

INTERNATIONAL VARIATION IN INTERPOSITIONAL GRAFT USE FOR VESICOVAGINAL FISTULA REPAIR: A SYSTEMATIC REVIEW

Hypothesis / aims of study

Evidence-based analysis of vesicovaginal fistula (VVF) surgical repair methods and outcomes are limited. The objective of this systematic review is to assess regional variation among interpositional graft use, differences in obstetrical related fistula closure rates and post-operative incontinence.

Study design, materials and methods

Medline, Embase, Science Citation Index, Cochrane Controlled Trials Register, and PubMed search of peer-reviewed articles on graft use and outcomes outside of the United States, Canada, and Europe, between 1978 - 2008. Vesicovaginal fistulas secondary to obstetrical trauma, unrelated to radiation exposure, were included, as well as cases involving concomitant urethro-vaginal and/or rectovaginal fistulas.

Results

A total of 3,390 articles were reviewed, 41 met search criteria from 16 different countries, with 25 including detailed patient demographics. Fistulas size ranged from 2mm to over 7cm. Fourteen interpositional graft types were used, with labial fat and omentum most common. Time of fistula formation to corrective surgery ranged widely from 8 weeks to 20 years. Closure rates ranged from 50-100%. Overall post-operative incontinence ranged from 6-65%.

Characteristics of interpositional graft use for vesicovaginal fistula repair and outcomes.

Study	Country	Year of Repair	No. of patients*	Age at repair (yrs)	Graft Type	Fistula closure	Postoperative followup	Postoperative incontinence	Previous surgery
Wall	Nigeria	1992-1999	932(889)		Maritus	92%		16%	
Rangnekar	India	1994-1999	34	18-52	Maritus	92%	6mo-5.5yr	0%	29%
Kapoor	India	1995-2005	52(51)	17-53	peritoneum omentum	94%	5mo-5.5y	0%	2%
Punekar	India	1996-1999	15	18-40	Maritus	93%	3-12mo	0%	67%
Murray	Ethiopia	1999	55(52)	16-45	Maritus	100%	median 8wk	57%	
Browning	Ethiopia	2002-2004	440 (206)		Maritus	97%	2.5yr	49%	2%
Margolis	Ghana	1992	4(2)	20,39	Maritus	50%	6mo	50%	50%
Goh	Ethiopia	1995-1997	116(84)	16-20	BCM	98%		8%	7%
Xu	China	1995-2003	9(2)	23-38	BCM	100%	6mo - 5yr	0%	100%
Roenneburg	Niger	2003-2005	90(73)	14-51	BCM	82%	1-3mo	12%	59%
Husain	Eritrea	2004	37	17-60	Maritus BCM	63%	4wk		0%
Kelly	Ethiopia	1983-1987	685 (578)	9-45	Maritus gracilius	85%		65%	
Kelly	Ethiopia	1983-1988	309(224)	9-45	Maritus gracilius	88%	4wk	6%	
Perata	Kenya	1986-1997	68(48)	mean 22	Maritus rectus abdominus	91%	7.2 mo		60%
Nesrallah	Brazil	1978-1996	25		omentum omentum	100%	12-17mo	0%	36%
Mubeen	India	1995-2002	32 (10)	12-55	peritoneum skin	88%		0%	
Rajamaheswari	India	1996-2002	90(34)	20-55	omentum Maritus	93%			
Sotelo	Brazil Venezuela	1998-2004	15	19-59	omentum sigmoid colon	93%	3mo-3yr		27%
Raassen	Tanzania Uganda	2001-2003	639(72)	mean 27	omentum	91%	2-4wk	18%	0%
Otsuka	Brazil	2004-2006	7	37-74	omentum	100%	2mo-2yr	29%	43%
Hemal	India	2006-2007	7		omentum sigmoid colon	100%	3-12mo	0%	100%
Patwardhan	India	2008	4	12-30	peritoneum omentum ileum	100%	3mo		25%
el-Lateef Moharram	Egypt	1995-2001	26(25)		abdominal fat	100%	1.5wk	58%	4%
Vyas	India	2003-2004	26	22-50	bladder mucosa	91%	3-12mo	0%	14%
Choudhrie	India	2005	1	27	gluteal fat	100%	3wk		0%

BCM, bulbocavernosus muscle

*Number of total patients (number of vesicovaginal cases meeting search criteria)

**When indicated, mean fistula diameter (diameter range)

Interpretation of results

Fistula closure rates and post-operative urinary incontinence prevalence was consistent with published literature.

Concluding message

Interpositional graft preference is likely independent of geographical region and more related to characteristics of the fistula defect and patient health, though more studies determining a causal relationships are needed.

Specify source of funding or grant

NONE

Is this a clinical trial?

No

What were the subjects in the study?

NONE
