

Uterine preservation or hysterectomy at the time of POP repair: A mediterranean approach

Dr Barry O'Reilly
Head of Urogynaecology
Cork University Maternity Hospital
Ireland



CORK





Ospidéal Máithreachais
na hOllscoile Corcaigh

Cork University
Maternity Hospital





Photo Denis LeGourrierec 2006



Photo Denis LE GOURRIEREC 2004



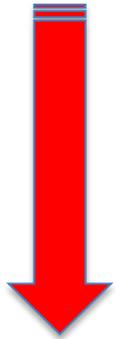
FINNARR TAUGHT LET MUNSTER

What else !!



History

Hysterectomy



Hysteropexy

- 50BC **Themison** of Athens: Vaginal Hysterectomy
- 120AD **Soranus**: Gangrenous inverted uterus
- 1100s **Alsaaharavius**: Prolapsed externally should be excised
- 1813 **Lagenbeck**: Planned vaginal hysterectomy – ridiculed!
- 1901 Laparoscopy: Cystoscope inserted into a dogs abdo cavity
- 1900s Abdominal hysteropexy
- 1934 **Noble Sproat Heaney**: 627 vaginal hysterectomies
- 1940s **Raoul Palmer**: Popularised gynae laparoscopy
- 1984 **Semm**: Laparoscopic assisted vaginal hysterectomy
- 1990s Ventral suspension to the iliopectineal ligament
- 1993 **Addison**: Abdominal sacral hysteropexy with Mesh
- 2000 Laparoscopic Hysteropexy

RCT' s in robotic surgery: a practical impossibility

Collins S, Editorial, IUJ 2010

- Conservative power analysis of 50 women with vault prolapse
- Over 6 mths – 100 women approached – 3 randomised

3 problems or **BIAS** –

1. Patient bias – “new v old” (like surgery for SUI), Grays anatomy etc
2. Physician bias – discharge patients earlier, difficulty with objectivity
3. Hospital bias – pressure on physicians to maintain critical caseload; value for money (\$150k service charge)

Hyster... ectomy v ..pexy

Factors influencing the decision or **BIAS**

- Literature
 - Evidence
 - Publish or perish
- Patient
- Surgeons
- Training
 - Ability
- Hospital



Uterine Preservation – Bias?

Factors influencing the decision

– Literature

- Evidence
- Publish or perish

– Patient

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Uterovaginal prolapse in a woman desiring uterine preservation

- Hysterectomy as part of a prolapse repair is probably overused and perhaps should no longer be considered absolutely routine.



National Bias



Ospidéal Máithreachais
na hOllscoile Corcaigh
Cork University
Maternity Hospital



Types of Hysteropexy

VAGINAL APPROACH

- MANCHESTER PROCEDURE
- UTEROSACRAL SUSPENSION AND PPLICATION
- SACROSPINOUS HYSTEROPEXY
- TENSION-FREE VAGINAL MESHES

ABDOMINAL APPROACH

- MAY INCLUDE CONCOMITANT PROCEDURES (e.g. vaginal- abdominal retropubic suspension, pectineal ligament suspension, sacrohysteropexy)

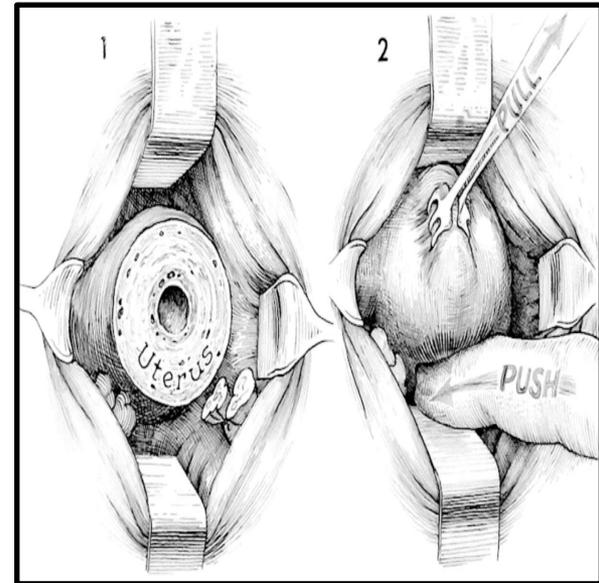
LAPAROSCOPIC APPROACH

- MAY INCLUDE CONCOMITANT PROCEDURES (see above)

MANCHESTER PROCEDURE

The original procedure(1888) involved amputation of the cervix, colporrhaphy, and attachment of the cervical stump to the cardinal ligaments, although several modifications have been introduced since then. Accordingly, it is indicated in patients with cervical elongation and intact uterosacral-cardinal ligaments

- NUMEROUS RETROSPECTIVE STUDIES
- ASSOCIATED WITH FOLLOWING PROBLEMS
 - EARLY RECURRING PROLAPSE IN 20%
 - DECREASE IN FERTILITY
 - CERVICAL STENOSIS (DIFFICULT TO OBTAIN HYSTOLOGY)



12. Chopin, N. *et al.* Total laparoscopic hysterectomy for benign uterine pathologies: obesity does not increase the risk of complications. *Hum. Reprod.* 24, 3057–3062 (2009).

MANCHESTER PROCEDURE

Table 1 | Failure rates after the Manchester procedure

Study	n	Follow-up	Failure (%)
Conger & Keettel (1958) ²⁰	960	Not reported	4.3
Tipton & Atkin (1970) ¹⁹	82	6–12 years	21% reoperation rate*
Dutta & Dutta (1994) ¹³	573	12–43 months	0–4
Thomas <i>et al.</i> (1995) ¹⁵	88	22 days to 4.6 years	6
Ayhan <i>et al.</i> (2006) ¹⁶	204	20 years	3.9
de Boer <i>et al.</i> (2009) ²¹	81	1 year	50% anterior compartment recurrence

*Included nonprolapse indication.

1: Zucchi A, Lazzeri M, Porena M, Mearini L, Costantini E. Uterus preservation in pelvic organ prolapse surgery. *Nat Rev Urol.* 2010 Nov;7(11):626-33

13. Dutta, D. K. & Dutta, B. Surgical management of genital prolapse in an industrial hospital. *J. Indian Med. Assoc.* 92, 366–367 (1994).

15. Thomas, A. G. *et al.* Manchester procedure vs. vaginal hysterectomy for uterine prolapse. A comparison. *J. Reprod. Med.* 40, 299–304 (1995).

16. Ayhan, A., Esin, S., Guven, S., Salman, C. & Ozyuncu, O. The Manchester operation for uterine prolapse. *Int. J. Gynaecol. Obstet.* 92, 228–233 (2006).

19. Tipton, R. H. & Atkin, P. F. Uterine disease after the Manchester repair operation. *J. Obstet. Gynaecol. Br. Commonw.* 77, 852–853 (1970).

20. Conger, G. T. & Keettel, W. C. The Manchester-Fothergill operation, its place in gynecology; a review of 960 cases at University Hospitals, Iowa City, Iowa. *Am. J. Obstet. Gynecol.* 10, 1–10 (1958).

21. de Boer, T. A., Milani, A. L., Kluivers, K. B., Withagen, M. I. & Vierhout, M. E. The effectiveness of surgical correction of uterine prolapse: cervical amputation with uterosacral ligament plication (modified Manchester) versus vaginal hysterectomy with high uterosacral ligament plication. *Int. Urogynecol. J. Pelvic Floor Dysfunct.* 20, 1313–1319 (2009).



SACROSPINOUS HYSTEROPEXY

Dissection to right sacrospinous ligament, cervix is attached to the right sacrospinous ligament, medial to the ischial spine. First described by Richardson (1989)⁹

- The procedure can be performed with bilateral attachment to the sacrospinous ligaments with a reported anatomical cure rate of 89%¹⁰
- FOUR studies compared the technique ^{30, 31, 32, 33}

9. Richardson, D. A., Scotti, R. J. & Ostergard, D. R. Surgical management of uterine prolapse in young women. *J. Reprod. Med.* 34, 388–392 (1989).

10. Kovac, S. R. & Cruikshank, S. H. Successful pregnancies and vaginal deliveries after sacrospinous uterosacral fixation in five of nineteen patients. *Am. J. Obstet. Gynecol.* 168, 1778–1783 (1993).

29. Dietz, V., Huisman, M., de Jong, J. M., Heintz, P. M. & van der Vaart, C. H. Functional outcome after sacrospinous hysteropexy for uterine descensus. *Int. Urogynecol. J. Pelvic Floor Dysfunct.* 19, 747–752 (2008).

SACROSPINOUS HYSTEROPEXY

Table 3 | Studies comparing vaginal hysterectomy and uterus-sparing sacrospinous hysteropexy

Study	Uterus preservation (n)	Hysterectomy (n)	Results (%)
Maher <i>et al.</i> (2001) ³⁰	34	36	Subjective success: 78 vs 86 Objective success: 74 vs 72 Satisfaction: 85 vs 86
Hefni & El-Toukhy (2002) ³²	61	48	Recurrent cystocele: 11.4 vs 10.4 Success: 93 vs 95
van Brummen <i>et al.</i> (2003) ³¹	54	49	Recurrence: 11.4 vs 6.7
Dietz <i>et al.</i> (2010) ³³	35	31	Reoperation: 11 vs 7 Apical recurrence: 27 vs 3

1: Zucchi A, Lazzeri M, Porena M, Mearini L, Costantini E. Uterus preservation in

pelvic organ prolapse surgery. *Nat Rev Urol.* 2010 Nov;7(11):626-33

30. Maher, C. F. *et al.* Uterine preservation or hysterectomy at sacrospinous colpopexy for uterovaginal prolapse. *Int. Urogynecol. J. Pelvic Floor Dysfunct.* 12, 381–384 (2001).

31. van Brummen, H. J., van de Pol, G., Aalders, C. I., Heintz, A. P. & van der Vaart, C. H. Sacrospinous hysteropexy compared to vaginal hysterectomy as primary surgical treatment for a descensus uteri: effects on urinary symptoms. *Int. Urogynecol. J. Pelvic Floor Dysfunct.* 14, 350–355 (2003).

32. Hefni, M. & El-Thoukhy, T. Sacrospinous cervico-colpopexy with follow-up 2 years after successful pregnancy. *Eur. J. Obstet. Gynecol. Reprod. Biol.* 103, 188–190 (2002).

33. Dietz, V., van der Vaart, C. H., van der Graaf, Y., Heintz, P. & Schraaffordt Kooops, S. E. One-year follow-up after sacrospinous hysteropexy and vaginal hysterectomy for uterine descent: a randomized study. *Int. Urogynecol. J. Pelvic Floor Dysfunct.* 21, 209–216 (2010)

SACROSPINOUS HYSTEROPEXY

Table 4 | Failure rates from noncomparative sacrospinous hysteropexy studies

Study	n	Follow-up	Failure (%)
Richardson <i>et al.</i> (1989) ⁹	5	6–24 months	0
Kovac <i>et al.</i> (1993) ¹⁰	17	1–6 years	5
Carey & Slack (1994) ⁶⁶	11	4 months	0
Lin <i>et al.</i> (2005) ⁶⁷	60	5 years	6.9
Dietz <i>et al.</i> (2007) ⁶⁸	99	23 months	2.3
Gamble <i>et al.</i> (2008) ³⁷	39	12 months	2.6

1: Zucchi A, Lazzeri M, Porena M, Mearini L, Costantini E. Uterus preservation in pelvic organ prolapse surgery. *Nat Rev Urol.* 2010 Nov;7(11):626-33

9. Richardson, D. A., Scotti, R. J. & Ostergard, D. R. Surgical management of uterine prolapse in young women. *J. Reprod. Med.* 34, 388–392 (1989).

10. Kovac, S. R. & Cruikshank, S. H. Successful pregnancies and vaginal deliveries after sacrospinous uterosacral fixation in five of nineteen patients. *Am. J. Obstet. Gynecol.* 168, 1778–1783 (1993).

66. Carey, M. P. & Slack, M. C. Transvaginal sacrospinous colpexy for vault and marked uterovaginal prolapse. *Br. J. Obstet. Gynecol.* 101, 536–540 (1994)

67. Lin, J. Y. *et al.* Risk factors for failure of transvaginal sacrospinous uterine suspension in the treatment of uterovaginal prolapse. *J. Formos. Med. Assoc.* 104, 249–253 (2005)

68. Dietz, V. *et al.* The effectiveness of the sacrospinous hysteropexy for the primary treatment of uterovaginal prolapse. *Int. Urogynecol. J. Pelvic Floor Dysfunct.* 18, 1271–1276 (2007)

37. Gamble, T. L. *et al.* Bilateral graft-augmented sacrospinous hysteropexy: 1-year anatomic and functional outcomes following surgery for uterine preservation. *J. Pelvic Med. Surg.* 14, 275–279 (2008).

Disappearing role of TVM ?

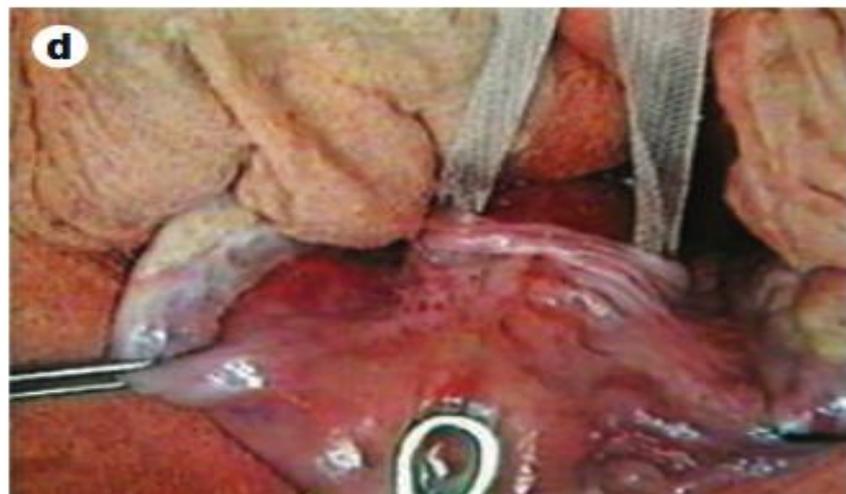
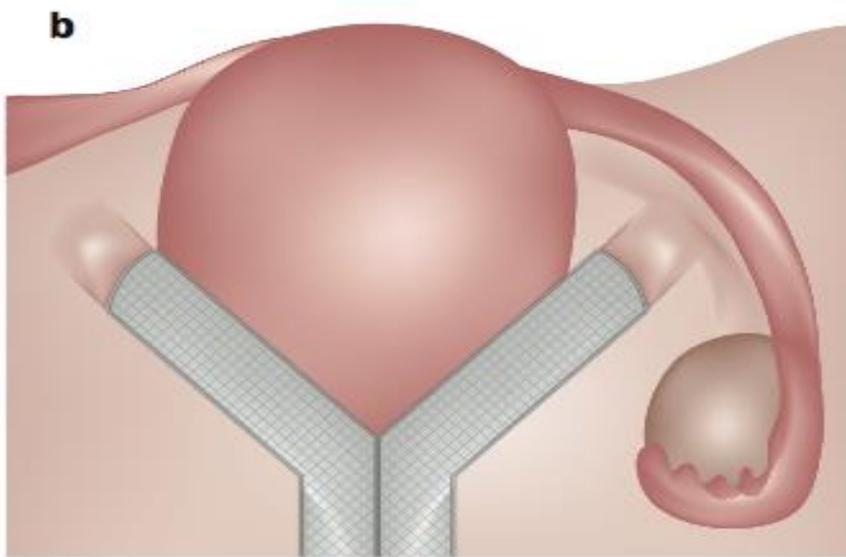
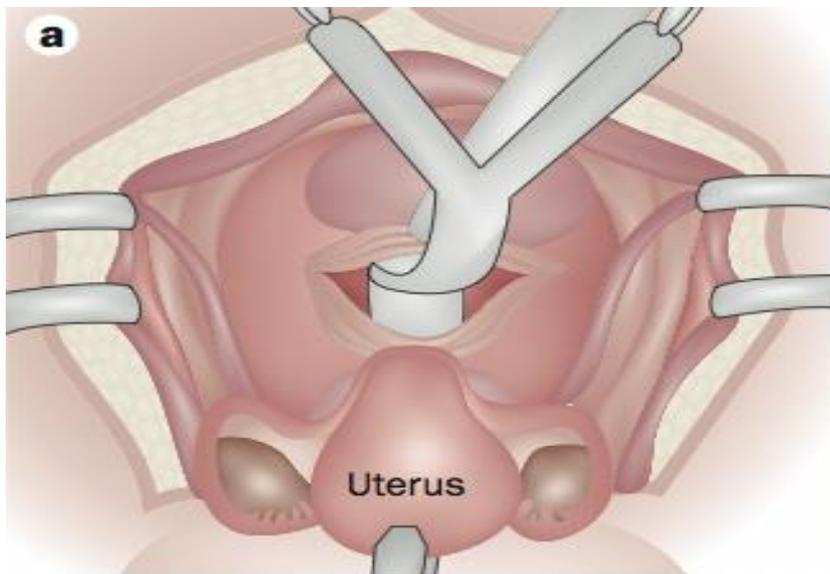
- USA 2010 – 300,000 POP surgeries, 1 in 3 involved mesh (75% transvaginal)
- Due to aggressive marketing, surgeon hype, quick fix and office based
- MAUDE (2005-2010) – 3979 mesh related reports commonest extrusion, pain and infection
- 5 x increase in adverse events b/n 2008-2010 cf previous 3 years
- Public health notification 2008 and update 2011
- TV mesh to correct the apex is associated with increased complications and reoperation rates cf. traditional surgery or ASC

ABDOMINAL APPROACH

Sacrohysteropexy is performed using two meshes fixed to the anterior and posterior vaginal wall and to the sacrum, in order to suspend the bladder and the uterus anteriorly

- IT MAY INCLUDE COMBINED PROCEDURES, SUCH AS VAGINAL-ABDOMINAL RETROPUBIC UTERINE SUSPENSION, PECTINEAL LIGAMENT UTERINE SUSPENSION, AND SACROHYSTEROPEXY. PECTINEAL LIGAMENT SUSPENSION AND VAGINO-ABDOMINAL RETROPUBIC HYSTEROPEXY
- VARIATIONS IN THE OPERATING TECHNIQUE, MESH SIZE, SHAPE AND ATTACHMENT SITES MAKE COMPARISON ARDUOUS
- LAPAROSCOPIC (AND ROBOTIC) TECHNIQUES FOLLOW THE SAME STEPS AS THE OPEN PROCEDURE
- HIGH MESH EROSION RATES IF HYSTERECTOMY IS PERFORMED AT THE TIME OF SACROCOLPOPEXY

ABDOMINAL APPROACH



ABDOMINAL APPROACH

- ROOVERS⁴⁵ COMPARED ABDOMINAL SACROHYSTEROPEXY AND VAGINAL HYSTERECTOMY WITH COMBINED VAULT FIXATION TO THE UTEROSACRAL-CARDINAL LIGAMENT COMPLEX
 - Recurrence was higher in the abdominal surgery group (22%) than in the vaginal hysterectomy group (2.5%)
 - Sacrohysteropexy reported more discomfort caused by OAB symptoms.
 - Operating time was shorter in the abdominal group
 - Quality of life and scores on all domains of the urogenital distress inventory (except for the pain and fecal incontinence domains) improved significantly

45. Roovers, J. P. *et al.* A randomised controlled trial comparing abdominal and vaginal prolapse surgery: effects on urogenital function. *BJOG* 111, 50–56 (2004)

ABDOMINAL APPROACH

COSTANTINI⁴⁴ COMPARED SACROCOLPOPEXY AFTER HYSTERECTOMY AND HYSTEROCOLPOSACROPEXY WITH UTERUS PRESERVATION:

- no significant difference in functional outcomes, subjective and objective outcomes as well as patient satisfaction.
- Uterus preservation was associated with a significantly shorter operating time and lower morbidity.
- Median operating times were 115 min (range 80–135 min) in the sacrocolpopexy group and 89 min (60–110 min) in the hysterocolposacropexy group (P <0.001)
- Median intraoperative blood loss was less in the hysterocolposacropexy group (325 ml versus 200 ml; P <0.001) and the mean hospital stay was shorter (P <0.05).

44. Costantini, E. *et al.* Uterus preservation in surgical correction of urogenital prolapse. *Eur. Urol.* 48, 642–649 (2005)

FAILURE RATES OF OPEN UTERUS SPARING PROLPASE REPAIR

Table 5 | Failure rates of abdominal uterus-sparing surgery

Study	Procedure (mesh type)	n	Follow-up	Failure (%)
Stoesser (1955) ⁶⁹	SCP (external oblique fascia)	22	Not reported	0
Van Lindert <i>et al.</i> (1993) ⁷⁰	SCP (Gore-Tex®)	8	32 months	0
Joshi (1993) ⁴¹	Pectineal ligament suspension	20	6–30 months	0
Addison <i>et al.</i> (1993) ⁷¹	SCP (mersilene)	3	6 weeks to 20 years	0
Banu (1997) ⁷²	SCP (mersilene)	19	3–5 years	0
Costantini <i>et al.</i> (1998) ⁷³	SCP (Gore-Tex®)	7	12–68 months	0
Leron & Stanton (2001) ⁷⁴	SCP (Teflon®)	13	16 months	0
Roovers <i>et al.</i> (2002) ⁷⁵	SCP (Gore-Tex®)	12	11–144 months	8.3
Barranger <i>et al.</i> (2003) ⁷⁶	SCP (polyester)	30	2–156 months	6.6
Roovers <i>et al.</i> (2004) ⁴⁵	SCP (Gore-Tex®)	41	12 months	21.9
Costantini <i>et al.</i> (2005) ⁴⁶	SCP (polypropylene)	34	51 months	0
Demirci <i>et al.</i> (2006) ⁷⁷	SCP (polypropylene)	20	25 months	5

Abbreviation: SCP, sacrocervicopexy.

Int Urogynecol J (2013) 24:1803–1813

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POP SURGERY REVIEW

Uterine-preserving POP surgery

Robert Gutman • Christopher Maher

On behalf of Committee 15 “Surgical Management of Pelvic Organ Prolapse” from the 5th International Consultation on Incontinence held in Paris, February 2012

Sacrospinous hysteropexy v Vaginal hysterectomy

Table 2 Comparison of the outcomes of sacrospinous hysteropexy and vaginal hysterectomy

Reference	Study type and surgery	Review (months)	Success rate (%)		Complications
			SSHP	Vaginal hysterectomy	
Dietz et al. [18]	RCT	12	27/34 (79)	30/31 (97)	1 ureteral obstruction TVH group
Jeng et al. [10]	RCT	6	MD	MD	Buttock pain 12 (15 %)
Hefni et al. [13]	Prospective cohort	33	57/57 (100)	46/48 (96)	Buttock pain: 2 (3 %) vs 2 (4 %) All others in TVH/SSLF group Haematoma 3 (6 %) –1 reoperation to drain, transfusion 2 (4 %)
Van Brummen et al. [16]	Retrospective cohort				Haemorrhage 1 (2 %) Haematoma 3 (6 %) –1 reoperation to drain, transfusion 2 (4 %)
Maher et al. [15]	Retrospective cohort				Buttock pain 3 (2 vs 1) Dyspareunia 7 % vs 3 %
Dietz et al. [12]	Prospective				Buttock pain 13 (18 %) Vaginal haematoma 2 (3 %) Vaginal adhesion 3 (4 %) Reoperation bleeding: 1 Unknown
Lin et al. [17]	Prospective				Buttock pain (15 %) DVT 1
Dietz et al. [11]	Retrospective				Reoperation: postoperative bleeding 1 Buttock pain 6.5 %, dyspareunia 2 Rectal injury 2, transfusion 1 Vault haematomas (2 %) Reoperation for bleeding 3 Rectal injury 1 (5 %)
Hefni and El-Toukhy [19]	Retrospective				
Kovac and Cruikshank [20]	Retrospective	37.2	15/17 (88)		
Richardson et al. [21]	Retrospective	6–24	5/5 (100)		
Total			373/428 (87)	244/262 (93)	P=0.054
			95 %CI 84–90	95 %CI 90–96	

↓ op time
 ↓ Recovery time
 ↓ Blood loss
 ↑ Higher recurrence rate
 Recurrence dependent on severity of prolapse

Variation in surgical techniques and definition success exist

Vaginal mesh hysteropexy v Vaginal mesh hysterectomy

Table 3 Comparison of vaginal mesh hysteropexy and vaginal mesh hysterectomy outcomes

Reference	Study type & surgery	Review months	Success rate (%)		Mesh exposure hysteropexy	Mesh exposure hysterectomy
			Mesh hysteropexy	Mesh hysterectomy		
McDermott et al. [26]	Retrospective cohort Total Prolift hysterectomy	11	20/21 (95)	2/24		
Chu et al. [27]	Retrospective cohort Perigee and Apogee				2	5/39
Neuman and Lavy [28]	Retrospective cohort Posterior IVS hysterectomy					6/44
Feiner et al. [33]	Prospective Anterior Prolift, SSHP				3/4	
Inoue et al. [30]	Prospective observational TFS SSHP	MD	23/25 (92)	1/25		
Huang et al. [29]	Retrospective polypropylene SSHP	20	68/67 (99)	8/67		
Nicita et al. [31]	Retrospective	31	19/21 (89)	0/21		
Total			273/316 (86) 95 % CI (82–90)	81/83 (98) 95 % CI (94–100)	28/318 (8.8) 95 % CI (5.7–11.9)	11/83 (13) 95 % CI (6–21)

**Equal efficacy
NO difference in Mesh Exposure**

Variety of surgical techniques and definitions of success

SSHP sacrospinous hysteropexy, TFS tissue fixation system, IVS intravaginal slingplasty, DVT deep venous thrombosis

Sacral hysteropexy v Hysterectomy and SCP

Table 4 Comparison of outcomes of sacral hysteropexy (open or laparoscopic) and hysterectomy plus sacral colpopexy outcomes

Reference	Study type and surgery	Follow-up months	Success rate (%)		Mesh exposure (%)		Complications
			ASHP	TAH SCP	ASHP	TAHSCP	
Roovers et al. [54]	Multicenter RCT	12	26/41 (63)		2/41		1 Transfusion, 2 vault abscess and infected implant
Costantini et al. [49]	Prospective	51	31/34 (91)	35/38 (92)	0/34	3/38	ASHP group 2 transfusion, 2 incisional hernia
Jeon et al. [51]	Retrospective Cohort	26 (1-84)	35/35 (100)	60/62 (97)	0/35	5/62	TAH: 1 DVT, 3 SBO, 1 ureteric obstruction
Bai et al. [44]	Retrospective cohort						Transfusion: 3/5 Wound dehiscence secondary closure: 0/2 Ileus: 1 ASHP
Costantini et al. [55]	Prospective observational						De novo constipation 5, Persistent sexual dysfunction 24 % (4/17) Wound hernia 2 PE 1 2 dyspareunia
	ASHP (47) LSHP (8)						
Price et al. [56]	Prospective LSHP						Wound infection 2 Incisional hernia 1 Dyspareunia 3 Haematoma 1, presacral haemorrhage 1
Demirci et al. [50]	Prospective ASHP						Wound infection 1, incisional hernia 1, SBO 1, sciatic pain 1, de novo dyspareunia 2
Barranger et al. [46]	Prospective ASHP						DVT/PE 2 (10 %) Femoral neuropathy 1 (5 %) Incisional hernia 2 (10 %) 1 rectal injury, umbilical hernia and transfusion
Costantini et al. [48]	Retrospective ASHP	32 (12-68)	7/7 (100)	8/9 (89)	0/7	0/9	
Rosenblatt et al. [57]	Retrospective LSHP	8	40/40 (100)		0/40		
Banu [45]	Retrospective ASHP	36-60	19/19 (100)		0/19		"No significant complications"
Total			310/339 (91)	121/129 (94)	5/339 (1.5)	11/129 (8.5)	

Equal efficacy for anatomical outcomes
Sacral colpopexy with hysterectomy five times higher Mesh erosion rate

Laparoscopic Uterosacral hysteropexy v Hysterectomy

Table 5 Comparison of laparoscopic uterosacral hysteropexy and hysterectomy outcomes

Reference	Methodology	Numbers	Follow-up months	LUSLHP (%)	TLH+USCL (%)	Vaginal hysterectomy	Complications (%)
Rosen et al. [58]	Prospective coh				7 (78)		Dyspareunia 1 in each group
Diwan et al. [59]	Retrospective co					22/25 (88)	De novo dyspareunia 2 (8)
Maher et al. [60]	Prospective						Laparotomy haemorrhage 2 ureteral releasing incisions
Medina and Takacs [61]	Retrospective						Pneumonia 1
Krause et al. [62]	Prospective						DVT/PE 1 2 small bowel perforations

Less effective than abdominal sacral hysteropexy and hysterectomy with sacral colpopexy

Significant variation in definition success and surgical technique

LSHP laparoscopic sacral hysteropexy, *LUSLHP* laparoscopic uterosacral ligament hysteropexy, *TLH* total laparoscopic hysterectomy

Round Ligament suspension = 100% recurrence

Mesh exposure at sacrocolpopexy with or without hysterectomy

Table 6 Rate of mesh exposures at sacral colpopexy with and without hysterectomy and with subtotal hysterectomy

Reference	Design	Follow-up (months)	Surgery	Mesh	No hysterectomy (%)	Concomitant total hysterectomy (%)	Concomitant subtotal hysterectomy	<i>p</i>
Jeon et al. [24]	Retrospective comparative	36	Open	Teflon	2/35	5/63	MD	–
				Marlex PP				
Cundiff et al. [65]	Prospective comparison	2						
Wu et al. [22]							MD	–
Costantini et al. [49]							MD	–
Bensinger et al. [66]							0/37	–
Brizzolara and Pillai-Allen [67]								
Culligan et al. [68]								
Total for open SC	–	–	–	–	23/853 (2.7)	35/405 (8.6)	0/37	0.001
Stepanian et al. [69]	Retrospective	12	Lap	PP	2/272	3/130		
Tan-Kim et al. [63]	Retrospective comparative	15	Lap	PP	MD	13/57	1/21	–
Total	–	–	–	–	25/1,125 (2.2) 95 % CI (1.4–3.1)	51/592 (8.6) 95 % CI (6.3–11)	1/58	0.001

Risk of mesh exposure
Sacrocolpopexy + hysterectomy = 8.6%
Sacrocolpopexy - hysterectomy = 2.2%
Sacrocolpopexy + Subtotal = 1.7 %

PP polypropylene, Lap laparoscopic, SC sacral colpopexy, MD missing data

LAPAROSCOPIC APPROACH

- MANY PAPERS ON LAPAROSCOPIC SACROCOLPOPEXY INCLUDE UTERUS SPARING PROCEDURES, WITHOUT DIFFERENTIATING FROM PATIENTS WHO UNDERWENT EITHER A PREVIOUS HYSTERECTOMY, OR A CONCOMITANT HYSTERECTOMY OR SUPRACERVICAL HYSTERECTOMY
- STUDIES BY AGARWALA⁵⁷ ET AL, ROSS AND PRESTON⁵⁸, RIVOIRE⁵⁹ ET AL AND SARLOS⁶⁰ ET AL (N = 101) INDICATE THAT HYSTEROPEXY IS PERFORMED IN FEWER THAN 5% OF CASES, THE REST GENERALLY BEING TOTAL OR SUBTOTAL HYSTERECTOMY
- THIS HAS CLOUDED OUR OPINIONS ON THIS TYPE OF SURGERY

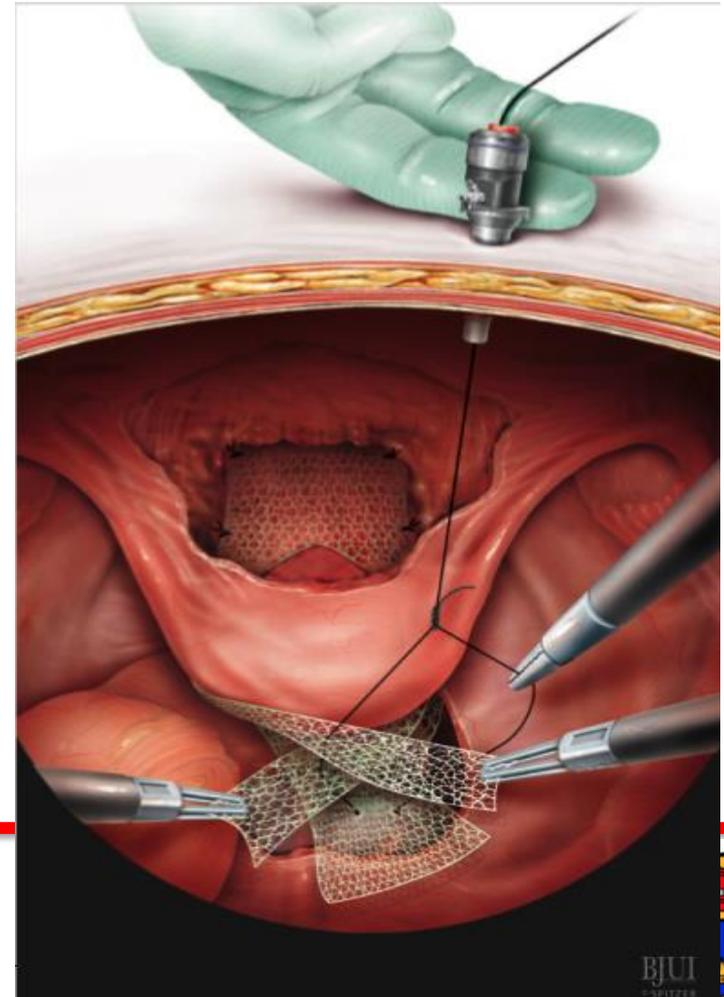
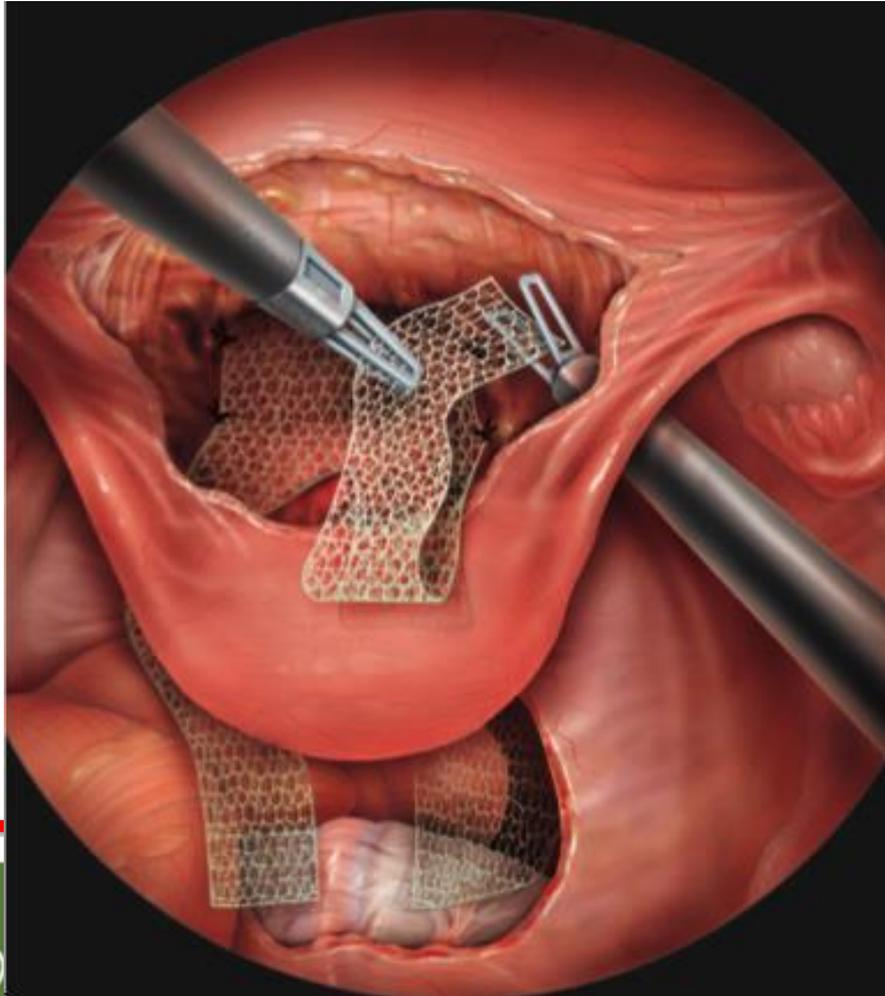
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59. Rivoire, C. *et al.* Complete laparoscopic treatment of genital prolapse with meshes including vaginal promontofixation and anterior repair: a series of 138 patients. *J. Minim. Invasive Gynecol.* 14, 712–718 (2007).

60. Sarlos, D., Brandner, S., Kots, L., Gyax, N. & Schaer, G. Laparoscopic sacrocolpopexy for uterine and post-hysterectomy prolapse: anatomical results, quality of life and perioperative outcome—a prospective study with 101 cases. *Int. Urogynecol. J. Pelvic Floor Dysfunct.* 19, 1415–1422 (2008).

LAPAROSCOPIC COLPOSACROHYSTEROPEXY



140 patients
6 Apical prolapse
3 required repeat Surgery

Int Urogynecol J (2014) 25:131–138

DOI 10.1007/s00192-013-2209-5

ORIGINAL ARTICLE

Laparoscopic hysteropexy: 1- to 4-year follow-up of women postoperatively

Philip Rahmanou • B. White • N. Price • S. Jackson



Ospidéal Máithreachais
na hOllscoile Corcaigh

Cork University
Maternity Hospital



SUMMARY

- While uterine preservation is a viable option for the surgical management of uterine prolapse the evidence on safety and efficacy is currently lacking
- The legacy of TVM has certainly set us back wrt exploring native tissue repair compared to hysteropexy



Uterine Preservation – Bias?

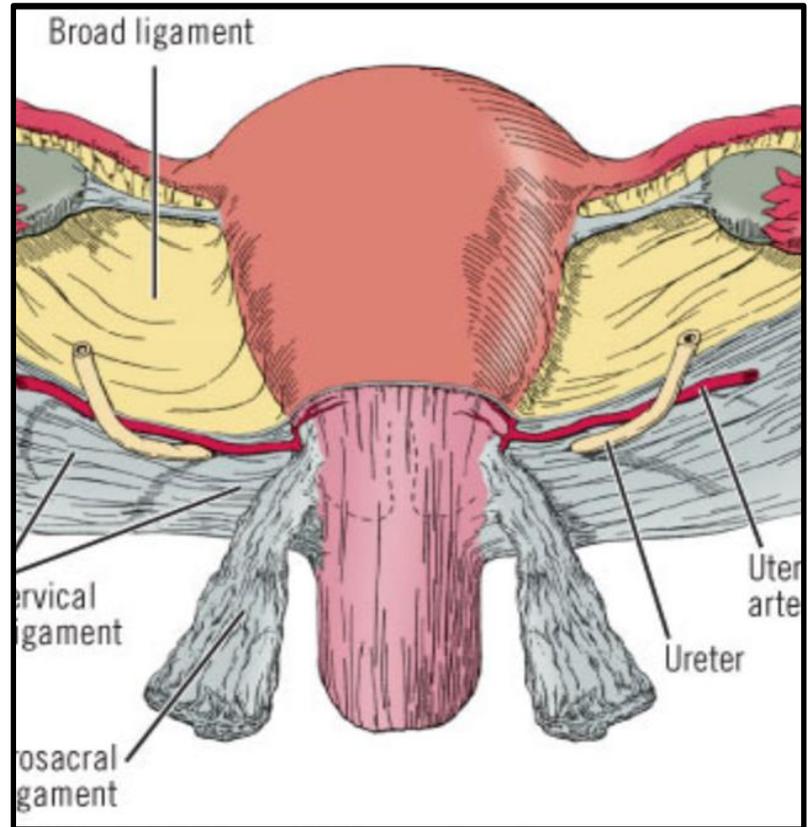
Factors influencing the decision

- Patient
- Surgeons
- Training
 - Ability v disability!
- Hospital



Patient Bias

- Female psyche/desire
- Fertility
- Function – sexual
- Fear



Patient Bias

- Female psyche/ desire
- Fertility
- Function – sexual
- Fear

Wong et al¹: Patient beliefs regarding hysterectomy in women seeking surgery for pelvic organ prolapse: findings in a predominantly Hispanic population.

124 patients

30%: preservation.

Affected by age education and social class

Korbly et al²: Patient preferences for uterine preservation and hysterectomy in women with pelvic organ prolapse.

213 patients:

20% hysterectomy

36% preservation

Geographic region, education level, and belief that the uterus is important for a sense of self

Patient Bias

- Female psyche
- **Fertility**
- Function – sexual
- Fear

Pregnancy and POP

Pessary first line

Defer surgery until family complete

Pregnancy post surgery

Manchester: 12 -1 recurrence

SS hysteropexy: 17- 2 recurrence

Lap US hysteropexy: Few -1 recurrence

AWS hysteropexy: 139 – 1 recurrence

No consensus type of hysteropexy
for fertility, pregnancy, delivery,
recurrence

Patient Bias

- Female psyche
- Fertility
- **Function – sexual**
- Fear

Costantini et al¹. Changes in female sexual function after pelvic organ prolapse repair: role of hysterectomy.

68 patient 51-66 years

Desire, arousal, and orgasm domains showed significant improvements in the uterus-sparing group

Good et al²: Prolapse-related knowledge and attitudes toward the uterus in women with pelvic organ prolapse symptoms.

213 patients

47% disagreed that “the uterus is important for sex”.

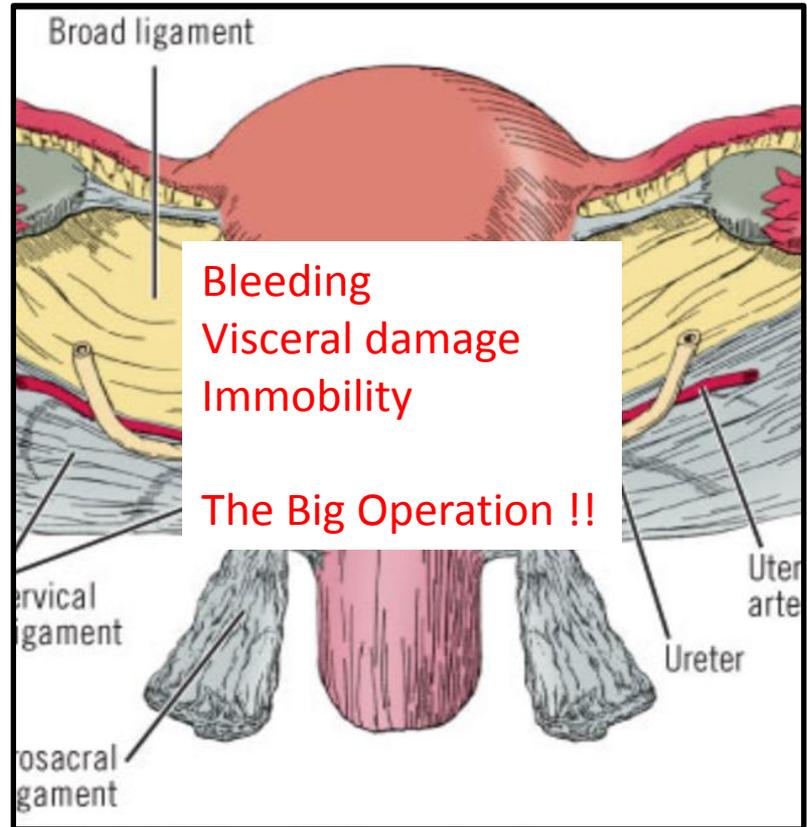
60% disagreed “the uterus is important for a sense of self”

64% disagreed “that hysterectomy would make me feel less feminine”

67% disagreed “that hysterectomy would make me feel less whole”

Patient Bias

- Female psyche
- Fertility
- Function – sexual
- **Fear- hysterectomy complications**



Or the corollary –

Conflicting evidence

J Gynecol Obstet Biol Reprod (Paris). 2014 Jan;43(1):40-5. doi: 10.1016/j.jogyn.2013.10.011. Epub 2013 Dec 3.

[Should we perform intra-operative ultrasound pre-operative pelvic reconstructive surgery with uterine preservation?].

[Article in French]

Bohoussou E¹, Adjoussou SA², Letouzey V³, Patton B⁴, de Tayrac R⁵.

Ultrasound pre-op
Endometrial biopsy not
indicated

Risk of unanticipated abnormal gynecologic pathology at the time of hysterectomy for uterovaginal prolapse

Presented at the 30th Annual Scientific Meeting of the American Urogynecological Society, Las Vegas, NV, December 26, 2009.

[Anna C. Frick](#), MD, MPH, [Mark D. Walters](#), MD, [Kathleen S. Larkin](#), MD, [Michael J. Gormley](#), MD

Center for Urogynecology and Reconstructive Pelvic Surgery, Obstetrics, Gynecology and Women's Health Institute, Cleveland Clinic, Cleveland, OH

PMB = Hysterectomy
13% unanticipated
endometrial cancer or
hyperplasia

Uterine Preservation – Bias?

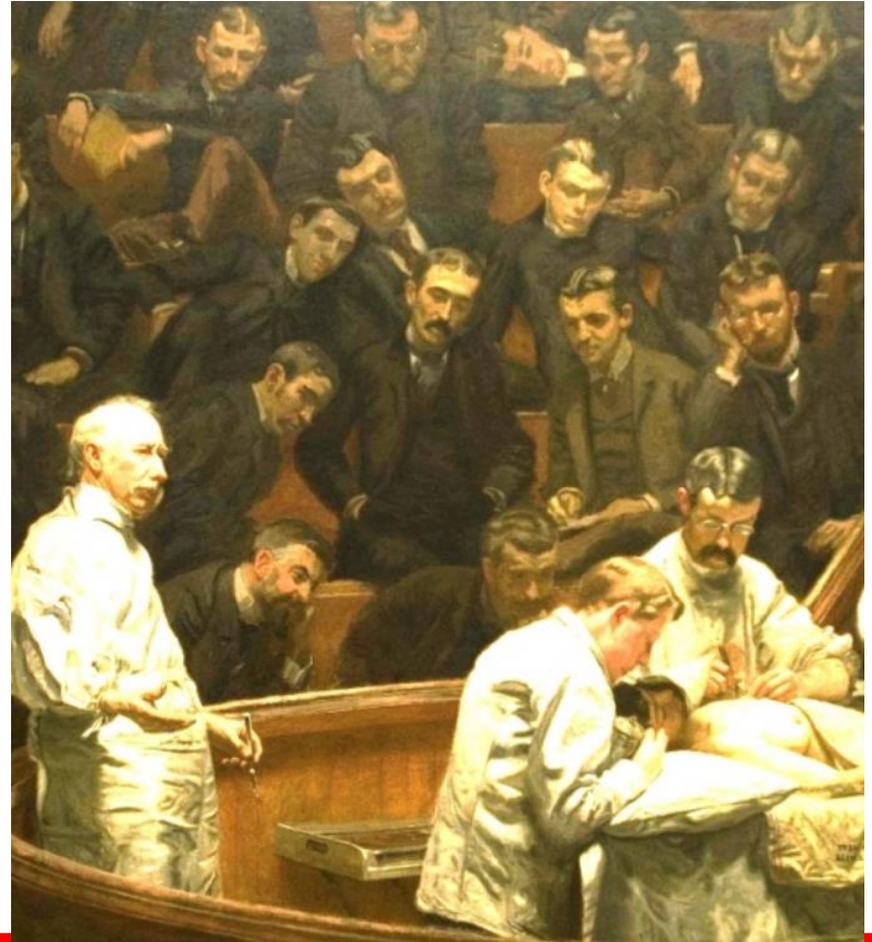
Factors influencing the decision

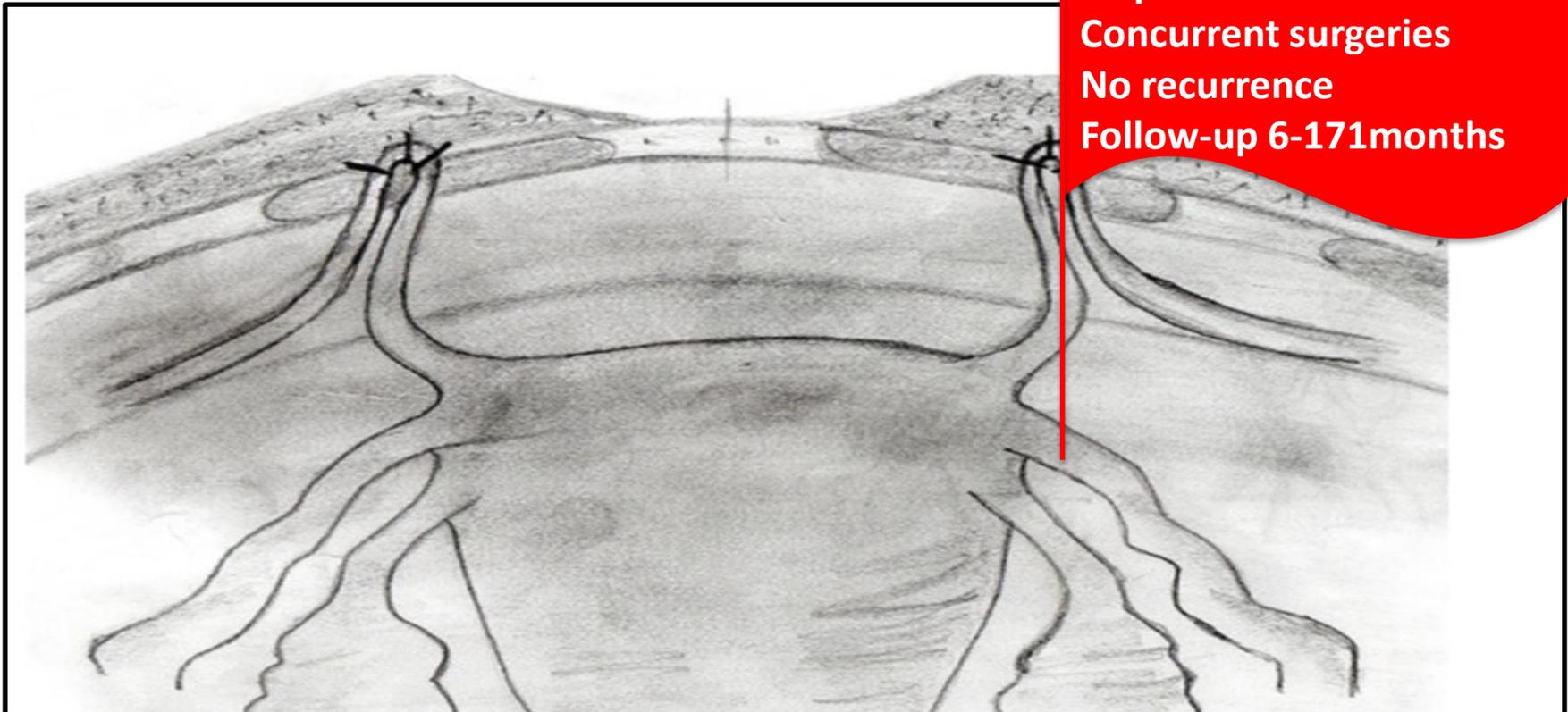
- Literature
 - Evidence
 - Publish or perish
- Patient
- **Surgeons**
- Training
 - Ability
- Hospital



Surgeon Bias

- How was I trained?
- What can I do?
- What am I good at?
- Lets do some research ?
- Lets make up an operation ?





A new surgical method of suprapubic and extraperitoneal approach with **uterine preservation** for pelvic organ **prolapse**: kurt extraperitoneal ligamentopexy.

Kurt S, Canda MT, Tasyurt A.

52 patients
13% Hysterectomy rate
7-30 months post
procedure

J Urol. 2014 Nov;192(5):1461-7. doi: 10.1016/j.juro.2014.06.027. Epub 2014 Jun 13.

Anterior vaginal wall suspension procedure for moderate bladder and uterine prolapse as a method of uterine preservation.

Coskun B¹, Lavelle RS¹, Alhalabi F¹, Christie AL¹, Zimmern PE².

DOI: 10.1111/j.1471-0528.2007.01416.x
www.blackwellpublishing.com/bjog

8 patients
Concurrent surgery
Follow-up 6/52- 1 yr

Laparoscopic uterine sling suspension: a new technique of uterine suspension in women desiring surgical management of uterine prolapse with uterine conservation

A Cutner,^a R Kearney,^b A Vashisht^a

Uterine Preservation – Bias?

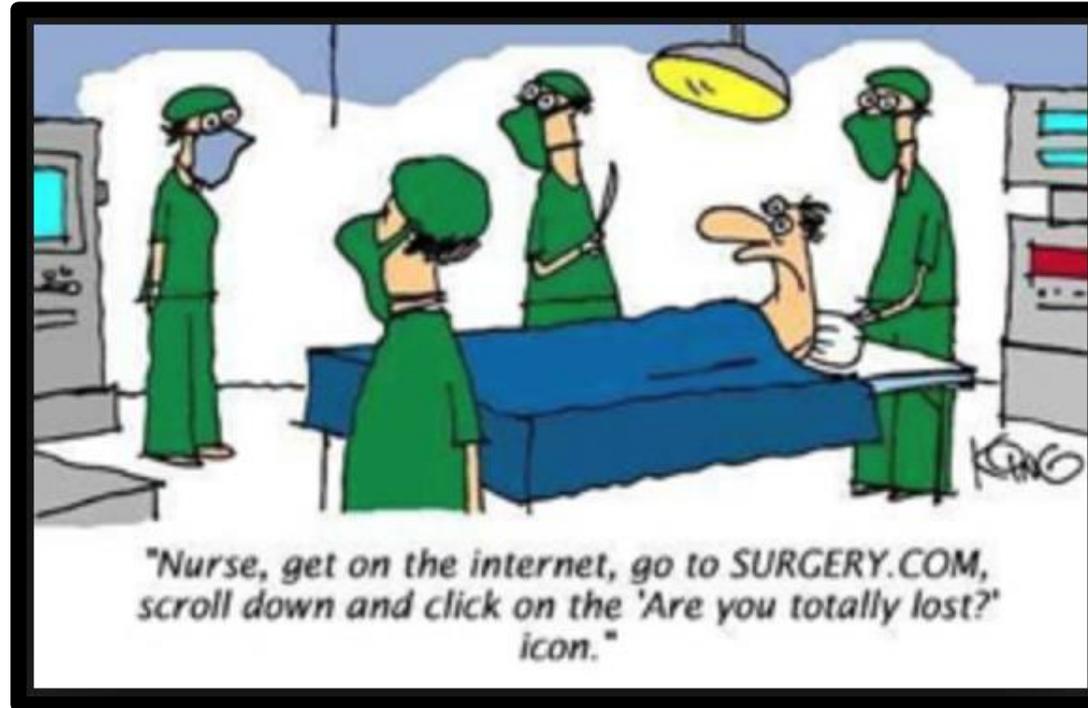
Factors influencing the decision

- Literature
 - Evidence
 - Publish or perish
- Patient
- Surgeons
- **Training**
 - **Ability**
- Hospital



Surgeon ability

- Exclusive training- minimal invasive, vaginal, abdominal
- Influence of technology: Robotic Surgery
- Training hours: EWTD impact on training



**Board certification
Realistic
Transferable to theatre
Assessment tools**

J Obstet Gynaecol Can. 2011 Dec;33(12):1253-5.

On the brink: the future of female pelvic medicine and reconstructive surgery in Canada.

Cundiff GW.

J Obstet Gynaecol Can. 2008 Aug;30(8):684-95.

Standing on the shoulders of giants: contemplating a standard national curriculum for surgical training in gynaecology.

Geoffrion R.

J Surg Educ. 2014 Jul-Aug;71(4):492-9. doi: 10.1016/j.jsurg.2014.01.011. Epub 2014 Apr 26.

Effect of the full implementation of the European Working Time Directive on gynaecological surgery.

Mahesh B¹, Sharples L², Codispoti M³.

Ir J Med Sci. 2013 Sep;182(3):383-7. doi: 10.1007/s11845-012-0894-6. Epub 2013 Jan 4.

The detrimental impact of the implementation of the European working time directive on the house officer (SHO) operative experience.

Breen KJ¹, Hogan AM, Mealy K.

RESEARCH ARTICLE

Is gynaecological surgical training a concern? A questionnaire survey of gynaecological surgical trainers

Esther L Moss¹, Foteini E Bredaki¹, Peter W Jones², James Hollingworth³.

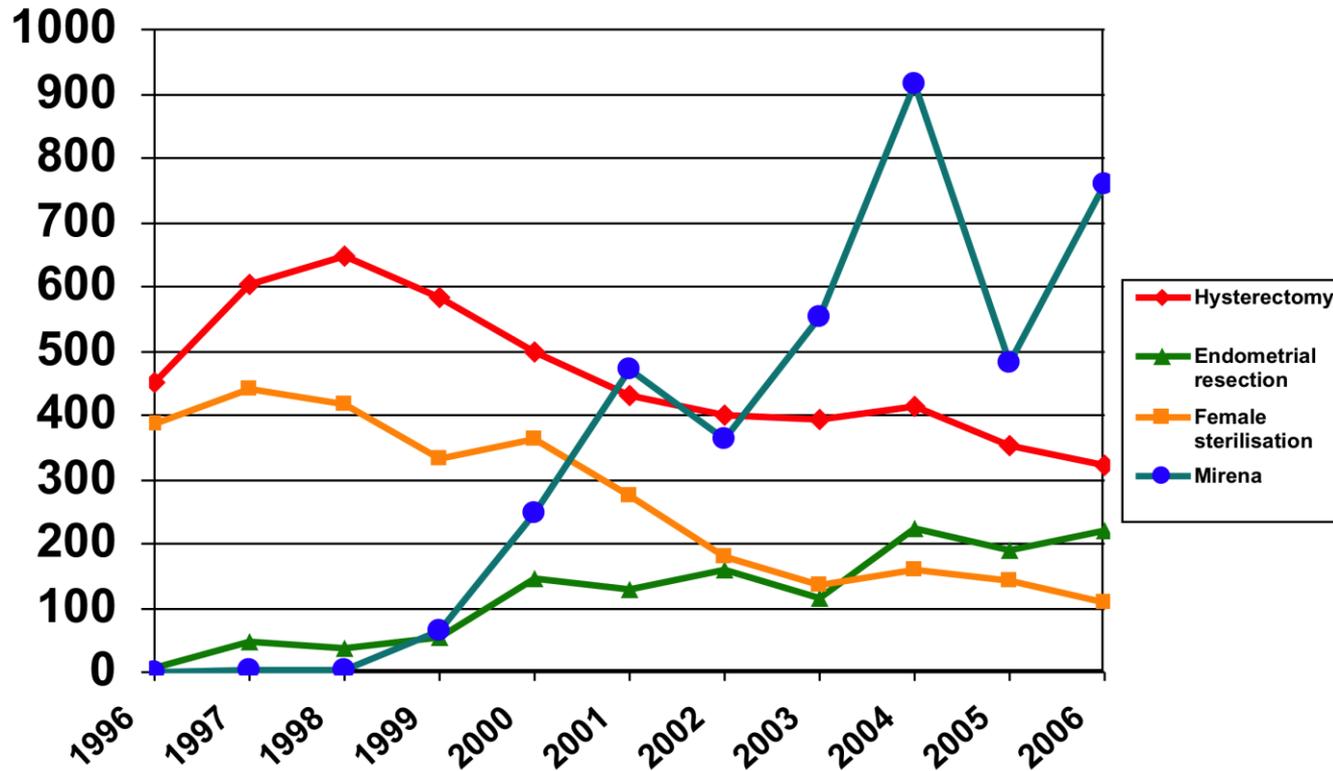
Attitudes to training cases had to change
Increase in junior training cases

EWTD in Ireland:
26% decrease in minor cases
63% decrease in intermediate cases perform by SHOs

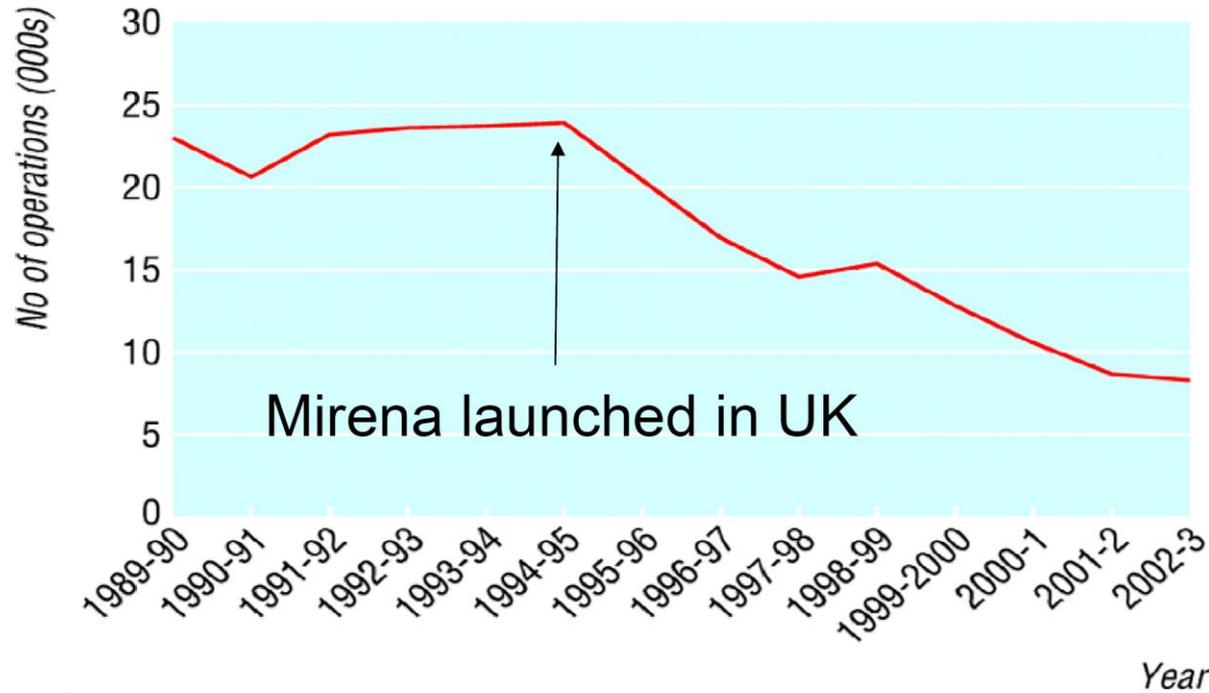
UK: 14% trainees not happy to perform TAH on completion compared to 1% in 2002
More deliveries= Less surgery
Fellowships required

The fall of laparoscopic surgery

Mirena and reduction in TL's, UK



Hysterectomies for menorrhagia 1990-2000, UK



Reid, P. C et al. BMJ 2005;330:938-939
Copyright ©2005 BMJ Publishing Group Ltd.



	E & W 1998 ¹
Open	78%
Vaginal	20%
Lap / Robotic	1.1%
Unknown	1%
No. of cases	42,653

Benign hysterectomy modalities England and Wales

27;8:CD006575. doi: 10.10

surgical trainees i

The Future: Hysteropexy/MIS

- Robotic/Laparoscopic Simulators
- Box Models
- Virtual reality training

BUT what about vaginal surgery??



Uterine Preservation – Bias?

Factors influencing the decision

- Literature
 - Evidence
 - Publish or perish
- Patient
- Surgeons
- Training
 - Ability
- **Hospital**



Hospital Bias

- Renumeration
- + Casemix
- + Length of stay
- + Blood transfusion
- + Obesity/Medical

= Cost

Is a vag hyst cheaper?



FinallyContraindications

Table 1 Contraindications to uterine-preserving surgery

Uterine abnormalities

Fibroids, adenomyosis, endometrial pathology

History of current or recent cervical dysplasia

Abnormal menstrual bleeding

Postmenopausal bleeding

Familial cancer BRAC1&2 ↑risk of ovarian cancer and theoretical risk of fallopian tube and serous endometrial cancer

Hereditary non-polyposis colonic cancer 40–50 % lifetime risk of endometrial cancer

Tamoxifen therapy

Unable to comply with routine gynaecology surveillance

RCT's in hystero...pexy v ectomy : a practical impossibility?

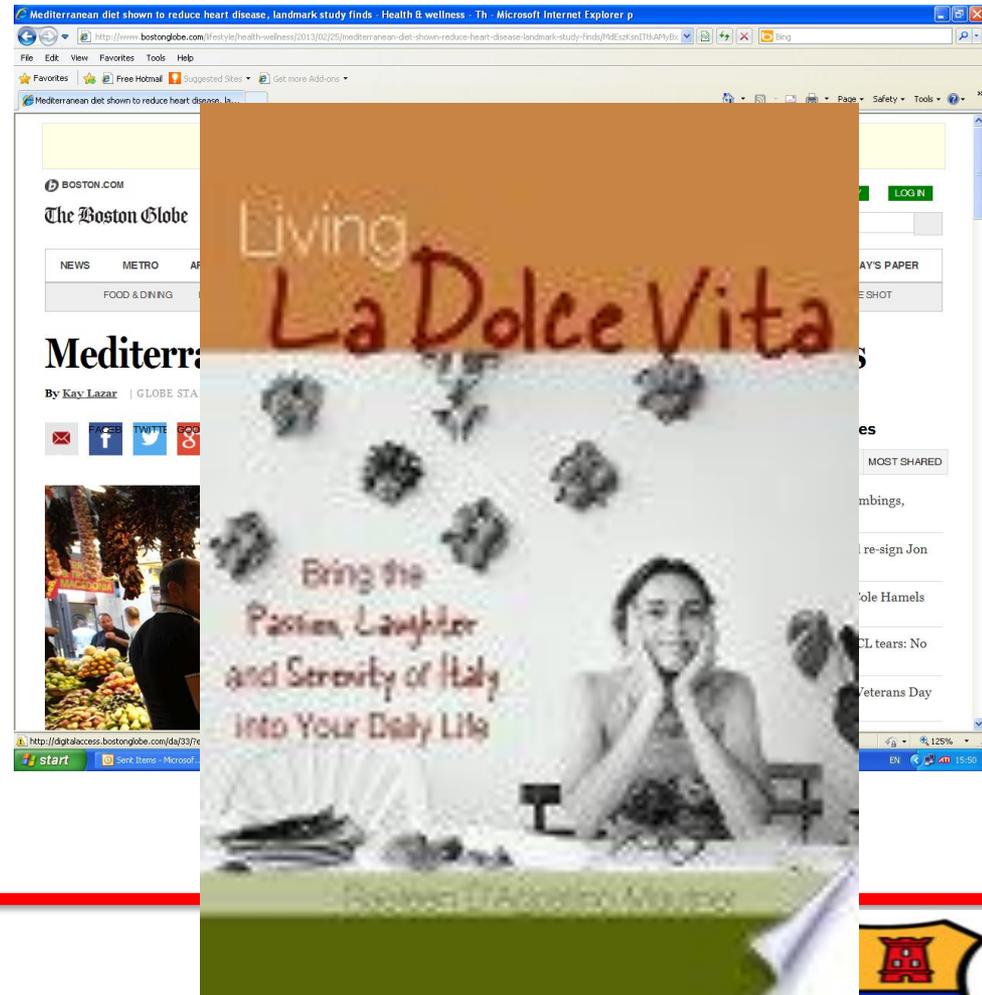
- Conservative power analysis of 50 women with vault prolapse
- Over 6 mths – 100 women approached – 3 randomised

There are still multiple bias' to overcome –

1. Patient bias – “new v old” (like surgery for SUI), Grays anatomy etc
2. Physician bias – discharge patients earlier, difficulty with objectivity, desire to use new techniques, pressure to publish
3. Hospital bias – pressure on physicians to maintain critical caseload; value for money; need to advertise new techniques

A mediterranean approach?

- “Olive oil and poor mans diet of cereals grains, greens fruit and fish”
- Simplicity and purity
- *Non esagerare* – *nothing exaggerated or overcomplicated*



Final Thoughts

- The TVM debate has interfered with evolution of native tissue reconstruction
- What is the ideal vaginal hysterectomy technique?
- Must then provide RCT's to answer the question
- Women are changing in attitudes and beliefs
- Dependant on us as surgeons to be open and provide adequate explanation for informed consent
- **ULTIMATELY – DECISION WILL DEPEND ON OUR SURGICAL ABILITY**
- **ULTIMATELY – DECISION IS BASED ON WHAT WOMEN WANT**

MEL

HELEN

"What do women want? The only thing I have learned in fifty-two years is that women want men to stop asking dumb questions like that."

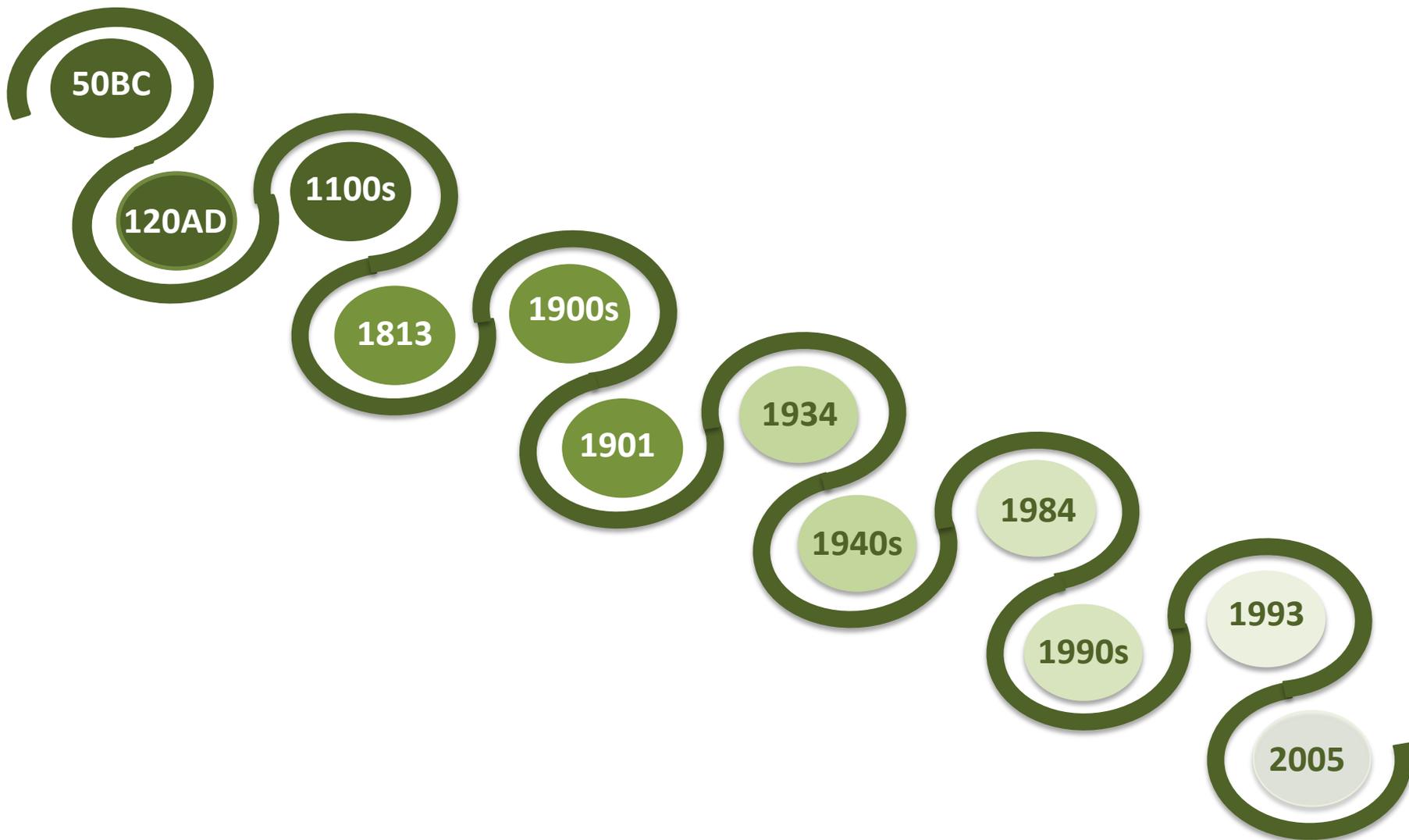
Sigmund Freud

Thank you !



Ospidéal Máithreachais
na hOllscoile Corcaigh
Cork University
Maternity Hospital





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na hOllscoile Corcaigh
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Maternity Hospital



10 patients
MRI 6/52 post op
3 required repeat Surgery
Restores the anatomy

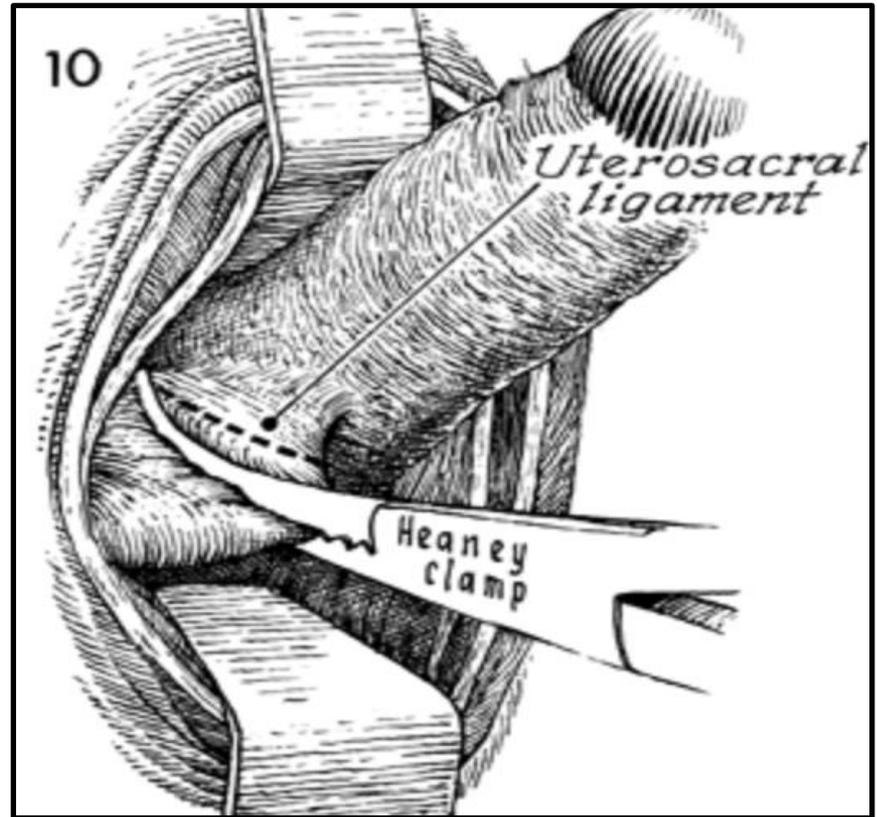
Female Pelvic Med Reconstr Surg. 2014 Jul-Aug;20(4):222-7. doi: 10.1097/SPV.000000000000066.

Does bilateral sacrospinous fixation with synthetic mesh recreate nulliparous pelvic anatomy? An MRI evaluation.

Nicolau-Toulouse V¹, Tiwari P, Lee T, Cundiff GW, Geoffrion R.

Concurrent hysterectomy

- Sparse info
- +/- mesh
- Erosion 4 times greater if concurrent hysterectomy at time of sacral colpopexy
- Caution advised, patient counselling



264,758 women
Benign Hysterectomy
Robot:0.5% in 2007
9.5% in 2010.

ORIGINAL CONTRIBUTION

Robotically Assisted vs Laparoscopic Hysterectomy Among Women With Benign Gynecologic Disease

Jason D. Wright, MD

Importance. Although robotically assisted hysterectomy for benign gynecologic disease

Influence of Robotic Approach

Figure 3. Hysterectomy Rates by Route of Surgery at Hospitals Where Robotic Hysterectomy Was Not Performed, by Quarter

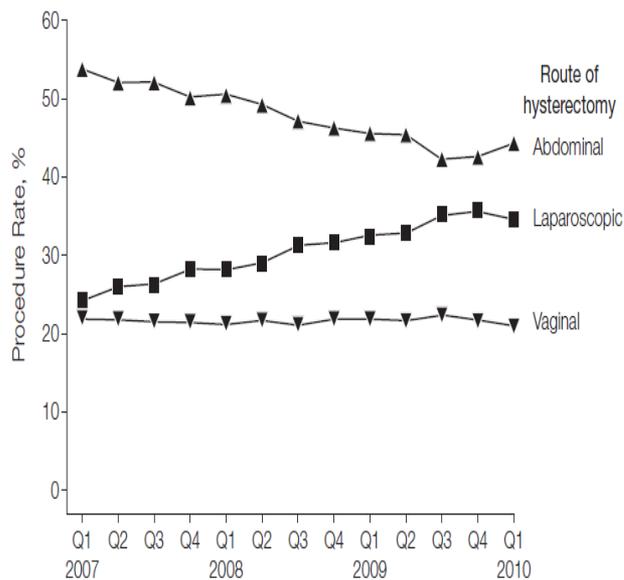
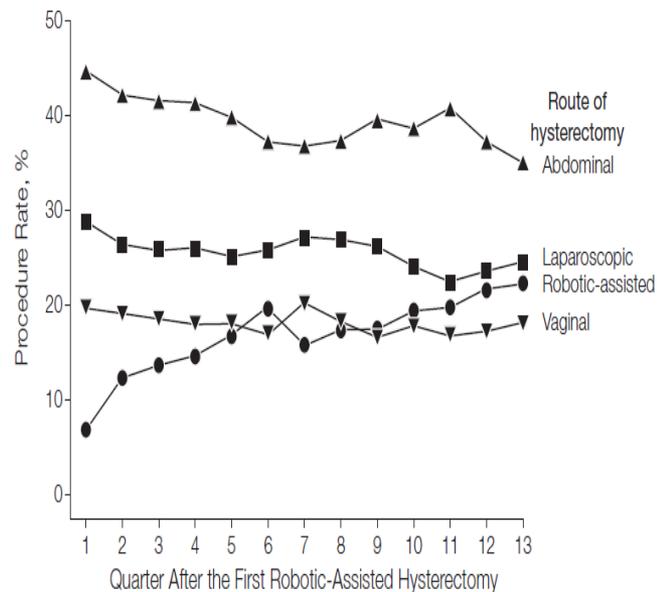
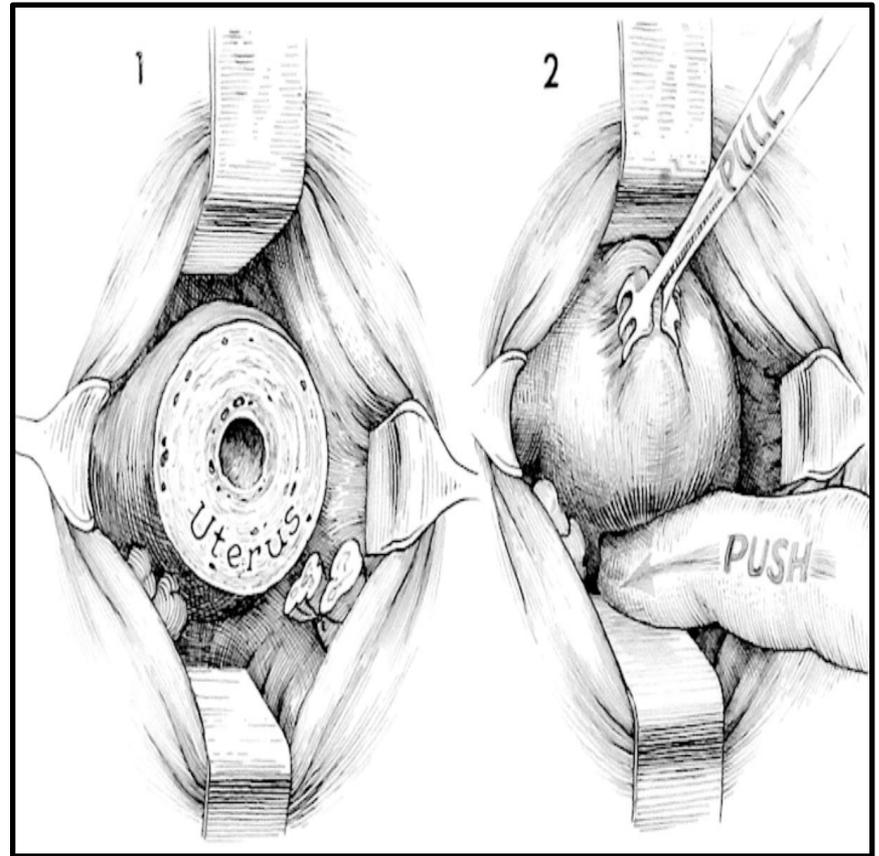


Figure 2. Hysterectomy Rates by Route of Surgery at Hospitals Where Robotic Hysterectomy Was Performed



Manchester Repair

- 40% success rate
- Decreased op times,
- Menstrual dysfunction
- Cervical stenosis
- “ the Manchester procedure has a limited place in modern gynecology.....”
Kalogirou



140 patients
6 Apical prolapse
3 required repeat Surgery

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45 patients

1^o outcome: subjective success rate, measured by a negative answer to the Q35 of EPIQ

LSTH+ cervicopexy more successful

Neurourol Urodyn. 2014 Jun 29. doi: 10.1002/nau.22641. [Epub ahead of print]

Comparison between laparoscopic sacral hysteropexy and subtotal hysterectomy plus cervicopexy in pelvic organ prolapse: A pilot study.

Gracia M¹, Perelló M, Bataller E, España M, Parellada M, Genís D, Balasz J, Carmona F.