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**Date:** 21 December 2017

**Sources Searched:** Embase, Medline

## Pain Following Laparoscopic Clip Sterilisation

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[See full search strategy](#)

### **1. Fallopian Tube Cyst: A Rare Complication Of Tubal Sterilization.**

**Author(s):** Zahiruddin, Sana; Khan, Momna; Iftikhar, Maria

**Source:** Journal of Ayub Medical College, Abbottabad : JAMC; 2016; vol. 28 (no. 2); p. 411-412

**Publication Date:** 2016

**Publication Type(s):** Case Reports

**PubMedID:** 28718577

**Abstract:** Tubal sterilization is one of the most commonly employed permanent method of contraception, although it is considered very safe, rarely a cyst may develop in the fallopian tube after sterilization which may undergo torsion resulting in patient presenting with acute abdomen. We are presenting a case of a middle aged women presenting to emergency room with severe lower abdominal pain, she had past history of tubal ligation done 12 years back. Pelvic ultrasound showed right sided ovarian cyst, emergency laparotomy was performed for suspected torsion of ovarian cyst, which revealed normal ovary, however a right sided fallopian tube cyst was present which had undergone torsion, right sided salpingectomy was performed and the patient was sent home in stable condition on the fourth postoperative day.

**Database:** Medline

## **2. Acute pelvic abscess: A rare complication of laparoscopic sterilisation**

**Author(s):** Ahmed-Ebbiary N.; Abdel-Karim A.

**Source:** Journal of Minimally Invasive Gynecology; 2013; vol. 20 (no. 6)

**Publication Date:** 2013

**Publication Type(s):** Conference Abstract

**Abstract:** Study Objective: Pelvic abscess following laparoscopic sterilisation (LS) is extremely rare. Further, history of previous pelvic inflammatory disease (PID) is not a contraindication for laparoscopic procedures. We report a case of acute pelvic abscess following LS in a patient with previous PID. Setting: General Hospital. Patients: A 34 year old woman P3+0 was referred for LS. She reported previous history of PID, which was successfully treated with antibiotics. Her general health was unremarkable and she denied any gynaecological symptoms. General/gynaecological examination were within normal. Vaginal/cervical swabs were taken and later reported negative. She was well on admission and fit for surgery. Intervention: Routine 3-puncture laparoscopy was performed which revealed mild right adnexal adhesions but no evidence of acute PID or masses. Both tubes were identified and occlusive clips were applied. The procedure was uneventful and patient was discharged home on the same day. Measurements and Main Results: The patient was re-admitted two weeks later with symptoms and signs suggestive of acute PID/pelvic abscess. Examination revealed a tender right adnexal mass which was confirmed by ultrasound. A provisional diagnosis of acute PID/pelvic abscess was made and IV antibiotics were commenced. As she remained symptomatic, diagnostic laparoscopy was performed which revealed extensive "fresh" omental adhesions and a complex right adnexal mass which included bowel, omentum, right pyosalpinx and the ovary. Extensive laparoscopic adhesiolysis, right salpingectomy and drainage of the pelvic abscess was performed and antibiotics were continued. The patient was discharged well on the third postoperative day. Conclusion: This case suggests that history of PID has to be ruled out in women undergoing any laparoscopic procedure and patients should be counselled about possible flare-up of 'dormant' PID. It also underscores the importance of prophylactic antibiotics in these cases. Further, pelvic abscess has to be considered in the differential diagnosis of acute abdomen following laparoscopy.

**Database:** EMBASE

## **3. Filshie clip migration: A report of two cases.**

**Author(s):** Renard, N Y A; Jacquemyn, Y

**Source:** Journal of obstetrics and gynaecology : the journal of the Institute of Obstetrics and Gynaecology; Jul 2012; vol. 32 (no. 5); p. 492-493

**Publication Date:** Jul 2012

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 22663331

**Database:** Medline

#### **4. Filshie clip torsion presenting as acute abdomen.**

**Author(s):** Bharathan, R; Hanson, M

**Source:** Journal of obstetrics and gynaecology : the journal of the Institute of Obstetrics and Gynaecology; 2010; vol. 30 (no. 8); p. 879-880

**Publication Date:** 2010

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 21126143

**Database:** Medline

#### **5. Filshie clip migration and retention.**

**Author(s):** Dey, Madhuchanda; Morgan, Margery; Bonduelle, Myriam

**Source:** The journal of family planning and reproductive health care; Jan 2010; vol. 36 (no. 1); p. 44-45

**Publication Date:** Jan 2010

**Publication Type(s):** Letter Case Reports

**PubMedID:** 20067673

**Database:** Medline

#### **6. Management of chronic pelvic pain additional to tubal sterilization.**

**Author(s):** Hiemstra, Ellen; Weijenborg, Philomeen Tm; Jansen, Frank Willem

**Source:** Journal of psychosomatic obstetrics and gynaecology; Sep 2008; vol. 29 (no. 3); p. 153-156

**Publication Date:** Sep 2008

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 18608819

**Abstract:**OBJECTIVEA case series is presented to illustrate the dilemma in management of women with Chronic Pelvic Pain (CPP) additional to a tubal sterilization.METHODSBetween January 1999 and June 2007, five women consulted the Department of Gynecology for CPP additional to tubal sterilization with Filshie Clips (FCs). A biopsychosocial approach of the complaint was offered and laparoscopic removal of the clips was performed in all cases. The effectiveness of this management was assessed by a personal interview and a retrospective chart review.RESULTSTwo of the five patients refused an exploration of psychosocial factors possibly contributing to or maintaining the pain. During laparoscopic removal of the Filshie Clips no additional pathology was noted. At follow-up four women declared to have benefited from the removal procedure.CONCLUSIONIf women present with CPP additional to sterilization with FCs in the absence of obvious pathology, gynecologists have to pay attention to the possibility of underlying psychosocial factors to this complaint. However, this attention can be in conflict with the woman's conviction that only removal of the clips will alleviate her pain. In that case, laparoscopic removal might be a component of the management.

**Database:** Medline

### **7. Spontaneous vaginal expulsion of a Filshie clip.**

**Author(s):** Kale, Anita; Chong, Yap-Seng

**Source:** Annals of the Academy of Medicine, Singapore; May 2008; vol. 37 (no. 5); p. 438-439

**Publication Date:** May 2008

**Publication Type(s):** Letter Case Reports

**PubMedID:** 18536836

**Database:** Medline

### **8. Extruded Filshie clip presenting as an ischiorectal abscess.**

**Author(s):** Dua, R Sascha; Dworkin, Michael J

**Source:** Annals of the Royal College of Surgeons of England; Nov 2007; vol. 89 (no. 8); p. 808-809

**Publication Date:** Nov 2007

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 17999828

Available at [Annals of the Royal College of Surgeons of England](#) - from Europe PubMed Central - Open Access

**Abstract:** This report adds to the small, but significant, literature base describing late complications following laparoscopic sterilisation. In women with recalcitrant peri-anal sepsis (who have previously undergone a sterilisation procedure) the possibility of tubal clip migration should be borne in mind. This is also an important learning point from a medicolegal point of view as patients presenting with the sequelae of clip migration will need to be counselled, and possibly investigated, with respect to the efficacy of their sterilisation procedure.

**Database:** Medline

### **9. Spontaneous urethral extrusion of a Filshie clip.**

**Author(s):** Palanivelu, L M; B-Lynch, C

**Source:** Journal of obstetrics and gynaecology : the journal of the Institute of Obstetrics and Gynaecology; Oct 2007; vol. 27 (no. 7); p. 742

**Publication Date:** Oct 2007

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 17999315

**Database:** Medline

#### **10. Spontaneous expulsion of tubal ligation clips: a case report.**

**Author(s):** Fahey, Meriah

**Source:** Journal of obstetrics and gynaecology Canada : JOGC = Journal d'obstetrique et gynecologie du Canada : JOGC; Sep 2007; vol. 29 (no. 9); p. 733-736

**Publication Date:** Sep 2007

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 17825138

**Abstract:**BACKGROUND A rare complication of tubal ligation, expulsion of tubal clips has been sporadically reported in the literature. CASE An otherwise well multiparous woman who had undergone two operative deliveries and a tubal ligation presented with menstrual discharge from her laparotomy incision. Following two surgical procedures to excise fistulous tracts, the patient spontaneously expelled three Hulka tubal ligation clips from the vagina. CONCLUSION Migration of tubal ligation clips and extrusion with associated tuboperitoneal fistula is a rare outcome of tubal ligation. Individual patient reactions to the presence of supposedly inert objects in the peritoneal cavity are unpredictable.

**Database:** Medline

#### **11. Chronic abdominal pain after laparoscopic sterilization clip placement.**

**Author(s):** Daucher, James A; Weber, Anne M

**Source:** Obstetrics and gynecology; Dec 2006; vol. 108 (no. 6); p. 1540-1543

**Publication Date:** Dec 2006

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 17138790

Available at [Obstetrics and gynecology](#) - from Ovid (LWW Total Access Collection 2015 - Q1 with Neurology)

**Database:** Medline

#### **12. Clinics in diagnostic imaging (110). Right-sided tubal ligation clips complicated by the formation of an infected retention cyst.**

**Author(s):** Lim, S Y; Lam, S L

**Source:** Singapore medical journal; Jul 2006; vol. 47 (no. 7); p. 642

**Publication Date:** Jul 2006

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 16810442

**Abstract:** A 35-year-old Chinese woman presented with a five-day history of right iliac fossa pain and mass. She had no significant past medical history apart from laparoscopic tubal ligation performed years ago. Pelvic ultrasonography demonstrated a well-rounded cystic mass with homogeneous internal echoes and a brightly echogenic component, compatible with tubal ligation clips. Right adnexal infected retention cyst secondary to tubal ligation clips was diagnosed. Complications of female sterilisation are rare but nevertheless have been reported and accounted for symptoms of lower abdominal pain, and should be considered as a differential diagnosis.

**Database:** Medline

**13. Migrating filshie clip: An unmentioned complication of female sterilisation**

**Author(s):** Kalu E.; Croucher C.; Chandra R.

**Source:** Journal of Family Planning and Reproductive Health Care; Jul 2006; vol. 32 (no. 3); p. 188-189

**Publication Date:** Jul 2006

**Publication Type(s):** Article

**PubMedID:** 16857077

**Database:** EMBASE

**14. Complex inflammatory abdominal mass: A late complication of tubal clip sterilisation?**

**Author(s):** Saha A.; Clausen M.G.

**Source:** Journal of Family Planning and Reproductive Health Care; Jul 2006; vol. 32 (no. 3); p. 186-187

**Publication Date:** Jul 2006

**Publication Type(s):** Article

**PubMedID:** 16857076

**Database:** EMBASE

**15. Severe, acute pain following application of Filshie clips: a case of possible viscerovisceral sensitization.**

**Author(s):** Oji, I; Kitching, A; Smith, Km

**Source:** Journal of obstetrics and gynaecology : the journal of the Institute of Obstetrics and Gynaecology; May 2005; vol. 25 (no. 4); p. 400-401

**Publication Date:** May 2005

**Publication Type(s):** Journal Article

**PubMedID:** 16091338

**Database:** Medline

**16. Hydrosalpinx complicating routine double clip sterilisation**

**Author(s):** Subair O.; Uku A.; Amu O.

**Source:** Journal of Obstetrics and Gynaecology; Nov 2004; vol. 24 (no. 8); p. 942-943

**Publication Date:** Nov 2004

**Publication Type(s):** Article

**PubMedID:** 16147671

**Database:** EMBASE

**17. Spontaneous extrusion of a migrating Filshie clip through the anterior abdominal wall.**

**Author(s):** Krishnamoorthy, U; Nysenbaum, A M

**Source:** Journal of obstetrics and gynaecology : the journal of the Institute of Obstetrics and Gynaecology; Apr 2004; vol. 24 (no. 3); p. 328-329

**Publication Date:** Apr 2004

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 15203652

**Database:** Medline

**18. Migration of a Filshie clip into the urinary bladder with abscess formation [5]**

**Author(s):** Miliauskas J.R.

**Source:** Pathology; Aug 2003; vol. 35 (no. 4); p. 356-357

**Publication Date:** Aug 2003

**Publication Type(s):** Letter

**PubMedID:** 12959776

Available at [Pathology](#) - from Ovid (Journals @ Ovid) - London Health Libraries

**Database:** EMBASE

**19. Intraperitoneal migration of Filshie tubal sterilization clips: an uncommon cause of chronic abdominal pain.**

**Author(s):** Konaté, Amadou; Rauzy, Valérie; Chalon, Sandrine; Ceballos, Patrice; Rivière, Sophie; Ciurana, Albert-Jean; Le Quellec, Alain

**Source:** Gastroenterologie clinique et biologique; 2002; vol. 26 (no. 6-7); p. 630-632

**Publication Date:** 2002

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 12193864

**Abstract:** Tubal clips for female sterilization account for about 10 to 40% of the contraceptive methods used throughout the world. Clip migration is an unusual complication which may lead to chronic unexplained abdominal pain. We report here the case of a 44-year-old woman who suffered from chronic abdominal pain. The diagnosis of intraperitoneal migration of the Filshie clip fixed five years earlier was made. Cure was achieved with ablation of the clip. Late complications of Filshie clips are uncommon and non-specific. They include tubal necrosis and section, sterilization failure (0.7%), and migration (0.6%). Rare migrations into the bladder, the peritoneum, the appendix, or the vagina have been reported. When investigating chronic abdominal pain in a female patient, the clinician should inquire about sterilization history and carefully examine plain x-rays of the abdomen in women with tubal clips.

**Database:** Medline

## **20. Torsion of a Filshie clip presenting as an acute abdomen**

**Author(s):** Ong N.C.S.; Higgins J.R.; Tan J.H.-J.

**Source:** Gynaecological Endoscopy; 1998; vol. 7 (no. 6); p. 333-334

**Publication Date:** 1998

**Publication Type(s):** Article

**Abstract:**An acute abdomen is a common diagnostic problem for physicians. A case is presented in which a Filshie clip had undergone torsion resulting in the presentation of an acute abdomen. This unusual complication should be considered in patients who present with abdominal pain following laparoscopic sterilization using Filshie clips.

**Database:** EMBASE

## **21. Intractable pelvic pain following Filshie clip application.**

**Author(s):** Robson, S; Henshaw, R

**Source:** The Australian & New Zealand journal of obstetrics & gynaecology; May 1997; vol. 37 (no. 2); p. 242-243

**Publication Date:** May 1997

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 9222479

Available at [The Australian & New Zealand journal of obstetrics & gynaecology](#) - from Wiley Online Library Science , Technology and Medicine Collection 2017

**Database:** Medline

## **22. Recurrence of pelvic abscess associated with a detached Filshie clip.**

**Author(s):** Robson, S; Kerin, J

**Source:** The Australian & New Zealand journal of obstetrics & gynaecology; Nov 1993; vol. 33 (no. 4); p. 446-448

**Publication Date:** Nov 1993

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 8179570

Available at [The Australian & New Zealand journal of obstetrics & gynaecology](#) - from Patricia Bowen Library & Knowledge Service West Middlesex University Hospital NHS Trust (lib302631) Local Print Collection [location] : Patricia Bowen Library and Knowledge Service West Middlesex university Hospital.

**Database:** Medline



### **23. Post-ablation-tubal sterilization syndrome.**

**Author(s):** Townsend, D E; McCausland, V; McCausland, A; Fields, G; Kauffman, K

**Source:** Obstetrics and gynecology; Sep 1993; vol. 82 (no. 3); p. 422-424

**Publication Date:** Sep 1993

**Publication Type(s):** Journal Article

**PubMedID:** 8355945

**Abstract:**OBJECTIVETo determine the cause of unilateral or bilateral pelvic pain associated with vaginal spotting in women who had previously undergone tubal ligation followed by roller-ball endometrial ablation.METHODSWomen who had undergone previous tubal sterilization followed by rollerball endometrial ablation were evaluated laparoscopically and hysteroscopically when they presented with a symptom complex of intermittent vaginal bleeding associated with severe cramping pain in the lower abdomen.RESULTSDuring a 1.5-year observation period, six women with the symptom complex had laparoscopy and hysteroscopy. In all cases, marked endometrial scarring was noted. In every case, the proximal portions of either one or both fallopian tubes were swollen, and two cases had the appearance of an early ectopic pregnancy. In the remaining cases, the fallopian tubes were rubbery and swollen to as much as twice normal size. Symptoms in five of six patients subsided after laparoscopic removal of the oviduct.CONCLUSIONIt appears that women who have had a tubal sterilization followed by endometrial ablation are at risk of developing an ectopic-like symptom complex. Salpingectomy appears to be effective in relieving symptoms. Whether this represents a new syndrome or just an unusual association between tubal sterilization and endometrial ablation remains to be seen.

**Database:** Medline

### **24. Hulka Clip application as a potential cause of chronic pelvic pain.**

**Author(s):** Frishman, G N; Brest, N A

**Source:** Contraception; Apr 1992; vol. 45 (no. 4); p. 325-327

**Publication Date:** Apr 1992

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 1516364

**Abstract:**A case report of an isolated hydrosalpinx resulting from the placement of two Hulka Clips on the same fallopian tube is presented. This is a previously unreported complication of mechanical sterilization and is suggested as a possible cause of chronic pelvic pain.

**Database:** Medline

## **25. Imaging of hydrosalpinx with torsion following tubal sterilization.**

**Author(s):** Russin, L D

**Source:** Seminars in ultrasound, CT, and MR; Apr 1988; vol. 9 (no. 2); p. 175-182

**Publication Date:** Apr 1988

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 3078665

**Abstract:**Hydrosalpinx following tubal sterilization has been observed with increasing frequency. Women who have had PID or who have used IUDs might be at risk of developing this condition because they may already have occluded tubes from prior salpingitis. If a previously occluded tube is ligated or cauterized so that a second occlusion is created, hydrosalpinx may be anticipated. Often bilateral, hydrosalpinx may be present for years. Recurrent pelvic pain may signify intermittent noninfarctive torsion, but severe acute pain is a sign of torsion with impending infarction and gangrene in some patients. This condition has been detected by ultrasound and CT, enabling preoperative diagnosis. Presumably it will also be imaged by MR. Nontorsive hydrosalpinx is usually imaged as a thin-walled adnexal cyst. Torsion with infarction is seen as a larger cystic structure with thicker walls and internal debris from venous congestion and internal hemorrhage. Since 25 of 30 patients with post-tubal sterilization hydrosalpinx have presented with acute torsion, the significance of a nontorsive hydrosalpinx detected by any imaging modality should not be disregarded. Surgical removal or percutaneous puncture and drainage should be considered. Awareness of the patient's medical history is the key to diagnosis.

**Database:** Medline

## **26. Pain after laparoscopy related to posture and ring versus clip sterilization.**

**Author(s):** Dobbs, F F; Kumar, V; Alexander, J I; Hull, M G

**Source:** British journal of obstetrics and gynaecology; Mar 1987; vol. 94 (no. 3); p. 262-266

**Publication Date:** Mar 1987

**Publication Type(s):** Randomized Controlled Trial Clinical Trial Journal Article

**PubMedID:** 2952160

**Abstract:**In an attempt to reduce pain after laparoscopy, presumed to be due to persistence of CO<sub>2</sub> in the peritoneal cavity especially under the diaphragm, women were kept 30 degrees head down for 30 min immediately after operation. By random selection 67 treated patients were compared with 64 kept flat, postoperative symptoms being recorded at fixed times for 3 days. Although tilting was found to be of no significant benefit there were two useful findings. In both groups there was a significant fall in the frequency of upper abdominal pain during the first postoperative night from about 53% to about 25%, followed by a rise after returning home on the first postoperative day to about 60% and only a slow fall in the next 2 days. The severity of pain followed the same pattern. Patients should be warned to expect increased pain on ambulation after leaving hospital. Also, there was doubling in lower abdominal pain during the first 6 h associated with the use of Falope rings for sterilization, compared with either Hulka clip sterilization or only diagnostic laparoscopy.

**Database:** Medline

**27. Acute salpingitis subsequent to tubal ligation.**

**Author(s):** Phillips, A J; d'Ablaing, G

**Source:** Obstetrics and gynecology; Mar 1986; vol. 67 (no. 3)

**Publication Date:** Mar 1986

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 3945465

**Abstract:**Acute salpingitis subsequent to tubal ligation is an uncommon event. Multiple studies have given credence to the assumption that salpingitis after tubal ligation does not occur. Four cases of salpingitis after tubal ligation are reported during the period of January 1980 to May 1985. This relates to an incidence of one in approximately 450 cases of acute salpingitis. A case of acute stump salpingitis with sequela from tubal rupture is reported and represents (to the authors' knowledge) the third reported case in the literature. Salpingitis can occur in the proximal stumps of tubes that have been ligated.

**Database:** Medline

## Strategy 339140

#	Database	Search term	Results
1	Medline	(clip ADJ3 sterilization*).ti,ab	84
2	Medline	(clip ADJ3 sterilisation*).ti,ab	20
3	Medline	exp "STERILIZATION, TUBAL"/	4162
4	Medline	(1 OR 2 OR 3)	4182
5	Medline	(pain* ADJ2 severe).ti,ab	21795
6	Medline	(4 AND 5)	20
7	Medline	(pain*).ti	177311
8	Medline	(4 AND 7)	97
9	Medline	((intractable OR persistent OR chronic) ADJ3 pain*).ti,ab	64276
10	Medline	(4 AND 9)	33
11	Medline	(clip*).ti,ab	24642
12	Medline	exp PAIN/	351801
13	Medline	(3 AND 11 AND 12)	41
14	Medline	exp "ABDOMEN, ACUTE"/	9117
15	Medline	(3 AND 11 AND 12 AND 14)	2
16	Medline	("tubal occlusion").ti,ab	831
17	Medline	(14 AND 16)	0
18	Medline	(9 AND 16)	15
19	Medline	(5 AND 16)	3
20	EMBASE	(clip* ADJ3 sterilization*).ti,ab	106

21	EMBASE	(clip* ADJ3 sterilisation*).ti,ab	38
22	EMBASE	exp "UTERINE TUBE LIGATION"/	2814
23	EMBASE	(20 OR 21 OR 22)	2942
24	EMBASE	(pain* ADJ2 severe).ti,ab	28963
25	EMBASE	((intractable OR persistent OR chronic) ADJ3 pain*).ti,ab	90598
26	EMBASE	exp "INTRACTABLE PAIN"/	4402
27	EMBASE	exp "ACUTE ABDOMEN"/	12111
28	EMBASE	(24 OR 25 OR 26 OR 27)	129087
29	EMBASE	(23 AND 28)	69
30	EMBASE	exp "UTERINE TUBE STERILIZATION"/	8749
31	EMBASE	(clip*).ti,ab	35603
32	EMBASE	(28 AND 30 AND 31)	7
33	EMBASE	exp "PELVIC PAIN"/	16105
34	EMBASE	(30 AND 31 AND 33)	9
35	EMBASE	(pain*).ti	232439
36	EMBASE	(23 AND 31 AND 35)	14
37	EMBASE	exp "TUBAL OCCLUSION CLIP"/	2
38	EMBASE	(Hydrosalpinx).ti,ab	1120
39	EMBASE	exp HYDROSALPINX/	1399
40	EMBASE	(38 OR 39)	1683
41	EMBASE	(30 AND 31 AND 40)	6

42	EMBASE	(torsion).ti,ab	20530
43	EMBASE	(30 AND 31 AND 42)	0
44	Medline	(Hydrosalpinx).ti,ab	728
45	Medline	exp HYDROSALPINX/	0
46	Medline	(3 AND 11 AND 44)	3
47	EMBASE	(clip ADJ2 sterili* ation*).ti	0
48	EMBASE	(clip ADJ2 sterilization*).ti	27
49	EMBASE	(clip ADJ2 sterilisation*).ti	9
50	Medline	(clip ADJ2 sterilization*).ti	40
51	Medline	(clip ADJ2 sterilisation*).ti	7
52	Medline	*"STERILIZATION, TUBAL"/ae	594