertion of vaginal stent for continuous dilatation
Williams (1964)	Creation of a vulvo-vaginal pouch
Vecchietti (1965)	Traction from above on the hymenal pseudomembrane
Davydov (1969)	Perineal dissection and transplantation of peritoneum and insertion of vaginal stent for continuous dilatation

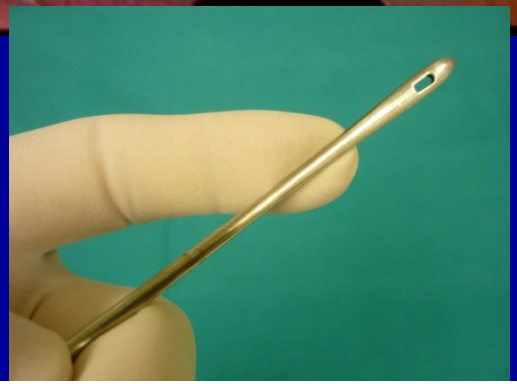
Creation of a neovagina in patients with MRKH syndrome

Among the most commonly used techniques that have been recently developed into laparoscopic approaches are sigmoid colpopoiesis, Vecchietti's and Davydov's procedures.

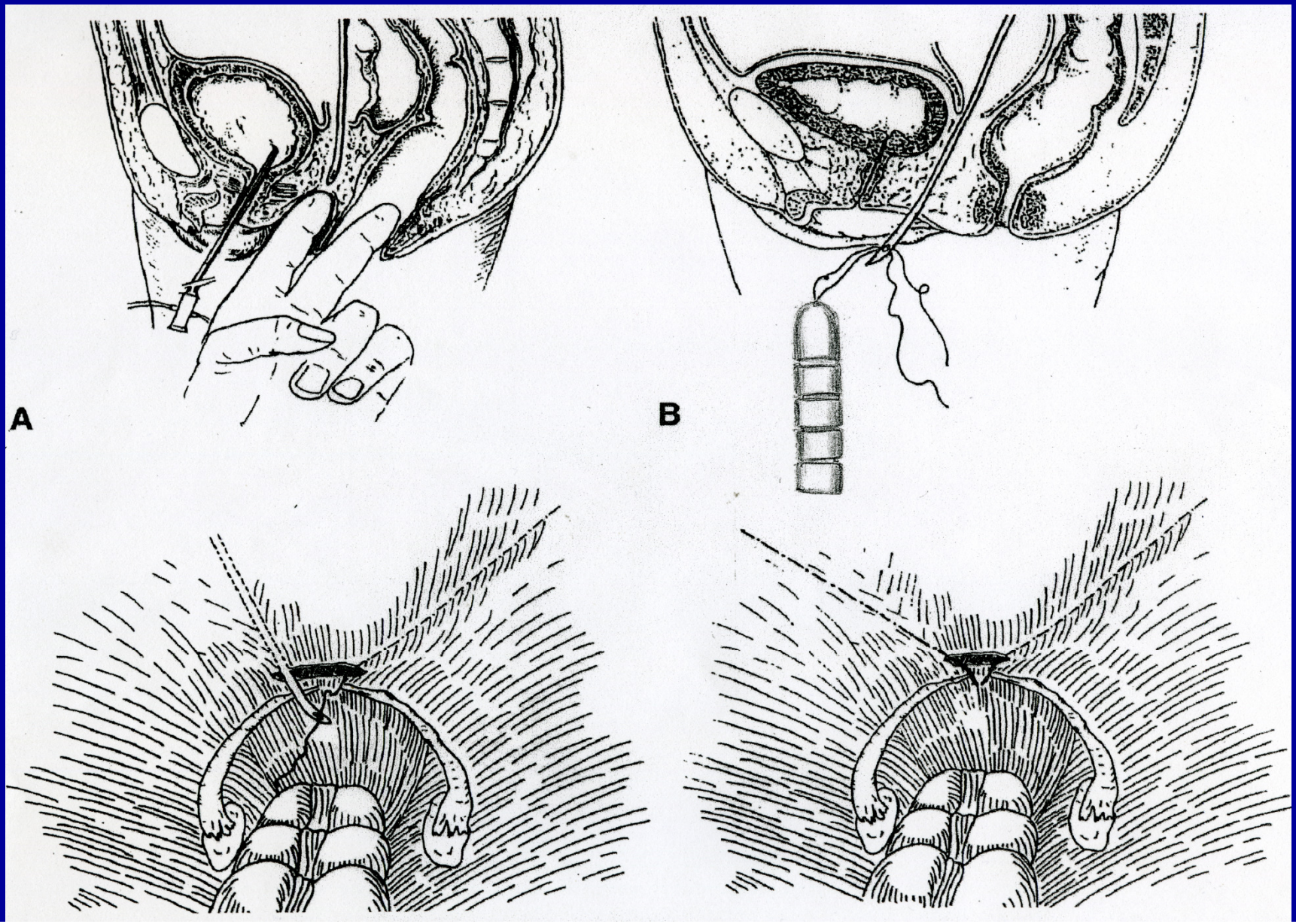
In our experience, Vecchietti's and Davydov's laparoscopic approaches offer both minor invasiveness and optimal results.

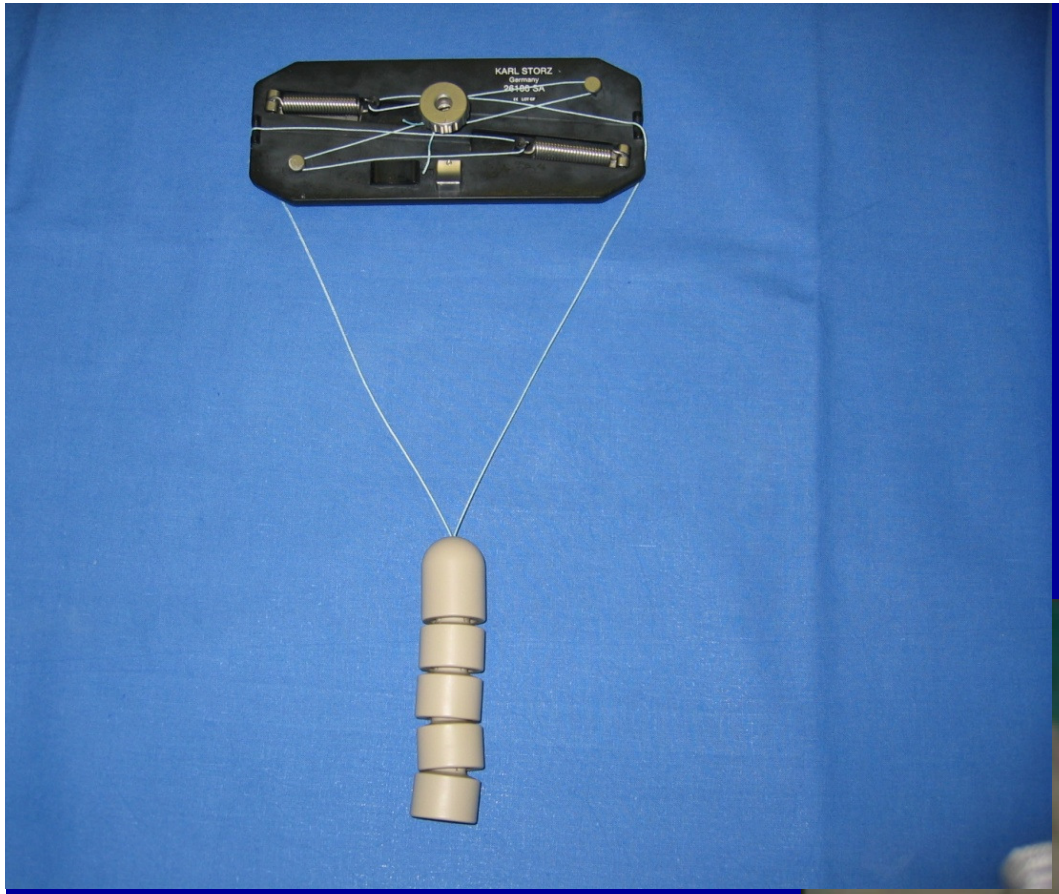
Laparoscopic Vecchietti procedure





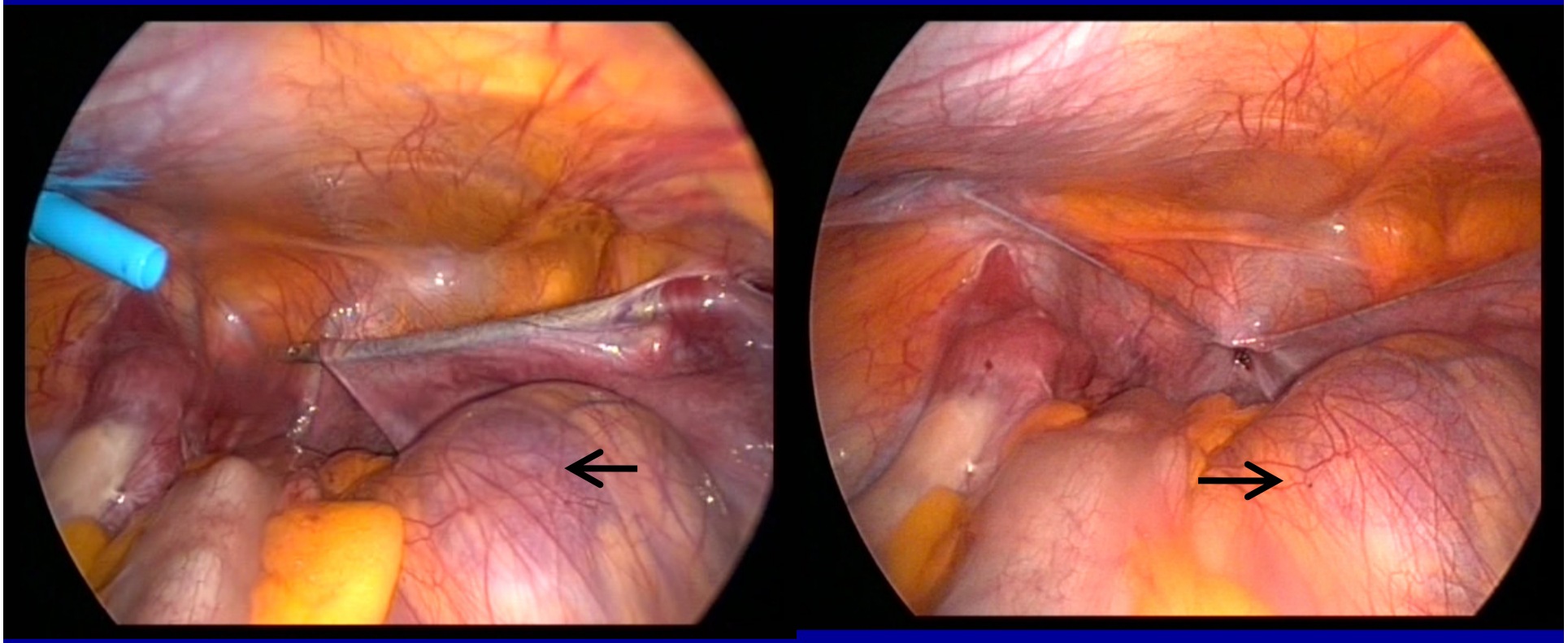
LAPAROSCOPIC VECCHIETTI'S OPERATION (Fedele 1994)




KARL STORZ
Germany

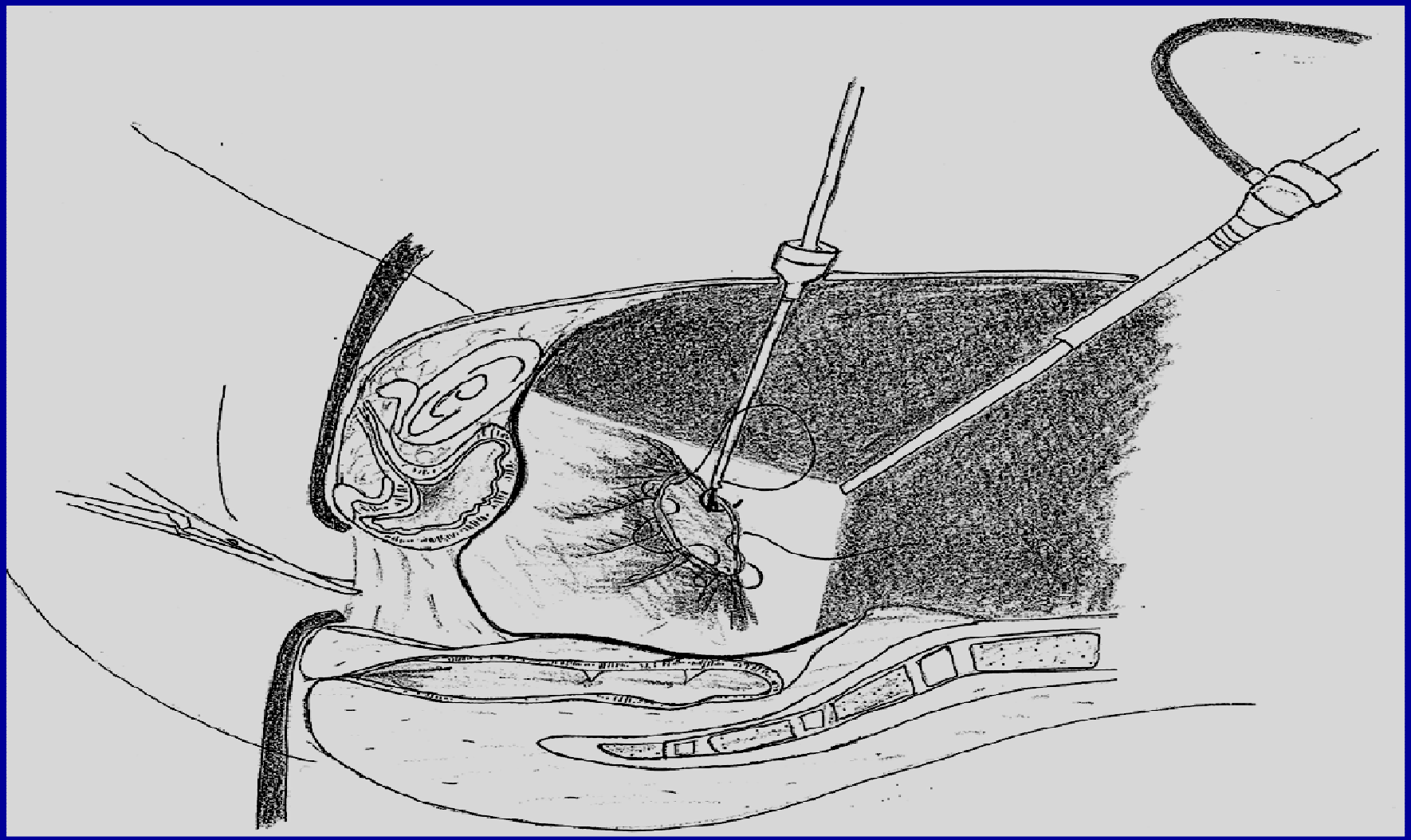
Renal anomalies and the Vecchietti technique

- 10 patients with a pelvic kidney, of which 8 were solitary.
- No complications

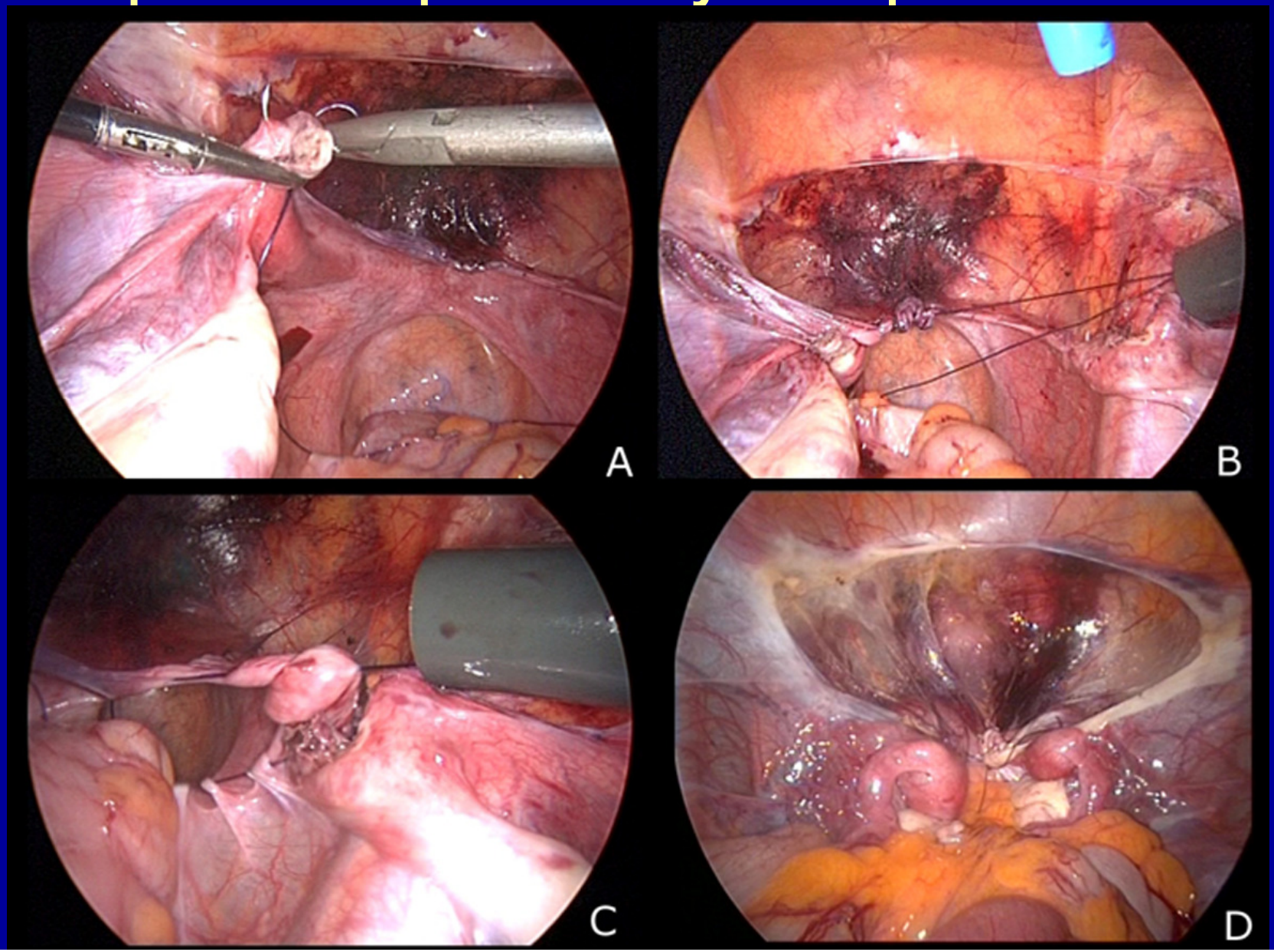


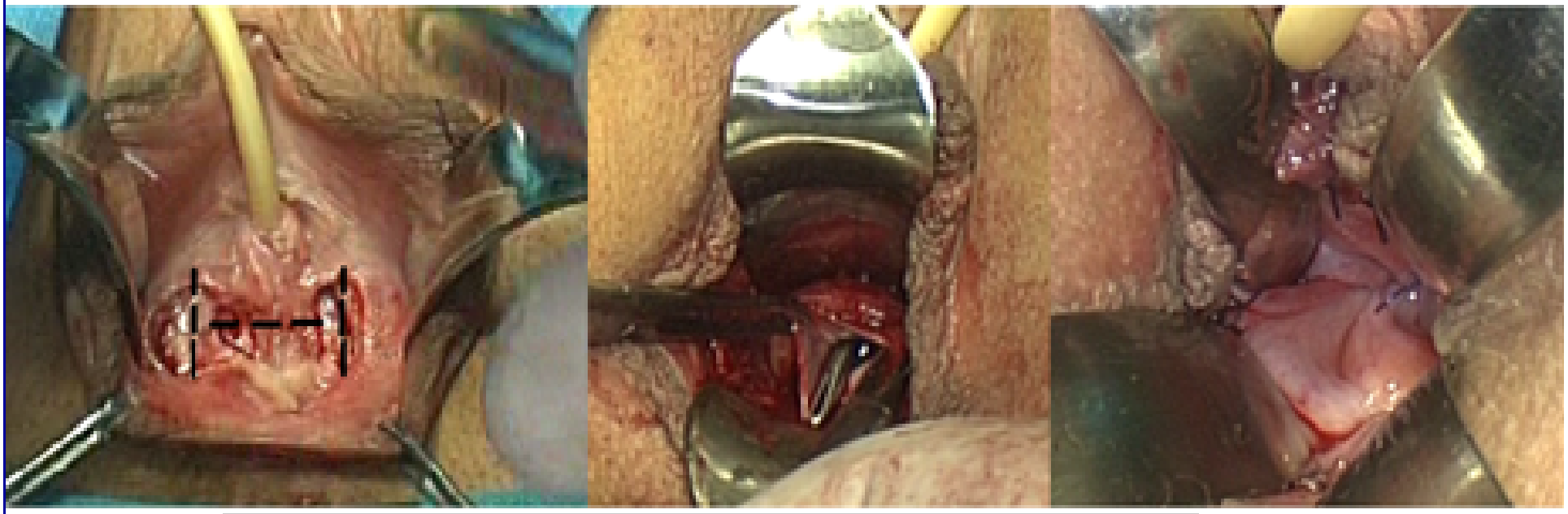
Fedele et al. Fertil Steril 2009

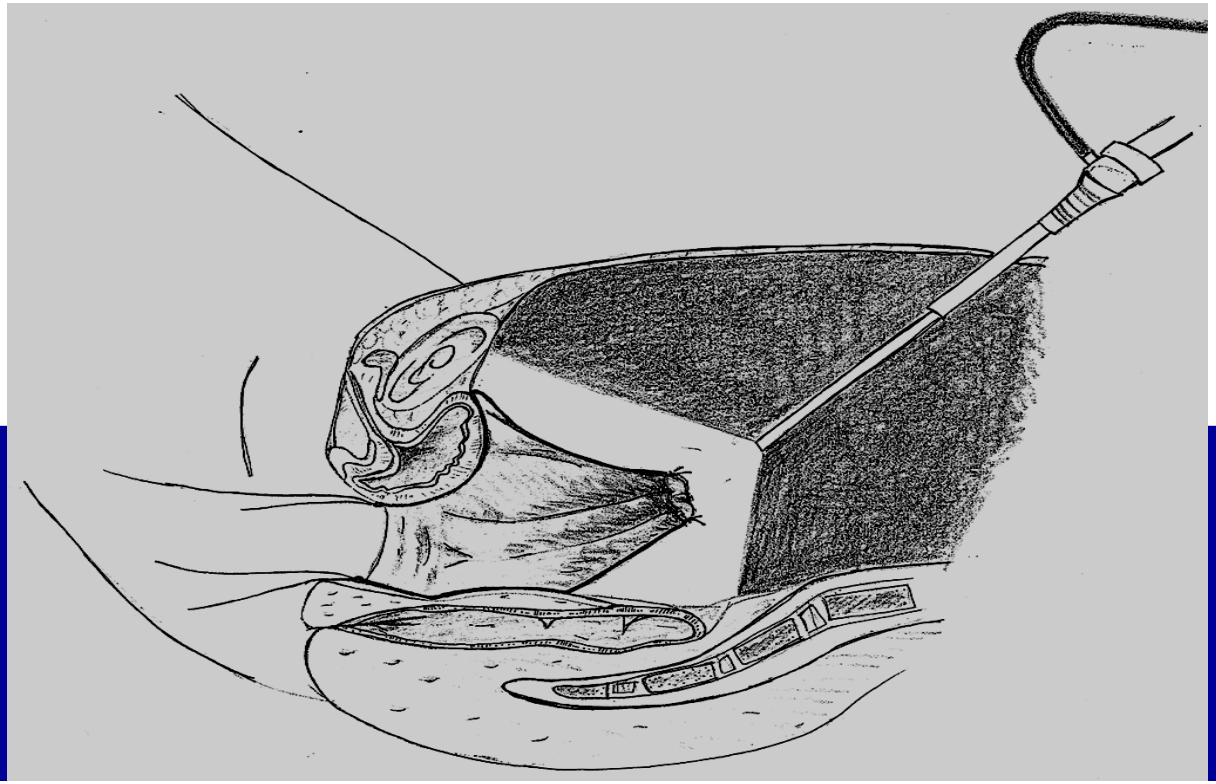
LAPAROSCOPIC DAVYDOV'S OPERATION (Adamyan 1993, Soong 1996)



Laparoscopic Davydov procedure







Comparison between laparoscopic Davydov (2005-2009) and Vecchietti (2003-2005) techniques for the creation of a neovagina in patients with MRKH syndrome.

	Vecchietti (n 40)	Davydov (n 40)
Mean duration of surgery (minutes) [a]	30±9.6	134 ± 24
Mean hospital stay (days) [b]	8.5 ± 1.9	4.0 ± 1
Intraoperative complications	none	none
Need for postoperative analgesia (days)	8.5 ± 1.2	4.0 ± 2
Postoperative vaginal bleeding (pads\day)	3.2 ± 0.6	2.4 ± 0.4
Length of neovagina at hospital delivery (cm) [c]	6.3 ± 0.7	7.25 ± 2.1
Length of neovagina at 12-month follow-up (cm) [c]	7.5 ± 1.1	8.5±1.6
Width of neovagina at hospital delivery (cm) [d]	2.1±0.5	2.0 ± 0.5
Width of neovagina at 12-month follow-up (cm) [d]	2.8± 0.6	2.8±0.65
Urinary catheter removal (days)	8.6 ± 0.2	2.1 ± 0.2
Vaginal stenosis requiring second surgery	none	none
Epithelization of the neovagina at 12-month follow-up (surface)	100%	100%

[a , b, e] $p < 0.001$

[c] $p < 0.05$

[d] $p > 0.05$

FSFI scores

Variable[a]	**Davydov** (N=40)	**Vecchietti** (N=40)	**P value**
Desire	4.3 ± 0.7	4.2 ± 0.9	0.8
Arousal	4.7 ± 0.8	4.6 ± 1	0.7
Lubrification	5.1 ± 0.6	4.5 ± 1	0.3
Orgasm	5 ± 0.6	4.4 ± 0.9	0.5
Satisfaction	4.8 ± 1.5	5.2 ± 1.2	0.6
Comfort	4.7 ± 1	5.2 ± 1	0.3
Total FSFI score	**31.8 ± 0.8**	**30.2 ± 1**	0.2

FSFI, Female Sexual Function Index

[a] Data are given as mean ± SD

A value of $P < 0.05$ is considered statistically significant.

- **very good >30**
- **good 23-29**
- **poor < 23**

Laparoscopic creation of a neovagina

Laparoscopic Vecchietti's and Davydov's techniques yield comparable anatomical and functional results.

Due to their technical characteristics, while Vecchietti may be a safer approach in MRKH patients with a pelvic kidney or previous pelvic surgery, Davydov's approach may be more appropriate in the presence of hypospadia.

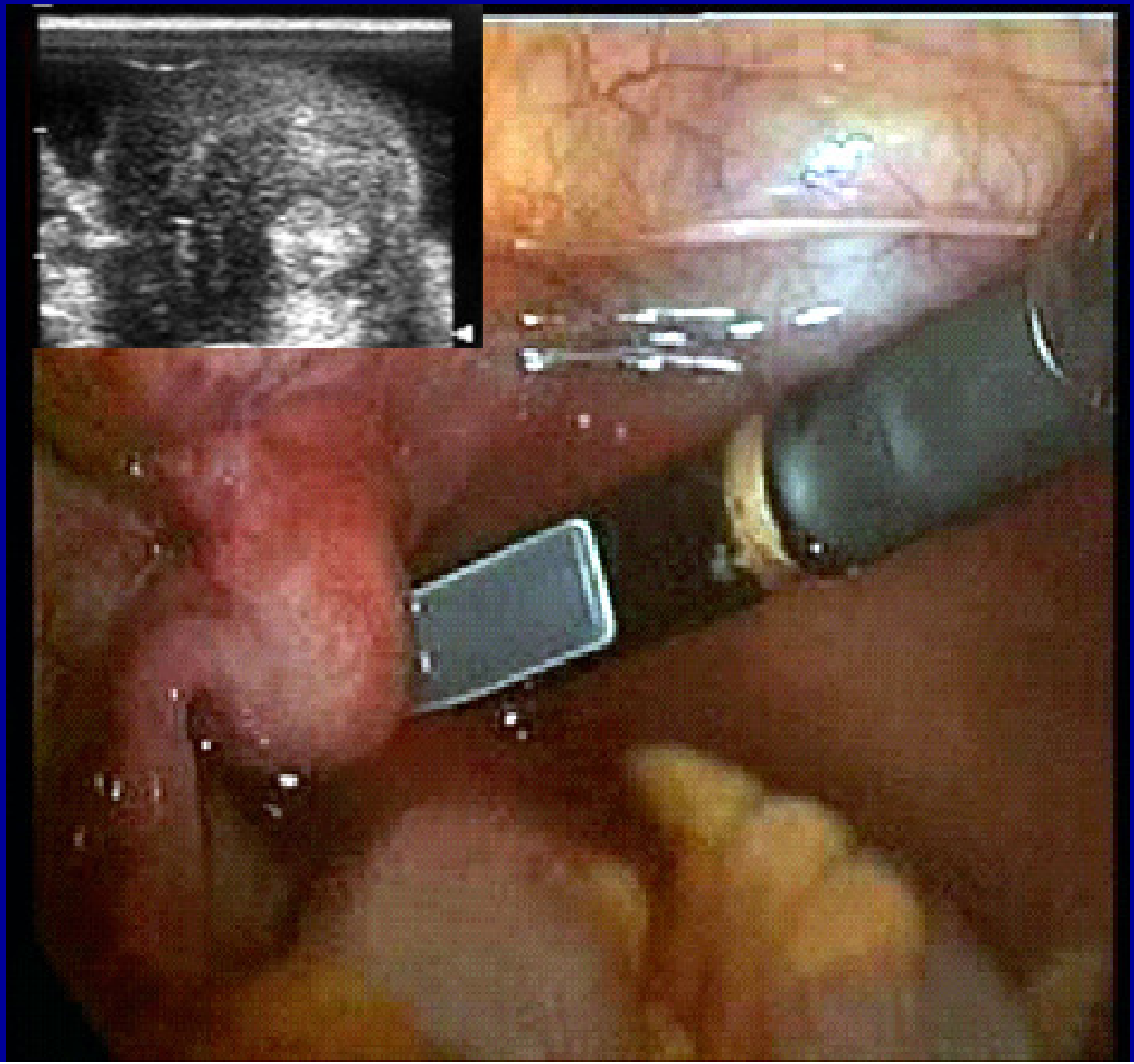
…in Mayer Rokitansky Kuster Hauser syndrome

Uterus bipartitus solidus cum vagina solida *-Kuester, 1910*

The presence of an endometrial cavity has indeed been described.

Clinical manifestations:

- cyclic pelvic pain (hematometra)
- pelvic endometriotic foci (Sonmezer et al, 2003; Acien et al, 1988)



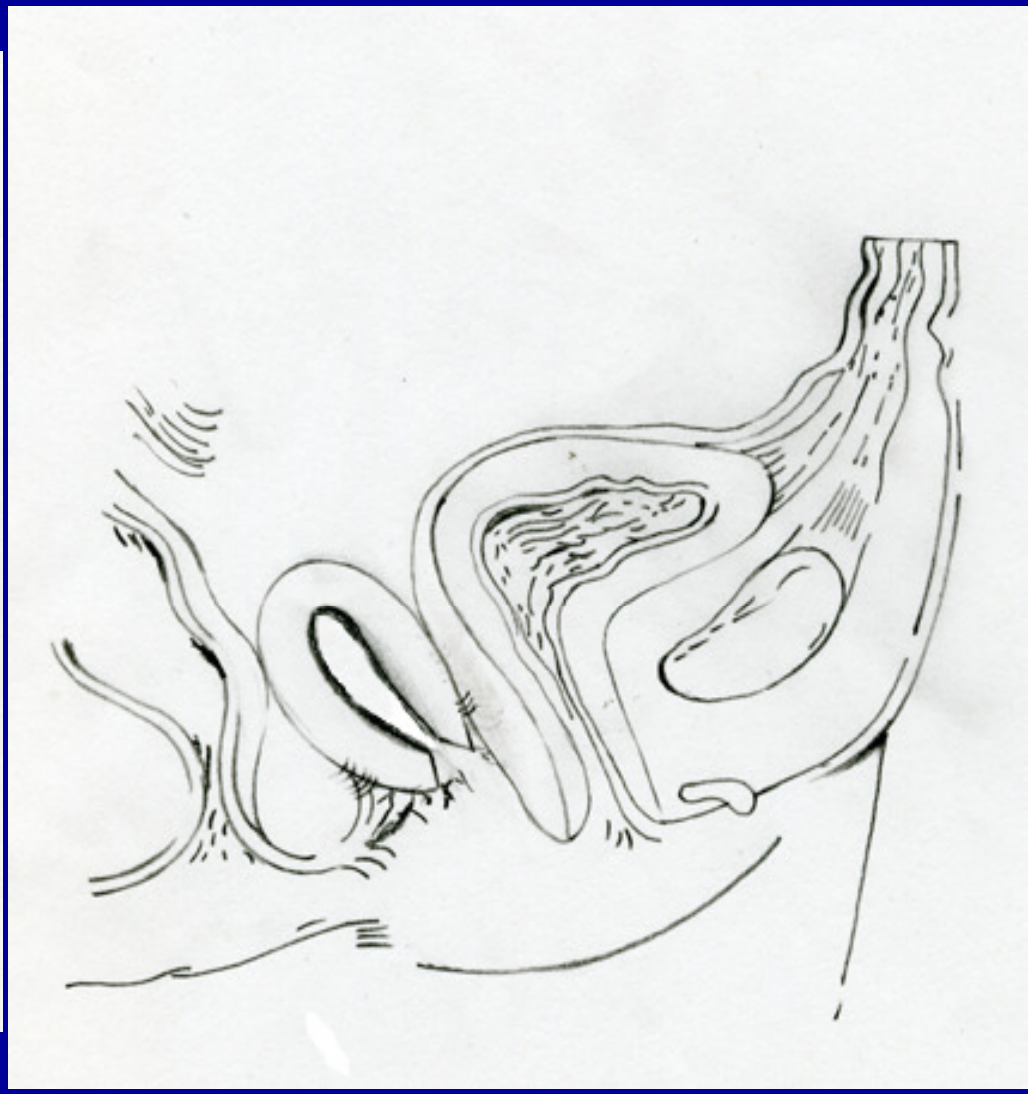
Laparoscopic creation of a neovagina and recovery of menstrual function in a patient with Rokitansky syndrome: A Case Report

L.Fedele[1,3], S.Bianchi[1], N.Berlanda[2], A.Bulfoni[2] and E.Fontana[1]

Hum Reprod 2006

With a combined laparoscopic-vaginal approach, a left 4x3cm cavitated Mullerian remnant (the right remnant was noncavitated and smaller) was anastomised with the vault of the retrohymenal dimple.

The 16-year old patient has recovered menstrual function and has had no complications at a 4-year follow-up.



Creation of a neovagina in Rokitansky syndrome

- New mini-invasive techniques have allowed to improve the conservative approach, and are particularly suitable to these young patients due to brief hospitalization, reduced postoperative pain and optimal aesthetic results.

- The variability in the intrapelvic anatomy and in the external genitalia of patients with Rokitansky syndrome implies that the surgeon tailor the surgical technique to each individual patient.