



BRITISH SOCIETY OF
UROGYNAECOLOGY (BSUG)

**STRESS URINARY INCONTINENCE SURGERY
IN THE UK 2008-2017**

1ST NATIONAL REPORT

BSUG AUDIT AND DATABASE COMMITTEE 2018

Contents

PREFACE		5
CHAPTER 1	Introduction	6
	1.1 BSUG database	
	1.2 Database usage	
	1.3 Audit timeframe and operations included	
	1.4 Outcomes	
	1.4.1 Follow-up interval after surgery	
	1.4.2 Global impression of improvement (GII) after surgery	
	1.4.3 Surgical complications	
	1.4.4 Assignment of risk for complications	
CHAPTER 2	Summary of findings and general trends	10
	2.1 Continence procedures 2008-2017	
	2.2 Report validity and comparison with Hospital Episode Statistics (HES)	
	2.3 Primary and repeat procedures for SUI	
	2.4 Sole continence procedures and continence procedures with concomitant operations	
	2.5 Outcome of continence surgery	
	2.6 Limitations of the audit	
CHAPTER 3	Retropubic mid-urethral tape (RP MUT)	15
	3.1 Number of procedures recorded	
	3.2 Follow up after RP MUT	
	3.3 Global impression of improvement (GII) after RP MUT	
	3.3.1 Overall improvement	
	3.3.2 GII at different time intervals	
	3.3.3 GII for procedures with and without concomitant operations	
	3.4 RP MUT complications	
	3.4.1 Intraoperative complications	
	3.4.2 Postoperative complications	
CHAPTER 4	Transobturator mid-urethral tape (TO MUT)	20
	4.1 Number of procedures recorded	
	4.2 Follow up after TO MUT	
	4.3 Global impression of improvement (GII) after TO MUT	
	4.3.1 Overall improvement	
	4.3.2 GII at different time intervals	
	4.3.3 GII for procedures with and without concomitant operations	
	4.4 TO MUT complications	
	4.4.1 Intraoperative complications	
	4.4.2 Postoperative complications	

CHAPTER 5	Bladder Neck Injection (BNI)	25
	5.1 Number of procedures recorded	
	5.2 Follow up after BNI	
	5.3 Global impression of improvement (GII) after BNI	
	5.3.1 Overall improvement	
	5.3.2 GII at different time intervals	
	5.3.3 GII for procedures with and without concomitant operations	
	5.4 BNI complications	
	5.4.1 Intraoperative complications	
	5.4.2 Postoperative complications	
CHAPTER 6	Colposuspension	30
	6.1 Number of procedures recorded	
	6.2 Follow up after colposuspension	
	6.3 Global impression of improvement (GII) after colposuspension	
	6.3.1 Overall improvement	
	6.3.2 GII at different time intervals	
	6.3.3 GII for procedures with and without concomitant operations	
	6.4 Colposuspension complications	
	6.4.1 Intraoperative complications	
	6.4.2 Postoperative complications	
CHAPTER 7	Fascial sling	35
	7.1 Number of procedures recorded	
	7.2 Follow up after fascial sling	
	7.3 Global impression of improvement (GII) after fascial sling	
	7.3.1 Overall improvement	
	7.3.2 GII at different time intervals	
	7.3.3 GII for procedures with and without concomitant operations	
	7.4 Fascial sling complications	
	7.4.1 Intraoperative complications	
	7.4.2 Postoperative complications	

ABBREVIATIONS

Bladder neck Injection (BNI)

British Society of Urogynaecology (BSUG)

Global impression of improvement (GII)

Healthcare Quality Improvement Partnership (HQIP)

Hospital Episode Statistics (HES)

Mid-urethral tape (MUT)

National Institute for Health and Care Excellence (NICE)

Retropubic mid-urethral tape (RP MUT)

Royal College of Obstetricians and Gynaecologists (RCOG)

Stress Urinary Incontinence (SUI)

Transobturator mid-urethral tape (TO MUT)

Preface

The British Society of Urogynaecology (BSUG) database has been available online since 2007. It allows BSUG members to record details of procedures performed to treat urinary incontinence and pelvic organ prolapse. Although voluntary, use of the database is recommended by The National Institute for Health and Care Excellence (NICE).

The main aim of the BSUG database is to allow outcomes of individual operations to be studied in detail. Thanks to the commitment of BSUG members - and the patients who kindly allowed their data to be recorded – the database has been extremely successful. Currently more than 120 000 individual surgical episodes have been recorded from a large number of consultants and centres. There have also been many publications which are listed on the BSUG website.

Individual consultants use the BSUG database to examine their own practice and for annual appraisal. It is also one of the requirements to become a BSUG accredited urogynaecology centre.

Continual improvements have been made to the BSUG database by many consultants who have worked in their own time without payment. While not perfect, the large number of cases entered by many consultants allows a valid assessment of the outcome of prolapse and incontinence procedures in the UK to be made.

This is the first National Report from the BSUG Audit and Database Committee and includes the first full 10 years of data collection (2008 – 2017). Surgery for urinary incontinence has never been under more scrutiny and publication of this report therefore comes at an opportune time. We have included information on national trends and details about the five most commonly performed procedures for the treatment of stress urinary incontinence (SUI). A conscious decision was taken to not interpret or comment on the results apart from where an explanation is necessary.

Thank you again to the patients and BSUG members who have contributed to this report which we hope you will find useful.

BSUG Audit and Database Committee 2018

CHAPTER 1: Introduction

1.1 BSUG DATABASE

The British Society of Urogynaecology (BSUG) database was established in 2004 and launched online in 2007. It collects data on operations for urinary incontinence and pelvic organ prolapse from the UK and is open to BSUG members. Access to the database is password-protected and the database is held within the secure NHS N3 network. Data entry is self-reported and voluntary but is recommended by NICE and is currently required for a centre to be accredited in urogynaecology by BSUG. Patient consent is required for data entry.

1.2 DATABASE USAGE

From 2008 to 2017, 116037 procedures for urinary incontinence and prolapse were entered onto the database. There were 145 centres which entered data and these included teaching hospitals, district general hospitals and private hospitals. The cases entered also include operations carried out by trainees on patients under the care of consultants. These cases are included in the audit as they cannot be easily separated.

1.3 AUDIT TIMEFRAME AND OPERATIONS INCLUDED

The timeframe of the audit was from the start of 2008 (the first full year of online data collection) to the end of 2017. The five most commonly performed operations for stress urinary incontinence (SUI) were included and their outcomes analysed in detail:

- Retropubic mid-urethral tape (RP MUT)
- Transobturator mid-urethral tape (TO MUT)
- Bladder neck injection (BNI)
- Colposuspension (open and laparoscopic)
- Autologous rectus fascial sling

The SUI operations could be sole procedures or part of a combination of procedures, usually for pelvic organ prolapse. Concomitant procedures ranged from transvaginal pelvic floor repairs, laparoscopic and open abdominal prolapse operations, laparoscopic and open hysterectomies, laparoscopies and hysteroscopies. Sole procedures cannot automatically be separated from procedures with concomitant operations using the current functions of the database. Data was therefore analysed manually to obtain this information.

1.4 OUTCOMES

1.4.1 FOLLOW-UP INTERVAL AFTER SURGERY

The database records the 1st follow-up after surgery at 4 prespecified intervals of 6 weeks, 3 months, 6 months and 1 year.

How the 1st follow-up was carried out is also reported. The 5 methods are shown in *Table 1*.

Table 1: *Method of follow-up.*

Outpatient visit
Postal questionnaire
Online questionnaire
Telephone follow-up
Follow-up at the GP practice

1.4.2 GLOBAL IMPRESSION OF IMPROVEMENT (GII) AFTER SURGERY

The outcome of surgery was assessed by looking at the patient-reported global impression of improvement (GII). The scale has 7 outcome categories and is specific to an improvement in SUI (*Table 2*). SUI operations may have been carried out along with other concomitant procedures that may have a confounding effect on GII. To mitigate this, the overall GII (inclusive of both sole procedures and those with concomitant operations), the GII for sole SUI procedures and the GII for SUI procedures with concomitant operations are reported separately. The functions of the database only generate the overall GII automatically. As such, GII for sole procedures was obtained by analysing the data manually.

Table 2: *Global impression of improvement after surgery.*

Very much better
Much better
A little better
No change
A little worse
Much worse
Very much worse

1.4.3 SURGICAL COMPLICATIONS

The database records prespecified intraoperative and postoperative complications (Table 3 & 4).

Table 3: *Intraoperative complications.*

Ureteric injury
Bladder injury
Bowel injury
Vaginal button-hole (where relevant)
Urethral injury
Blood loss > 500 ml

Table 4: *Postoperative complications.*

Graft complications (where relevant)
Blood transfusion
Thromboembolism
Return to theatre within 72 hours of the procedure
Catheterisation > 10 days
Readmission within 30 days of the procedure
Death

The database allows users to record the occurrence of a postoperative 'graft complication' for RP MUT and TO MUT. It does not specify the exact nature of the complication and could encompass various mesh-related problems including pain and mesh exposure or erosion. It was therefore not possible to categorise mesh complications more specifically.

It is important to note that SUI operations may have been carried out along with other concomitant procedures that may have a confounding effect on the complication rate. To mitigate this, the overall complication rate (inclusive of both sole procedures and those with concomitant operations), the complication rate for sole SUI procedures and the complication rate for SUI procedures with concomitant operations are reported separately. The functions of the database only generate the overall complication rate automatically. As such, complication rates for sole procedures were obtained by analysing the data manually.

1.4.4 ASSIGNMENT OF RISK FOR COMPLICATIONS

The incidence of each intraoperative and postoperative complication was assigned a level of risk based on guidance by the Royal College of Obstetricians and Gynaecologists [1] (Table 5).

Table 5: Assignment of risk for complications.

Term	Equivalent numerical ratio	Colloquial equivalent
Very common	1/1 to 1/10	A person in a family
Common	1/10 to 1/100	A person in a street
Uncommon	1/100 to 1/1000	A person in a village
Rare	1/1000 to 1/10 000	A person in a small town
Very rare	Less than 1/10 000	A person in a large town

CHAPTER 2: Summary of findings and general trends

2.1 CONTINENCE PROCEDURES 2008-2017

During the timeframe of the audit (2008 to 2017), there were 39 961 RP MUT, TO MUT, bladder neck injections, colposuspensions and autologous fascial sling operations for SUI entered onto the BSUG database.

There was a steady rise in the number of operations performed for SUI which peaked in 2013 (*Figure 1*), primarily due to an increase in the number of RP MUT and TO MUT operations. This increase could be partly due to an upsurge in database usage because of the Healthcare Quality Improvement Partnership (HQIP) audit on MUT that year. Over the following 4 years there was a significant decline in the number of MUT operations being performed and although there has been an increase in procedures not utilising mesh, the overall number of continence procedures recorded fell by 48% from its peak in 2013. The actual number of procedures recorded on the BSUG database each year is shown in *Table 1*.

Figure 1: Number of procedures for SUI on BSUG database 2008 – 2017.

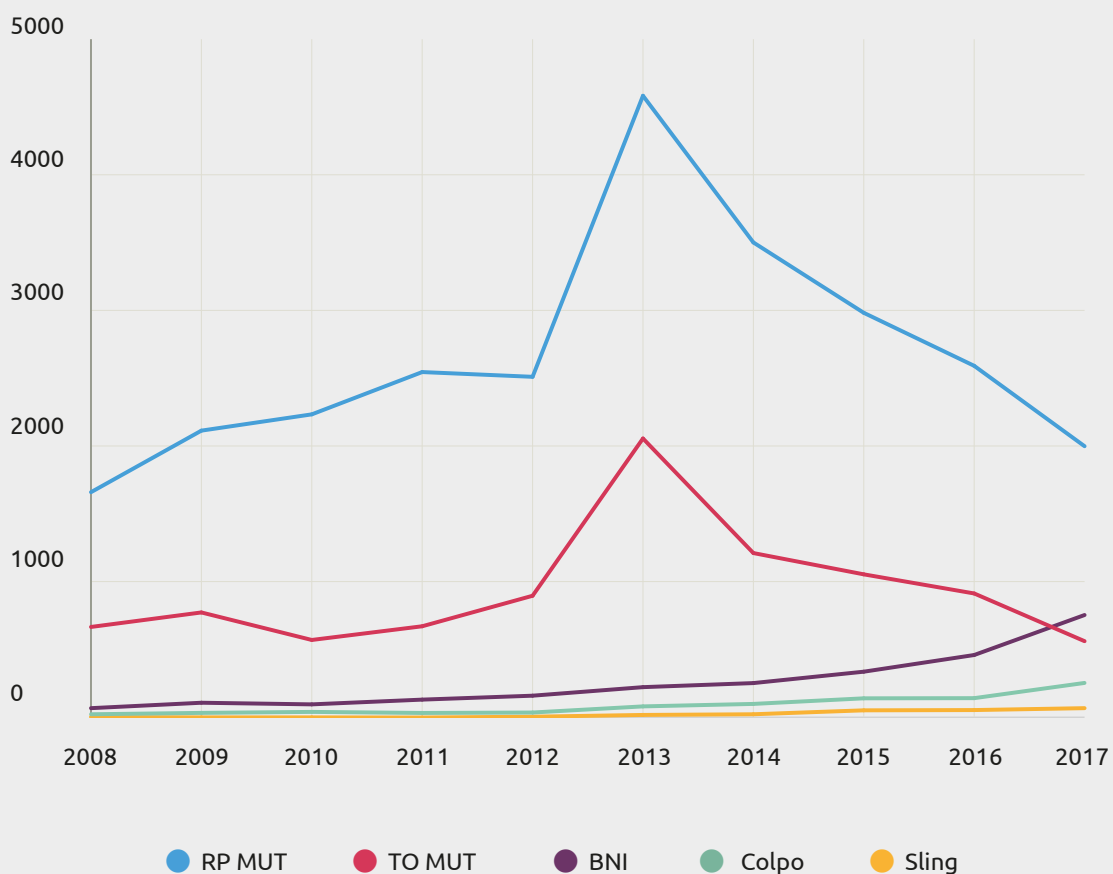


Table 1: Number of procedures for SUI on BSUG database 2008 – 2017.

Year/SUI operation	RP MUT	TO MUT	BNI	Colpo	Sling	Total
2008	1664	670	71	45	6	2456
2009	2118	777	111	51	3	3060
2010	2238	574	99	54	3	2968
2011	2550	675	134	42	2	3403
2012	2515	900	163	41	8	3627
2013	4588	2060	226	82	21	6977
2014	3506	1215	256	96	26	5099
2015	2987	1058	340	133	55	4573
2016	2596	917	463	130	57	4163
2017	2003	565	758	238	71	3635
Total	26765	9411	2621	912	252	39961

2.2 REPORT VALIDITY AND COMPARISON WITH HOSPITAL EPISODE STATISTICS (HES)

The BSUG database allows voluntary reporting of procedures by BSUG members only. SUI procedures carried out in both the NHS and private sector can be entered onto the database. It should be noted that continence procedures during this time were also undertaken by urologists and gynaecologists with an interest in continence surgery who may have chosen not to become a BSUG member.

Based on Hospital Episode Statistics (HES) [2] for NHS hospital admissions for SUI procedures in England, from all specialties, there were 101 538 procedures from April 2008 to March 2017 (please note the slightly different time period compared to this report). Of these, 100 516 (99%) were tape operations. The HES report however only identified SUI operations using procedure codes for tapes and non-mesh sling operations. HES also excludes procedures carried out in Wales and Scotland and those carried out in the private sector whereas the BSUG database does not. Taking these factors into consideration, the BSUG database captured approximately 40% of the continence operations for this time period. The percentage each year will of course vary but it is likely that the proportion of operations being included in the database will have increased following recommendations by the National Institute for Health and Care Excellence (NICE) and because of increasing subspecialisation in gynaecology.

2.3 PRIMARY AND REPEAT PROCEDURES FOR SUI

The proportion of primary and repeat procedures for SUI for each operation is shown in *Figure 2* and *Table 2*. Fascial slings had the highest proportion of procedures for recurrent SUI (57.1%).

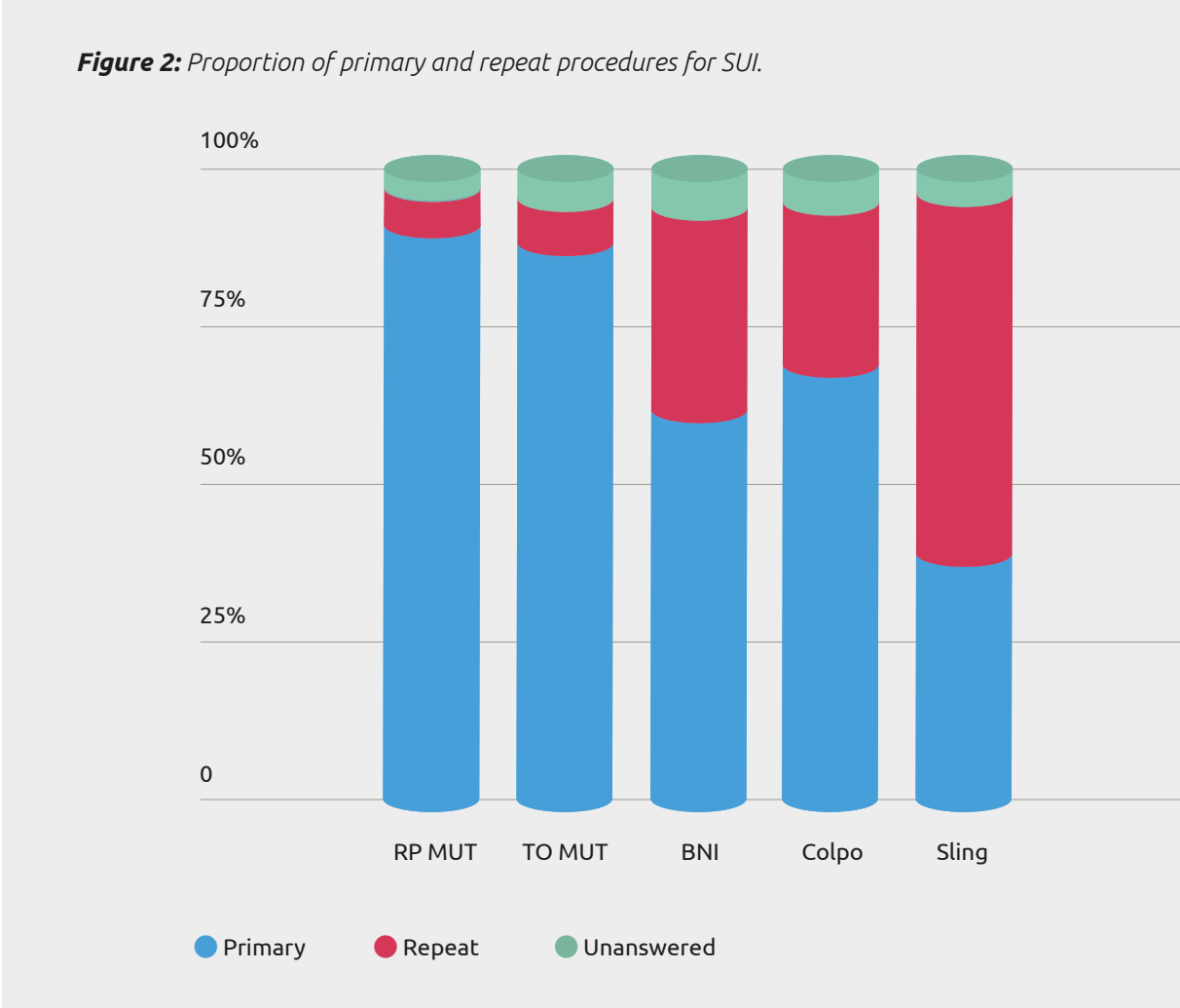


Table 2: The number (%) of primary and repeat procedures SUI.

	RP MUT	TO MUT	BNI	Colpo	Slings
Primary	24331 (90.9%)	8297 (88.2%)	1616 (61.7%)	628 (68.9%)	98 (38.9%)
Repeat	1566 (5.9%)	660 (7%)	841 (32.1%)	234 (25.7%)	144 (57.1%)
Unanswered	868 (3.2%)	454 (4.8%)	164 (6.2%)	50 (5.4%)	10 (4%)
Total	26765	9411	2621	912	252

2.4 SOLE CONTINENCE PROCEDURES AND PROCEDURES WITH CONCOMITANT OPERATIONS

The proportion of SUI operations as sole procedures and those with concomitant procedures is shown in *Figure 3* and *Table 3*. Colposuspensions had the highest proportion of concomitant procedures (35.9%).

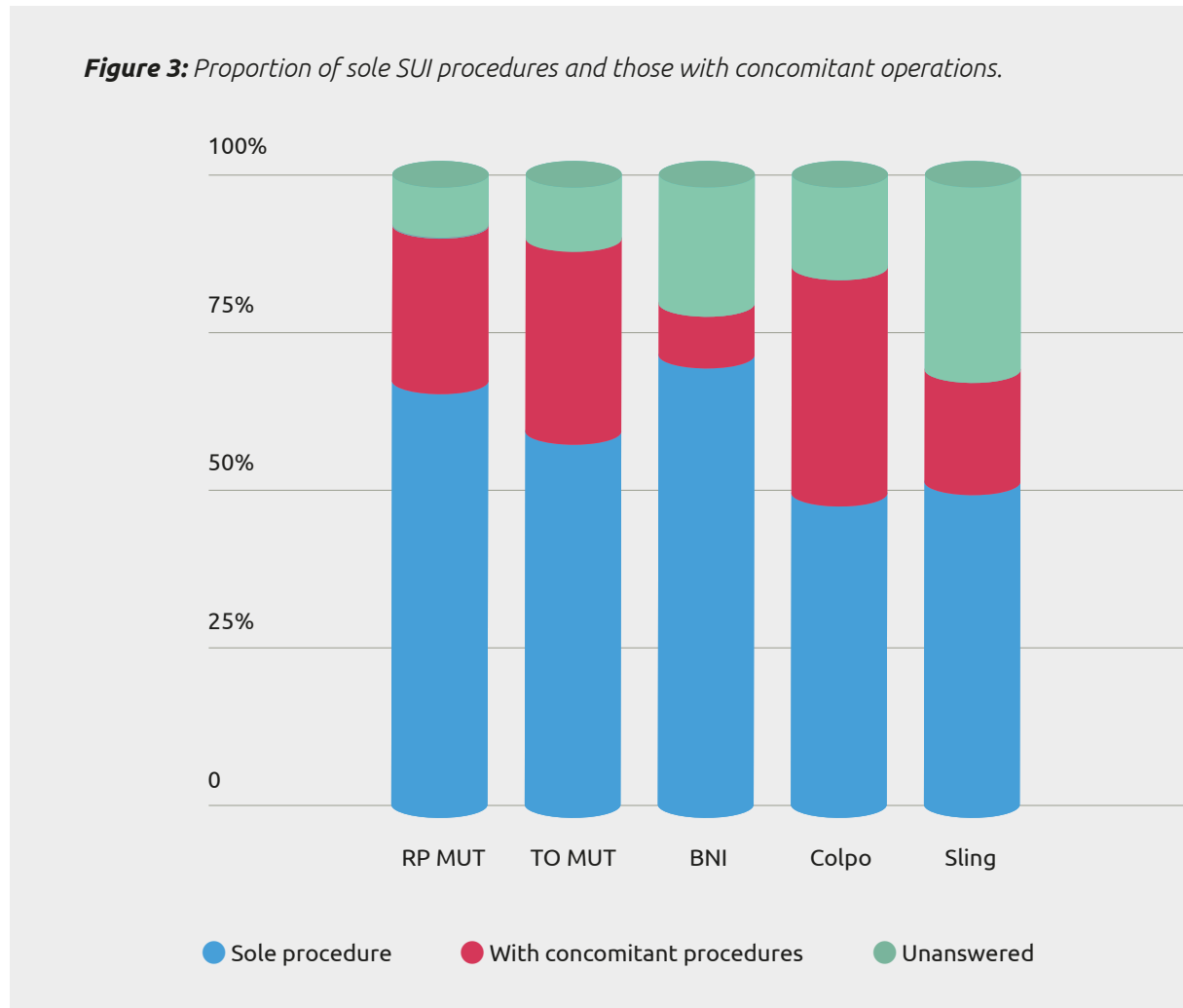


Table 3: The number (%) of sole SUI procedures and those with concomitant operations.

	Sole procedure (%)	With concomitant procedures (%)	Unanswered (%)	Total
RP MUT	17966 (67.1)	6650 (24.8)	2149 (8.0)	26765
TO MUT	5573 (59.2)	2876 (30.6)	962 (10.2)	9411
BNI	1869 (71.3)	207 (7.9)	545 (20.8)	2621
Colpo	451 (49.5)	327 (35.9)	134 (14.7)	912
Sling	129 (51.2)	45 (17.9)	78 (31.0)	252

2.5 OUTCOME OF CONTINENCE SURGERY

The main findings of this report are summarised in *Table 4*. Efficacy, based on GII, for sole continence procedures is presented in the table. The detailed report for each of the 5 continence operations also gives overall rates of efficacy (both for sole procedures and those with concomitant operations). The complication rates in *Table 4* are for sole continence procedures to reduce confounding. Complication rates for procedures with concomitant operations are presented in detail in the sections for the specific SUI procedures.

Table 4: Efficacy and complication rate of sole SUI procedures.

	RP MUT	TO MUT	BNI	Colpo	Sling
Efficacy for sole continence procedures at varying follow-up intervals					
'Much better' or 'Very much better'	90.3%	91.0%	54.9%	88.5%	85.7%
Complication rate for sole continence procedures at varying follow-up intervals					
Intraoperative	4.6%	1.8%	0.1%	4.5%	5.6%
Postoperative	10.4%	6.7%	2.1%	17.9%	23.9%
Total	15.0%	8.5%	2.2%	22.4%	29.5%
Risk category	Very common	Common	Common	Very common	Very common

2.6 LIMITATIONS OF THE AUDIT

The BSUG database is a voluntary database used by individual surgeons to record the outcome of their surgical procedures. Continence procedures are also undertaken by urologists and consultants who have chosen not to be BSUG members. Therefore, not every operation performed for the treatment of SUI over the last 10 years has been included in this analysis.

In addition, caution must be applied to the use and interpretation of this report because of missing data and the limited recording of long-term outcomes – both positive and negative. This is particularly the case for long-term complications which may arise after the initial period of follow-up some of which will be treated in other units.

CHAPTER 3: Retropubic mid-urethral tape (RP MUT)

3.1 NUMBER OF PROCEDURES RECORDED

There were 26 765 retropubic mid-urethral tape (RP MUT) operations recorded on the BSUG database from 2008 to 2017. 24 331 (90.9%) were primary procedures and 1566 (5.9%) were for recurrent SUI. 6650 (24.8%) RP MUT procedures were performed with concomitant operations.

All 16 different options in the database for RP MUT are included in this report and analysed together.

3.2 FOLLOW-UP AFTER RP MUT

17 448 (65.2%) of the RP MUT procedures entered on the BSUG database also had the interval to follow-up recorded. A face-to-face outpatient visit was the most frequent method of follow-up (81.2%). The 1st follow-up occurred most frequently at 3 months (Table 1).

Table 1: Follow-up interval after RP MUT.

Interval	n (%)
6 Weeks	5913 (33.9)
3 Months	6797 (39)
6 Months	4095 (23.5)
12 Months	643 (3.7)
Total	17448

3.3 GLOBAL IMPRESSION OF IMPROVEMENT AFTER RP MUT

3.3.1 OVERALL IMPROVEMENT

Global impression of improvement (GII) was recorded in 16 599 (62%) of cases. Overall, 90.2% of cases were reported to be “Much better” or “Very much better” (Figure 1 and Table 2). For the same outcome measure, it was 90.6% for primary procedures and 84.1% for recurrent SUI procedures respectively.

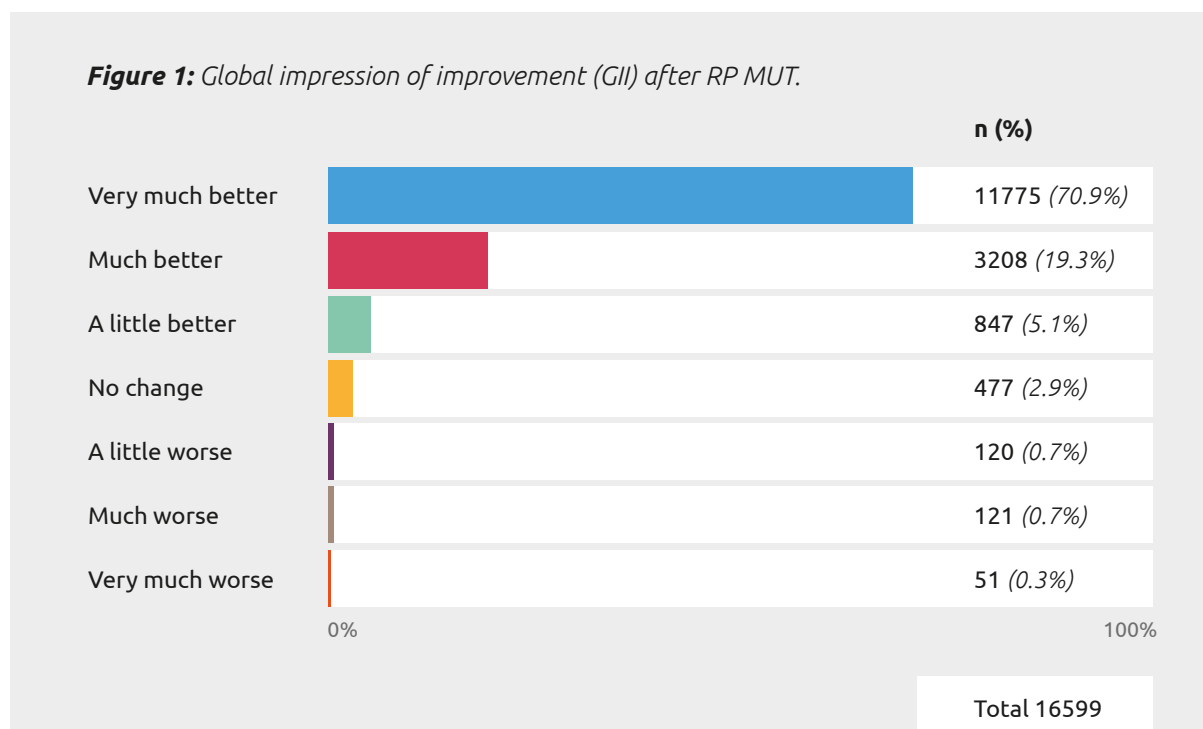


Table 2: Global impression of improvement (GII) after RP MUT.

GII	n	%
Very much better	11775	70.9
Much better	3208	19.3
A little better	847	5.1
No change	477	2.9
A little worse	120	0.7
Much worse	121	0.7
Very much worse	51	0.3
Total	16599	100

3.3.2 GLOBAL IMPRESSION OF IMPROVEMENT (GII) AT DIFFERENT TIME INTERVALS

The difference in outcome at different time intervals from surgery is shown in *Table 3*. Cases with unknown GII and follow-up interval were excluded. There appears to be a fall in the percentage of patients reporting being “Much better” or “Very much better” from 92.2% at 6 weeks to 81.4% at 1 year although the number of patients at 1 year is smaller.

Table 3: Global impression of improvement (GII) at different time intervals after RP MUT n (%).

FU interval/ GII	Very much better	Much better	A little better	No change	A little worse	Much worse	Very much worse	Total
6 wk	3997 (72)	1120 (20.2)	235 (4.2)	124 (2.2)	28 (0.5)	36 (0.6)	15 (0.3)	5555
3 mth	4694 (72.9)	1155 (17.9)	294 (4.6)	173 (2.7)	57 (0.9)	40 (0.6)	23 (0.4)	6436
6 mth	2614 (68.2)	764 (19.9)	256 (6.7)	129 (3.4)	28 (0.7)	30 (0.8)	10 (0.3)	3831
1 yr	366 (59.7)	133 (21.7)	51 (8.3)	41 (6.7)	6 (0.9)	13 (2.1)	3 (0.5)	613

3.3.3 GLOBAL IMPRESSION OF IMPROVEMENT (GII) FOR RP MUT PROCEDURES WITH AND WITHOUT CONCOMITANT OPERATIONS

GII after sole RP MUT procedures and those with concomitant operations were similar. 90.3% of sole RP MUT cases had ‘Much better’ or ‘Very much better’ outcomes. It was also 90.3% for the same outcome measure for RP MUT with concomitant operations (*Table 4*).

Table 4: Global impression of improvement (GII) for RP MUT with and without concomitant operations n (%).

GII/Type of procedure	Sole procedure	With concomitant operations	*Unknown	Total
Very much better	7920 (71.9)	3095 (69.9)	760 (65.5)	11775
Much better	2026 (18.4)	901 (20.4)	281 (24.2)	3208
A little better	561 (5.1)	223 (5.0)	63 (5.4)	847
No change	330 (3.0)	116 (2.6)	31 (2.7)	477
A little worse	67 (0.6)	38 (0.9)	15 (1.3)	120
Much worse	73 (0.7)	41 (0.9)	7 (0.6)	121
Very much worse	37 (0.3)	11 (0.2)	3 (0.3)	51
				16599

*Unknown - Not recorded if the procedure had concomitant operations or not

3.4 RP MUT COMPLICATIONS

3.4.1 INTRAOPERATIVE COMPLICATIONS

The recorded intraoperative complications for RP MUT are shown in *Table 5*. The 'overall' complication rate is the sum of the complication rate for sole RP MUT procedures, those with concomitant operations and 'unknown', where it was not specified if there was a concomitant operation. The most common intraoperative complications were bladder injury (3.6%), vaginal button-holing (0.5%) and blood loss >500 ml (0.5%).

Table 5: RP MUT intraoperative complications.

Complications	Yes% (Unanswered exc.)	Risk	No	Yes	Unanswered
Ureteric injury (overall)	0.02	Rare	26303	6	456
1. Sole procedure	0.02	Rare	17709	4	253
2. With concomitant procedures	0.03		6537	2	111
3. Unknown	0		2057	0	92
Bladder injury (overall)	3.6	Common	25382	960	423
1. Sole procedure	3.7	Common	17079	656	231
2. With concomitant procedures	3.3		6334	215	101
3. Unknown	4.3		1969	89	91
Bowel injury (overall)	0.04	Rare	26293	10	462
1. Sole procedure	0.006	Very rare	17709	1	256
2. With concomitant procedures	0.1		6528	9	113
3. Unknown	0		2056	0	93
Vaginal button-hole (overall)	0.5	Uncommon	19369	104	7292
1. Sole procedure	0.5	Uncommon	13233	71	4662
2. With concomitant procedures	0.6		4521	29	2100
3. Unknown	0.2		1615	4	530
Urethral injury (overall)	0.09	Uncommon	19456	17	7292
1. Sole procedure	0.06	Rare	13295	8	4663
2. With concomitant procedures	0.2		4544	7	2099
3. Unknown	0.1		1617	2	530
Blood loss >500 ml (overall)	0.5	Uncommon	26185	126	454
1. Sole procedure	0.3	Uncommon	17664	48	254
2. With concomitant procedures	1.1		6467	74	109
3. Unknown	0.2		2054	4	91

3.4.2 POSTOPERATIVE COMPLICATIONS

The recorded postoperative complications for RP MUT are shown in *Table 6*. The 'overall' complication rate is for sole RP MUT procedures, those with concomitant operations and 'unknown' where it was not specified if there was a concomitant operation. The most frequent postoperative complications were graft complication (2.8%), catheterisation >10 days (3.6%) and readmission within 30 days (4.3%). 1 death was reported in a RP MUT without concomitant procedures. The patient was readmitted to a different hospital 12 days after the procedure with sepsis. She died 14 days after her readmission. The cause of death after post-mortem examination was bacterial endocarditis not thought to be due to the procedure.

Table 6: RP MUT postoperative complications.

Complications	Yes% (Unanswered exc.)	Risk	No	Yes	Unanswered
Graft complication (overall)	2.8	Common	8251	239	18275
1. Sole procedure	2.9	Common	5757	169	12040
2. With concomitant procedures	2.3		2121	51	4478
3. Unknown	4.8		373	19	1757
Blood transfusion (overall)	0.08	Uncommon	26283	22	460
1. Sole procedure	0.03	Rare	17705	5	256
2. With concomitant procedures	0.3		6521	17	112
3. Unknown	0		2057	0	92
Thromboembolism (overall)	0.03	Rare	24715	7	2043
1. Sole procedure	0.04	Rare	16690	6	1270
2. With concomitant procedures	0.02		6095	1	554
3. Unknown	0		1930	0	219
Return to theatre within 72 hrs (overall)	0.6	Uncommon	18750	114	7901
1. Sole procedure	0.5	Uncommon	12502	57	5407
2. With concomitant procedures	1.0		4839	51	1760
3. Unknown	0.4		1409	6	734
Catheterisation >10 days (overall)	3.6	Common	18139	673	7953
1. Sole procedure	3.2	Common	12120	395	5451
2. With concomitant procedures	4.9		4644	241	1765
3. Unknown	2.6		1375	37	737
Readmitted within 30 days (overall)	4.3	Common	17676	797	8292
1. Sole procedure	3.7	Common	11835	453	5678
2. With concomitant procedures	6.2		4497	298	1855
3. Unknown	3.3		1344	46	759
Death (overall)	0.004	Very rare	24714	1	2050
1. Sole procedure	0.006	Very rare	16691	1	1274
2. With concomitant procedures	0		6096	0	554
3. Unknown	0		1927	0	222

CHAPTER 4: Transobturator mid-urethral tape (TO MUT)

4.1 NUMBER OF PROCEDURES RECORDED

There were 9411 transobturator mid-urethral tape (TO MUT) operations recorded on the BSUG database from 2008-1017. 8297 (88.2%) were primary procedures and 660 (7%) were for recurrent SUI. 2876 (30.6%) TO MUT procedures were performed with concomitant operations. All 13 different options in the database for TO MUT in the database are included in this report and analysed together.

4.2 FOLLOW-UP AFTER TO MUT

6551 (69.6%) of the TO MUT procedures entered on the BSUG database also had the interval to follow-up recorded. A face-to-face outpatient visit was the most frequent method of follow-up (92.6%). The 1st follow-up occurred most frequently at 3 months (Table 1).

Table 1: Follow up interval after TO MUT.

Interval	n (%)
6 Weeks	2062 (31.5)
3 Months	3214 (49.1)
6 Months	989 (15.1)
12 Months	286 (4.4)
Total	6551

4.3 GLOBAL IMPRESSION OF IMPROVEMENT AFTER TO MUT

4.3.1 OVERALL IMPROVEMENT

Global impression of improvement (GII) was recorded in 6259 (66.5%) of cases. Overall, 90.8% of cases were reported to be “Much better” or “Very much better” (Figure 1 and Table 2). For the same outcome measure, it was 91.3% for primary procedures and 84.3% for recurrent SUI respectively.

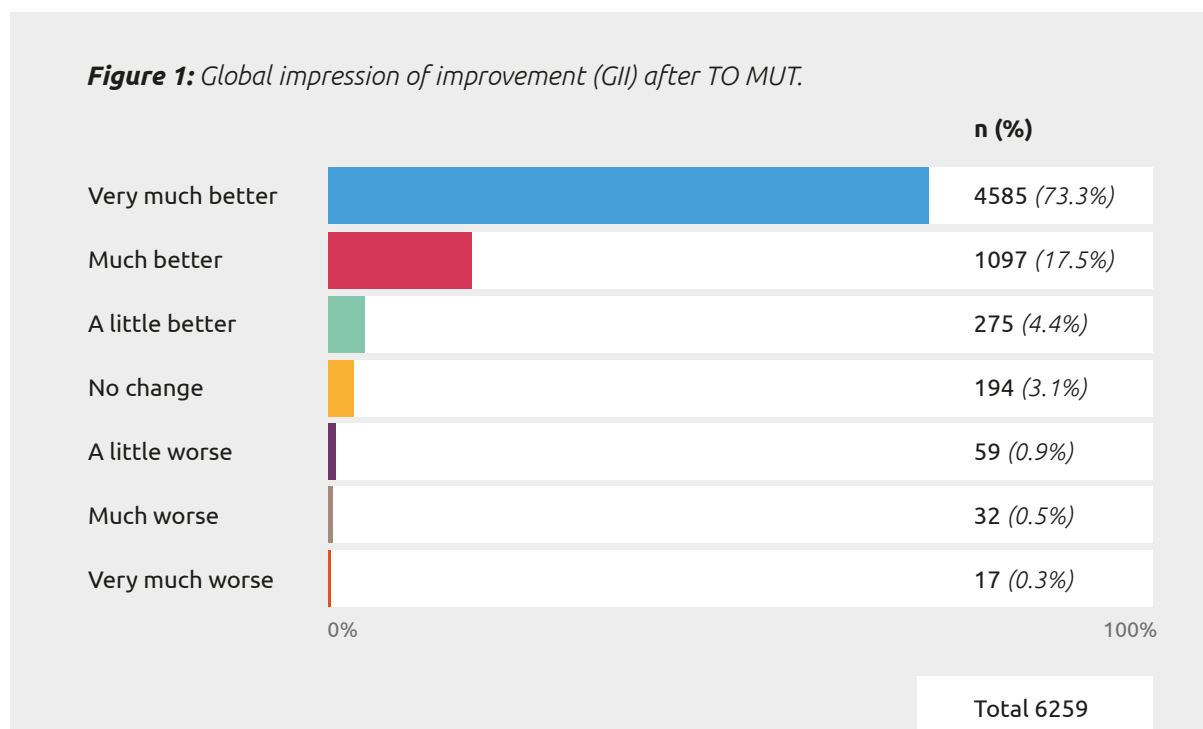


Table 2: Overall global impression of improvement (GII) after TO MUT.

GII	n	%
Very much better	4585	73.3
Much better	1097	17.5
A little better	275	4.4
No change	194	3.1
A little worse	59	0.9
Much worse	32	0.5
Very much worse	17	0.3
Total	6259	100

4.3.2 GLOBAL IMPRESSION OF IMPROVEMENT (GII) AT DIFFERENT TIME INTERVALS

The difference in outcome at different time intervals from surgery is shown in *Table 3*. Cases with unknown GII and follow-up interval were excluded. There appears to be only a marginal fall in the percentage of patients reporting being “Much better” or “Very much better” from 92.4% at 6 weeks to 88% at 1 year although the number of patients at 1 year is much smaller.

Table 3: Global impression of improvement (GII) at different time intervals after surgery n (%)

FU interval/ GII	Very much better	Much better	A little better	No change	A little worse	Much worse	Very much worse	Total
6 wk	1423 (73.8)	358 (18.6)	65 (3.4)	52 (2.7)	15 (0.8)	12 (0.6)	3 (0.2)	1928
3 mth	2235 (73.2)	518 (17)	147 (4.8)	99 (3.2)	33 (1.1)	14 (0.5)	7 (0.2)	3053
6 mth	700 (72.5)	172 (17.8)	49 (5.1)	29 (3)	5 (0.5)	3 (0.3)	7 (0.7)	965
1 yr	204 (73.9)	39 (14.1)	13 (4.7)	13 (4.7)	5 (1.8)	2 (0.7)	0	276

4.3.3 GLOBAL IMPRESSION OF IMPROVEMENT FOR TO MUT PROCEDURES WITH AND WITHOUT CONCOMITANT OPERATIONS

GII after sole TO MUT procedures and those with concomitant operations were similar. 91% of sole TO MUT cases had ‘Much better’ or ‘Very much better’ outcomes. It was 90.6% for the same outcome measure for TO MUT with concomitant operations (*Table 4*).

Table 4: Global impression of improvement for TO MUT with and without concomitant operations n (%).

GII/Type of procedure	Sole procedure	With concomitant operations	*Unknown	Total
Very much better	2726 (73.7)	1380 (72.1)	479 (74.0)	4585
Much better	638 (17.3)	355 (18.5)	104 (16.1)	1097
A little better	154 (4.2)	86 (4.5)	35 (5.4)	275
No change	120 (3.2)	57 (3.0)	17 (2.6)	194
A little worse	34 (0.9)	21 (1.1)	4 (0.6)	59
Much worse	16 (0.4)	10 (0.5)	6 (0.9)	32
Very much worse	9 (0.2)	6 (0.3)	2 (0.3)	17
				6259

*Unknown - Not recorded if the procedure had concomitant operations or not

4.4 TO MUT COMPLICATIONS

4.4.1 INTRAOPERATIVE COMPLICATIONS

The recorded Intraoperative complications for TO MUT are shown in *Table 5*. The 'overall' complication rate is the sum of the complication rate for sole TO MUT procedures, those with concomitant operations and 'unknown', where it was not specified if there was a concomitant operation. The most common intraoperative complications were vaginal button-holing (1.1%), bladder injury (0.5%) and blood loss >500 ml (0.4%).

Table 5: TO MUT intraoperative complications.

Complications	Yes% (Unanswered exc.)	Risk	No	Yes	Unanswered
Ureteric injury (overall)	0.01	Rare	9222	1	188
1. Sole procedure	0	Very rare	5488	0	85
2. With concomitant procedures	0		2807	0	69
3. Unknown	0.1		927	1	34
Bladder injury (overall)	0.5	Uncommon	9176	48	187
1. Sole procedure	0.5	Uncommon	5462	27	84
2. With concomitant procedures	0.5		2794	13	69
3. Unknown	0.9		920	8	34
Bowel injury (overall)	0.03	Rare	9219	3	189
1. Sole procedure	0	Very rare	5488	0	85
2. With concomitant procedures	0.1		2804	3	69
3. Unknown	0		927	0	35
Vaginal button-hole (overall)	1.1	Common	6979	75	2357
1. Sole procedure	1.0	Common	4140	41	1392
2. With concomitant procedures	1.1		2140	24	712
3. Unknown	1.4		699	10	253
Urethral injury (overall)	0.06	Rare	7046	4	2361
1. Sole procedure	0.1	Rare	4175	4	1394
2. With concomitant procedures	0		2162	0	714
3. Unknown	0		709	0	253
Blood loss >500 ml (overall)	0.4	Uncommon	9186	34	191
1. Sole procedure	0.2	Uncommon	5478	10	85
2. With concomitant procedures	0.8		2783	23	70
3. Unknown	0.1		925	1	36

4.4.2 POSTOPERATIVE COMPLICATIONS

The recorded postoperative complications for TO MUT are shown in *Table 6*. The 'overall' complication rate is for sole TO MUT procedures, those with concomitant operations and 'unknown' where it was not specified if there was a concomitant operation. The most frequent postoperative complications were graft complication (2.3%), catheterisation >10 days (2.1%) and readmission within 30 days (2.6%). 1 death was reported in a sole TO MUT procedure although no further details were available.

Table 6: TO MUT postoperative complications.

Complications	Yes% (Unanswered exc.)	Risk	No	Yes	Unanswered
Graft complication (overall)	2.3	Common	3235	77	6099
1. Sole procedure	2.3	Common	1953	45	3575
2. With concomitant procedures	2.3		1001	24	1851
3. Unknown	2.8		281	8	673
Blood transfusion (overall)	0.03	Rare	9217	3	191
1. Sole procedure	0	Very rare	5488	0	85
2. With concomitant procedures	0.1		2802	3	71
3. Unknown	0		927	0	35
Thromboembolism (overall)	0.02	Rare	8691	2	718
1. Sole procedure	0.04	Rare	5154	2	417
2. With concomitant procedures	0		2692	0	184
3. Unknown	0		845	0	117
Return to theatre within 72 hrs (overall)	0.7	Uncommon	6980	46	2385
1. Sole procedure	0.5	Uncommon	4132	22	1419
2. With concomitant procedures	1.0		2144	22	710
3. Unknown	0.3		704	2	256
Catheterisation >10 days (overall)	2.1	Common	6871	146	2394
1. Sole procedure	1.8	Common	4074	74	1425
2. With concomitant procedures	3.0		2097	65	714
3. Unknown	1.0		700	7	255
Readmitted within 30 days (overall)	2.6	Common	6725	178	2508
1. Sole procedure	2.0	Common	3988	83	1502
2. With concomitant procedures	3.7		2051	79	746
3. Unknown	2.3		686	16	260
Death (overall)	0.01	Rare	8691	1	719
1. Sole procedure	0.02	Rare	5155	1	417
2. With concomitant procedures	0		2691	0	185
3. Unknown	0		845	0	117

CHAPTER 5: Bladder neck injection (BNI)

5.1 NUMBER OF PROCEDURES RECORDED

There were 2621 bladder neck injection (BNI) operations recorded on the BSUG database from 2008 to 2017. 1616 (61.7%) were primary procedures and 841 (32.1%) were for recurrent SUI. 207 (7.9%) of BNI procedures were performed with concomitant operations, the lowest proportion of the 5 SUI operations assessed. All 12 different options in the database for BNI, including both transurethral and periurethral injections, are included in this report and analysed together.

5.2 FOLLOW-UP AFTER BNI

1543 (58.9%) of the BNI procedures entered on the BSUG database also had the interval to follow up recorded. A face-to-face outpatient visit was the most frequent method of follow-up (91%). The 1st follow-up occurred most frequently at 3 months (*Table 1*).

Table 1: Follow up interval after BNI.

Interval	n (%)
6 Weeks	476 (30.8)
3 Months	848 (55)
6 Months	174 (11.3)
12 Months	45 (2.9)
Total	1543

5.3 GLOBAL IMPRESSION OF IMPROVEMENT AFTER BNI

5.3.1 OVERALL IMPROVEMENT

Global impression of improvement (GII) was recorded in 1511 (57.6%) of cases. Overall, 55.1% of cases were reported to be “Much better” or “Very much better” (Figure 1 and Table 2). For the same outcome measure, it was 56.5% for primary procedures and 52.3% for recurrent SUI procedures respectively.

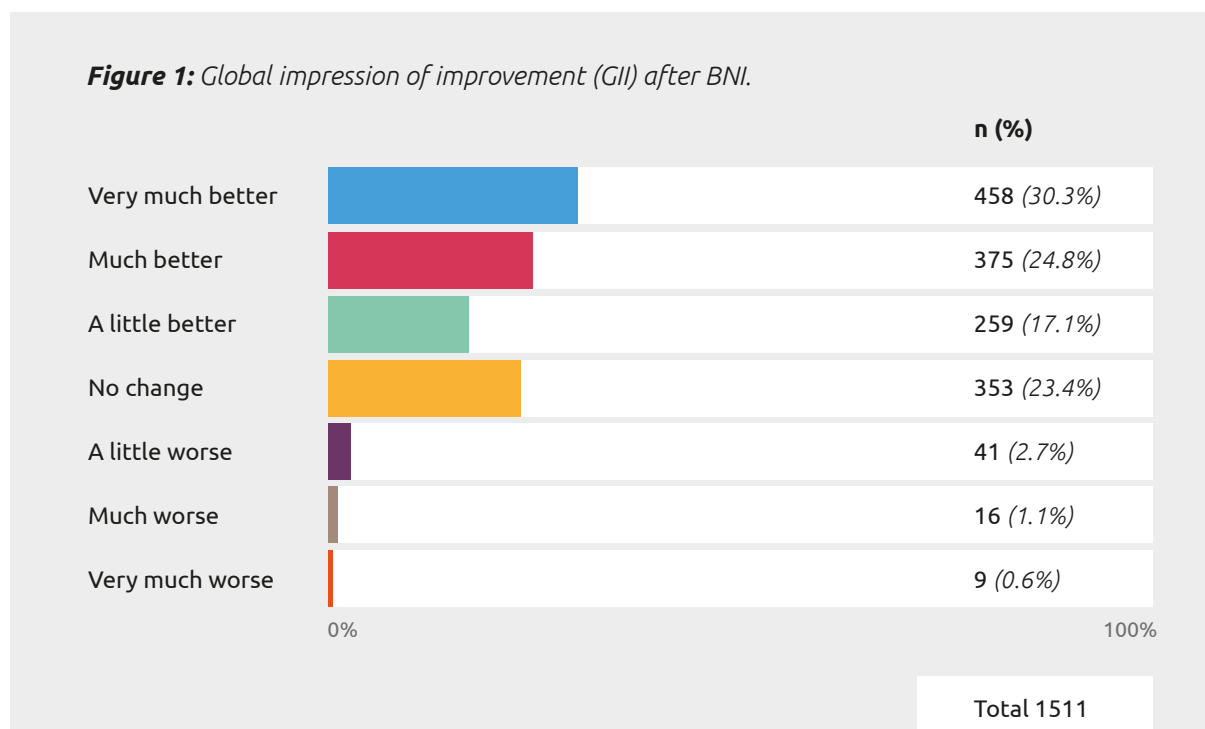


Table 2: Global impression of improvement (GII) after BNI.

GII	n	%
Very much better	458	30.3
Much better	375	24.8
A little better	259	17.1
No change	353	23.4
A little worse	41	2.7
Much worse	16	1.1
Very much worse	9	0.6
Total	1511	100

5.3.2 GLOBAL IMPRESSION OF IMPROVEMENT (GII) AT DIFFERENT TIME INTERVALS

The difference in outcome at different time intervals from surgery is shown in *Table 3*. Cases with unknown GII and follow-up interval were excluded. There appears to be a fall in the percentage of patients reporting being “Much better” or “Very much better” from 58.9% at 6 weeks to 47% at 6 months. The percentage improves again to 53.5% at 1 year but the number of patients assessed at this time period is much smaller.

Table 3: Global impression of improvement (GII) at different time intervals after BNI n (%).

FU interval/ GII	Very much better	Much better	A little better	No change	A little worse	Much worse	Very much worse	Total
6 wk	152 (32.7)	122 (26.2)	64 (13.8)	112 (24.1)	8 (1.7)	4 (0.9)	3 (0.6)	465
3 mth	252 (30.8)	194 (23.7)	151 (18.5)	185 (22.6)	25 (3.1)	9 (1.1)	2 (0.2)	818
6 mth	39 (22.9)	41 (24.1)	35 (20.6)	47 (27.6)	5 (2.9)	2 (1.2)	1 (0.6)	170
1 yr	10 (23.3)	13 (30.2)	8 (18.6)	7 (16.3)	2 (4.7)	1 (2.3)	2 (4.7)	43

5.3.3 GLOBAL IMPRESSION OF IMPROVEMENT FOR BNI PROCEDURES WITH AND WITHOUT CONCOMITANT OPERATIONS

54.9% of sole BNI cases had ‘Much better’ or ‘Very much better’ outcomes. It was 67.5% for the same outcome measure for BNI with concomitant operations (*Table 4*).

Table 4: Global impression of improvement for BNI with and without concomitant operations n (%).

GII/Type of procedure	Sole procedure	With concomitant operations	*Unknown	Total
Very much better	332 (31.1)	44 (35.8)	82 (25.5)	458
Much better	254 (23.8)	39 (31.7)	82 (25.5)	375
A little better	186 (17.4)	18 (14.6)	55 (17.1)	259
No change	253 (23.7)	17 (13.8)	83 (25.9)	353
A little worse	27 (2.5)	2 (1.6)	12 (3.7)	41
Much worse	13 (1.2)	0	3 (0.9)	16
Very much worse	2 (0.2)	3 (2.4)	4 (1.2)	9
				1511

*Unknown - Not recorded if the procedure had concomitant operations or not

5.4 BNI COMPLICATIONS

5.4.1 INTRAOPERATIVE COMPLICATIONS

The recorded intraoperative complications for BNI are shown in *Table 5*. The 'overall' complication rate is the sum of the complication rate for sole BNI procedures, those with concomitant operations and 'unknown', where it was not specified if there was a concomitant operation. All complications were infrequent. One bowel injury occurred in a patient with concomitant transvaginal mesh surgery for prolapse. This patient also had a bladder injury. There were 2 other bowel injuries; one where BNI was the sole procedure and another where it was unknown if there were concomitant operations. No other information was available.

Table 5: BNI intraoperative complications.

Complications	Yes% (Unanswered exc.)	Risk	No	Yes	Unanswered
Ureteric injury (overall)	0	Very rare	2575	0	46
Bladder injury (overall)	0.04	Rare	2574	1	46
1. Sole procedure	0	Very rare	1848	0	21
2. With concomitant procedures	0.005		199	1	7
3. Unknown	0		527	0	18
Bowel injury (overall)	0.1	Rare	2574	3	44
1. Sole procedure	0.05	Rare	1848	1	20
2. With concomitant procedures	0.5		199	1	7
3. Unknown	0.2		527	1	17
Urethral injury (overall)	0	Very rare	2250	0	371
Blood loss >500 ml (overall)	0.04	Rare	2575	1	45
1. Sole procedure	0.05	Rare	1848	1	20
2. With concomitant procedures	0		200	0	7
3. Unknown	0		527	0	18

5.4.2 POSTOPERATIVE COMPLICATIONS

The recorded postoperative complications for BNI are shown in *Table 6*. The 'overall' complication rate is for sole BNI procedures, those with concomitant operations and 'unknown' where it was not specified if there was a concomitant operation. The most frequent postoperative complications were catheterisation >10 days (1.5%) and readmission within 30 days (1.2%). One death was reported for a patient having a BNI. It occurred in a patient with a bowel injury and it is not known if BNI was the sole procedure or if there were concomitant procedures. No further details were available.

Table 6: BNI postoperative complications.

Complications	Yes% (Unanswered exc.)	Risk	No	Yes	Unanswered
Blood transfusion (overall)	0	Very rare	2575	0	46
Thromboembolism (overall)	0	Very rare	2509	0	112
Return to theatre within 72 hrs (overall)	0.1	Rare	1639	2	980
1. Sole procedure	0.09	Rare	1175	1	693
2. With concomitant procedures	0.8		128	1	78
3. Unknown	0		336	0	209
Catheterisation >10 days (overall)	1.5	Common	1615	24	982
1. Sole procedure	1.0	Common	1161	12	696
2. With concomitant procedures	6.1		122	8	77
3. Unknown	1.2		332	4	209
Readmitted within 30 days (overall)	1.2	Common	1583	19	1019
1. Sole procedure	1.0	Common	1137	11	721
2. With concomitant procedures	0.8		123	1	83
3. Unknown	2.1		323	7	215
Death (overall)	0.04	Rare	2508	1	112
1. Sole procedure	0	Very rare	1807	0	62
2. With concomitant procedures	0		194	0	13
3. Unknown	0.2		507	1	37

CHAPTER 6: Colposuspension

6.1 NUMBER OF PROCEDURES RECORDED

There were 912 colposuspension operations recorded on the BSUG database from 2008 to 2017. Both open and laparoscopic procedures were included. 179 (19.6%) were laparoscopic procedures. 628 (68.9%) were primary procedures and 234 (25.7%) were for recurrent SUI. 327 (35.9%) colposuspensions were performed with concomitant operations, the highest proportion for the 5 SUI operations assessed.

6.2 FOLLOW-UP AFTER COLPOSUSPENSION

609 (66.8%) of the colposuspension procedures entered on the BSUG database also had the follow-up interval recorded. A face-to-face outpatient visit was the most frequent method of follow-up (95.4%). The 1st follow-up occurred most frequently at 3 months (Table 1).

Table 1: Follow up interval after colposuspension.

Interval	n (%)
6 Weeks	105 (17.2)
3 Months	330 (54.2)
6 Months	158 (25.9)
12 Months	16 (2.6)
Total	609

6.3 GLOBAL IMPRESSION OF IMPROVEMENT AFTER COLPOSUSPENSION

6.3.1 OVERALL IMPROVEMENT

Global impression of improvement (GII) was recorded in 579 (63.5%) of cases. Overall, 87.3% of cases were “Much better” or “Very much better” (Figure 1 and Table 2). For the same outcome measure, it was 89.7% for primary procedures and 80.6% for recurrent SUI respectively.

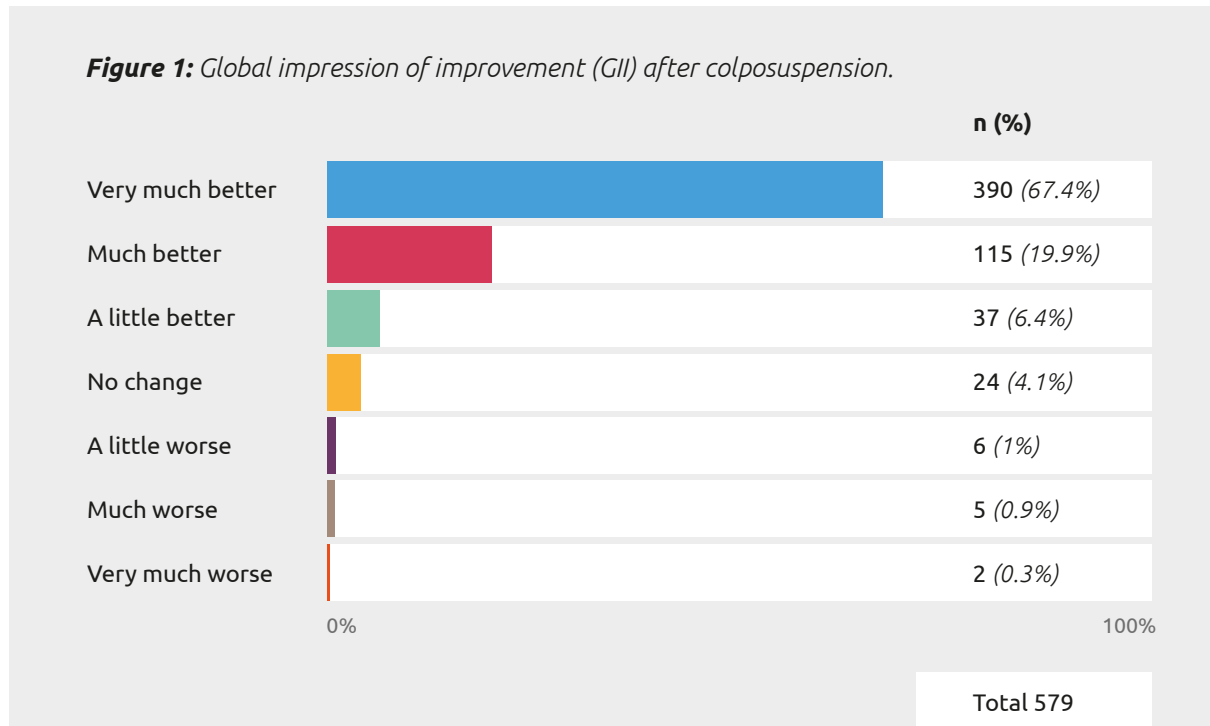


Table 2: Overall Global impression of improvement (GII) after colposuspension.

GII	n	%
Very much better	390	67.4
Much better	115	19.9
A little better	37	6.4
No change	24	4.1
A little worse	6	1
Much worse	5	0.9
Very much worse	2	0.3
Total	579	100

6.3.2 GLOBAL IMPRESSION OF IMPROVEMENT (GII) AT DIFFERENT TIME INTERVALS

The difference in outcome at different time intervals from surgery is shown in *Table 3*. Cases with unknown GII and follow-up interval were excluded. There appears to be a fall in the percentage of patients reporting being “Much better” or “Very much better” from 86.5% at 6 weeks to 68.8% at 1 year although the number of patients in the later time period is much smaller.

Table 3: Global impression of improvement (GII) at different time intervals after colposuspension n (%).

FU interval/ GII	Very much better	Much better	A little better	No change	A little worse	Much worse	Very much worse	Total
6 wk	52 (54.2)	31 (32.3)	2 (2.1)	5 (5.2)	2 (2.1)	4 (4.2)	0	96
3 mth	231 (74)	48 (15.4)	16 (5.1)	12 (3.8)	3 (1)	1 (0.3)	1 (0.3)	312
6 mth	98 (64.5)	31 (20.4)	16 (10.5)	5 (3.3)	1 (0.7)	0	1 (0.7)	152
1 yr	6 (37.5)	5 (31.3)	3 (18.8)	2 (12.5)	0	0	0	16

6.3.3 GLOBAL IMPRESSION OF IMPROVEMENT FOR COLPOSUSPENSION PROCEDURES WITH AND WITHOUT CONCOMITANT OPERATIONS

GII after sole colposuspension procedures and those with concomitant operations were similar. 88.5% of sole colposuspension cases had ‘Much better’ or ‘Very much better’ outcomes. It was also 87.1% for the same outcome measure for colposuspensions with concomitant operations (*Table 4*).

Table 4: Global impression of improvement for colposuspension with and without concomitant operations n (%).

GII/Type of procedure	Sole procedure	With concomitant operations	*Unknown	Total
Very much better	201 (67.9)	143 (68.8)	46 (61.3)	390
Much better	61 (20.6)	38 (18.3)	16 (21.3)	115
A little better	17 (5.7)	14 (6.7)	6 (8.0)	37
No change	9 (3.0)	10 (4.8)	5 (6.7)	24
A little worse	3 (1.0)	2 (1.0)	1 (1.3)	6
Much worse	3 (1.0)	1 (0.5)	1 (1.3)	5
Very much worse	2 (0.7)	0	0	2
				579

*Unknown - Not recorded if the procedure had concomitant operations or not

6.4 COLPOSUSPENSION COMPLICATIONS

6.4.1 INTRAOPERATIVE COMPLICATIONS

The recorded Intraoperative complications for colposuspension are shown in *Table 5*. The 'overall' complication rate is the sum of the complication rate for sole colposuspension procedures, those with concomitant operations and 'unknown', where it was not specified if there was a concomitant operation. The most common intraoperative complications were bladder injury (3.0%) and blood loss >500 ml (1.7%).

Table 5: Colposuspension intraoperative complications

Complications	Yes% (Unanswered exc.)	Risk	No	Yes	Unanswered
Ureteric injury (overall)	0	Very rare	887	0	25
Bladder injury (overall)	3.0	Common	862	27	23
1. Sole procedure	3.8	Common	428	17	6
2. With concomitant procedures	2.2		308	7	12
3. Unknown	2.3		126	3	5
Bowel injury (overall)	0.2	Uncommon	885	2	25
1. Sole procedure	0	Very rare	445	0	6
2. With concomitant procedures	0.6		311	2	14
3. Unknown	0		129	0	5
Urethral injury (overall)	0	Very rare	746	0	166
Blood loss >500 ml (overall)	1.7	Common	873	15	24
1. Sole procedure	0.7	Uncommon	442	3	6
2. With concomitant procedures	3.5		303	11	13
3. Unknown	0.8		128	1	5

6.4.2 POSTOPERATIVE COMPLICATIONS

The recorded postoperative complications for colposuspension procedures are shown in *Table 6*. The 'overall' complication rate is the sum of the complication rate for sole colposuspension procedures, those with concomitant operations and 'unknown', where it was not specified if there was a concomitant operation. The most frequent postoperative complications were catheterisation >10 days (9.6%), readmission within 30 days (8.7%) and return to theatre within 72 hours (1.7%). 1 death was reported. This occurred in a case where an open sacrocolpopexy was a concomitant procedure. No further details were available.

Table 6: Colposuspension postoperative complications

Complications	Yes% (Unanswered exc.)	Risk	No	Yes	Unanswered
Blood transfusion (overall)	0.6	Uncommon	882	5	25
1. Sole procedure	0.2	Uncommon	444	1	6
2. With concomitant procedures	1.3		309	4	14
3. Unknown	0		129	0	5
Thromboembolism (overall)	0	Very rare	853	0	59
Return to theatre within 72 hrs (overall)	1.7	Common	635	11	266
1. Sole procedure	1.8	Common	322	6	123
2. With concomitant procedures	1.3		223	3	101
3. Unknown	2.2		90	2	42
Catheterisation >10 days (overall)	9.6	Common	582	62	268
1. Sole procedure	7.9	Common	302	26	123
2. With concomitant procedures	12.4		198	28	101
3. Unknown	8.9		82	8	44
Readmitted within 30 days (overall)	8.7	Common	578	55	279
1. Sole procedure	8.0	Common	300	26	125
2. With concomitant procedures	9.6		197	21	109
3. Unknown	9.0		81	8	45
Death (overall)	0.1	Rare	851	1	60
1. Sole procedure	0	Very rare	430	0	21
2. With concomitant procedures	0.3		292	1	34
3. Unknown	0		129	0	5

CHAPTER 7: Autologous rectus fascial sling

7.1 NUMBER OF PROCEDURES RECORDED

There were 252 autologous sling operations recorded on the BSUG database from 2008 to 2017. 98 (38.9%) were primary procedures and 144 (57.1%) were for recurrent SUI, the highest proportion of the 5 operations examined in this report. 45 (17.9%) autologous fascial slings were performed with concomitant operations.

7.2 FOLLOW-UP AFTER AUTOLOGOUS FASCIAL SLING

139 (55.2%) of the autologous fascial sling procedures entered on the BSUG database also had the follow-up interval recorded. A face-to-face outpatient visit was the most frequent method of follow-up (93.5%). The 1st follow-up occurred most frequently at 3 months (*Table 1*).

Table 1: Follow-up interval after autologous fascial sling.

Interval	n (%)
6 Weeks	29 (20.9)
3 Months	71 (51.1)
6 Months	37 (26.6)
12 Months	2 (1.4)
Total	139

7.3 GLOBAL IMPRESSION OF IMPROVEMENT AFTER AUTOLOGOUS FASCIAL SLING

7.3.1 OVERALL IMPROVEMENT

Global impression of improvement (GII) was recorded in 134 (53.2%) of cases. Overall, 88.8% of cases were reported to be “Much better” or “Very much better” (Figure 1 and Table 2). For the same outcome measure, it was 91.8% for primary procedures and 86.4% for recurrent SUI procedures respectively.

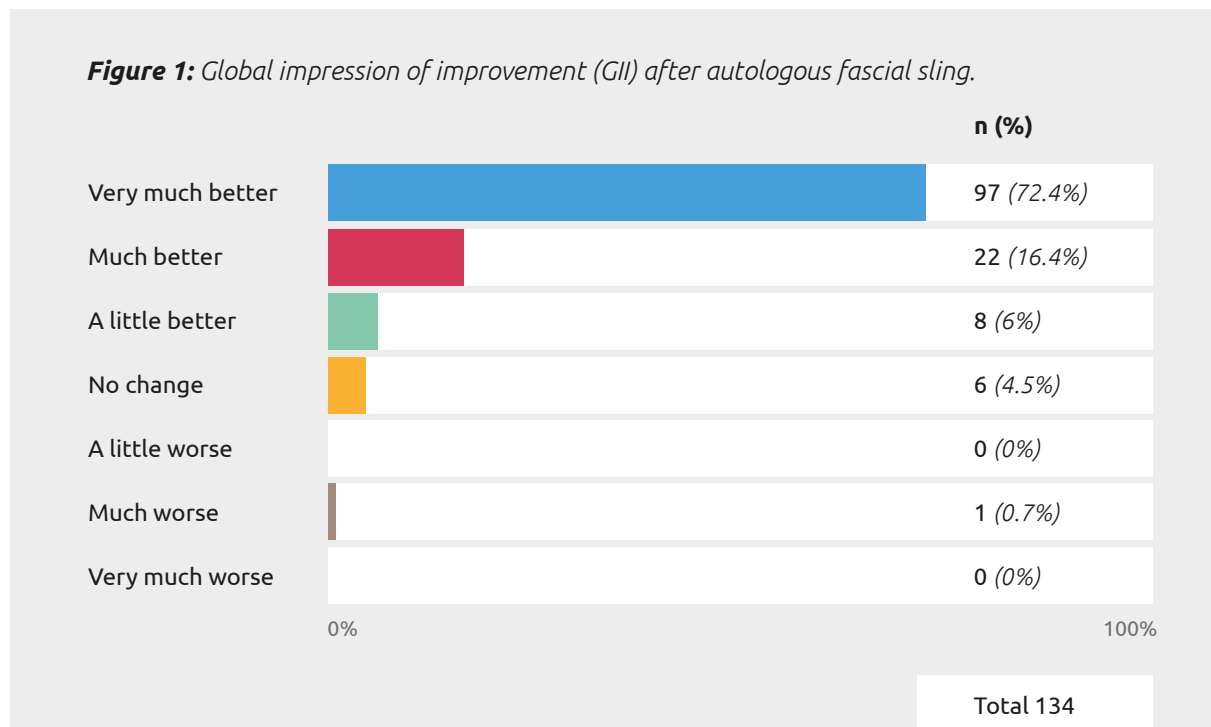


Table 2: Global impression of improvement (GII) after autologous fascial sling.

GII	n	%
Very much better	97	72.4
Much better	22	16.4
A little better	8	6
No change	6	4.5
A little worse	0	0
Much worse	1	0.7
Very much worse	0	0
Total	134	100

7.3.2 GLOBAL IMPRESSION OF IMPROVEMENT (GII) AT DIFFERENT TIME INTERVALS

The difference in outcome at different time intervals from surgery is shown in *Table 3*. Cases with unknown GII and follow-up interval were excluded. There appears to be a fall in the percentage of patients reporting being “Much better” or “Very much better” from 92.9% at 6 weeks to 80.9% at 6 months. Only two patients had follow-up data added 12 months post-operatively.

Table 3: Global impression of improvement (GII) at different time intervals after fascial sling n (%).

FU interval/ GII	Very much better	Much better	A little better	No change	A little worse	Much worse	Very much worse	Total
6 wk	22 (78.6)	4 (14.3)	0	1 (3.6)	0	1 (3.6)	0	28
3 mth	48 (70.6)	14 (20.6)	4 (5.9)	2 (2.9)	0	0	0	68
6 mth	26 (74.3)	3 (8.6)	4 (11.4)	2 (5.7)	0	0	0	35
1 yr	1 (50)	1 (50)	0	0	0	0	0	2

7.3.3 GLOBAL IMPRESSION OF IMPROVEMENT (GII) FOR FASCIAL SLING PROCEDURES WITH AND WITHOUT CONCOMITANT OPERATIONS

GII after sole sling procedures and those with concomitant operations were similar. 85.7% of sole sling cases had ‘Much better’ or ‘Very much better’ outcomes. It was 87.5% for the same outcome measure for slings with concomitant operations (*Table 4*).

Table 4: Global impression of improvement for autologous slings with and without concomitant operations n (%).

GII/Type of procedure	Sole procedure	With concomitant operations	*Unknown	Total
Very much better	47 (67.1)	16 (66.7)	34 (85.0)	97
Much better	13 (18.6)	5 (20.8)	4 (10.0)	22
A little better	5 (7.1)	2 (8.3)	1 (2.5)	8
No change	4 (5.7)	1 (4.2)	1 (2.5)	6
A little worse	0	0	0	0
Much worse	1 (1.4)	0	0	1
Very much worse	0	0	0	0
				134

*Unknown - Not recorded if the procedure had concomitant operations or not

7.4 FASCIAL SLING COMPLICATIONS

7.4.1 INTRAOPERATIVE COMPLICATIONS

The recorded intraoperative complications for fascial slings are shown in *Table 5*. The 'overall' complication rate is the sum of the complication rate for sole autologous fascial sling procedures, those with concomitant operations and 'unknown', where it was not specified if there was a concomitant operation. The most common intraoperative complications were bladder injury (4.2%) and blood loss >500 ml (0.8%).

Table 5: Autologous fascial sling Intraoperative complications.

Complications	Yes% (Unanswered exc.)	Risk	No	Yes	Unanswered
Ureteric injury (overall)	0	Very rare	237	0	15
Bladder injury (overall)	4.2	Common	228	10	14
1. Sole procedure	4.8	Common	119	6	4
2. With concomitant procedures	6.8		41	3	1
3. Unknown	1.5		68	1	9
Bowel injury (overall)	0	Very rare	238	0	14
Urethral injury (overall)	0	Very rare	226	0	26
Blood loss >500 ml (overall)	0.8	Uncommon	236	2	14
1. Sole procedure	0.8	Uncommon	124	1	4
2. With concomitant procedures	0		69	0	9
3. Unknown	2.3		43	1	1

7.4.2 POSTOPERATIVE COMPLICATIONS

The recorded postoperative complications for autologous fascial sling are shown in *Table 6*. The 'overall' complication rate is for sole autologous fascial procedures, those with concomitant operations and 'unknown' where it was not specified if there was a concomitant operation. The most frequent postoperative complications were catheterisation >10 days (14.3%), readmission within 30 days (7.6%) and return to theatre within 72 hrs (1.4%). There were no deaths.

Table 6: Fascial sling postoperative complications.

Complications	Yes% (Unanswered exc.)	Risk	No	Yes	Unanswered
Blood transfusion (overall)	0	Very rare	238	0	14
Thromboembolism (overall)	0	Very rare	236	0	16
Return to theatre within 72 hrs (overall)	1.4	Common	145	2	105
1. Sole procedure	1.3	Common	74	1	54
2. With concomitant procedures	3.6		27	1	17
3. Unknown	0		44	0	34
Catheterisation >10 days (overall)	14.3	Very common	126	21	105
1. Sole procedure	13.3	Very common	65	10	54
2. With concomitant procedures	14.3		24	4	17
3. Unknown	15.9		37	7	34
Readmitted within 30 days (overall)	7.6	Common	134	11	107
1. Sole procedure	9.3	Common	68	7	54
2. With concomitant procedures	11.5		23	3	19
3. Unknown	2.3		43	1	34
Death (overall)	0	Very rare	236	0	16

REFERENCES

1. Understanding how risk is discussed in healthcare. Royal College of Obstetricians and Gynaecologists. 2015.

<https://www.rcog.org.uk/globalassets/documents/patients/patient-information-leaflets/pi-understanding-risk.pdf>

2. Retrospective review of surgery for urogynaecological prolapse and stress urinary incontinence using tape or mesh. Hospital episode statistics (HES), Experimental Statistics, April 2008 – March 2017. Published by NHS Digital, April 17th, 2018.

<https://digital.nhs.uk/data-and-information/publications/statistical/mesh/apr08-mar17/retrospective-review-of-surgery-for-vaginal-prolapse-and-stress-urinary-incontinence-using-tape-or-mesh-copy>