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Date: 9 July 2019

Sources Searched: Medline, Embase.

Surgical Absorption

[See full search strategy](#)

1. Internal surgical use of biodegradable carbohydrate polymers. Warning for a conscious and proper use of oxidized regenerated cellulose.

Author(s): Franceschini, Gianluca

Source: Carbohydrate polymers; Jul 2019; vol. 216 ; p. 213-216

Publication Date: Jul 2019

Publication Type(s): Journal Article Review

PubMedID: 31047059

Abstract: Oxidized regenerated cellulose has become a major local surgical hemostatic biomaterial because of its ease of use, favorable biocompatibility, bactericidal activity and bioabsorption characteristics. Additional clinical indications of oxidized regenerated cellulose include wound repair and tissue reconstruction. Sometimes, some unusual adverse events are described. Studies report cases of minor postoperative complications as nidus of infection or allergic reaction mainly presenting as acute dermatitis, eczema and seroma. Also, rare and serious cases of foreign body reaction or impingement on nerve, due to not optimal bioabsorption, are showed in various surgical sites. Thus, on the one hand, patients should be informed by their clinicians of the possibility of these low incidence postoperative complications when considering preparations made of cellulose derivatives; and the clinicians should clearly indicate use of this biomaterial in the surgical procedure report so that radiologists may appropriately interpret any unusual findings potentially associated with this biomaterial use and thus avoid misdiagnosis and undue alarm in the follow-up of patients. On the other hand, the biomedical carbohydrate scientist must consider effective experimental design that substantially addresses the clinical adverse events associated with carbohydrate polymer use. Optimal development of carbohydrates for clinical use depends on excellent clinician/biomedical scientist communication.

Database: Medline



2. The use of foreign surgical material in obstetrics

Author(s): Scaffidi J.; McMicking J.

Source: Australian and New Zealand Journal of Obstetrics and Gynaecology; Sep 2018; vol. 58 ; p. 73-74

Publication Date: Sep 2018

Publication Type(s): Conference Abstract

Available at [Australian and New Zealand Journal of Obstetrics and Gynaecology](#) - from Wiley Online Library Science , Technology and Medicine Collection 2017

Available at [Australian and New Zealand Journal of Obstetrics and Gynaecology](#) - from Unpaywall

Abstract: Introduction: Oxidised regenerated cellulose mesh is one of the original types of topical haemostatic agents and is used widely in surgical procedures in order to achieve haemostasis. We report two cases of complications associated with Surgicel. Case history: Case 1 involved a patient whom underwent an emergency caesarean section for chorioamnionitis. The surgery was performed by a senior registrar, whom placed Surgicel along the uterine segment following its closure in order to obtain complete surgical haemostasis and vesicouterine fold was then closed after. The patient represented 2 weeks later having passed vaginally foreign material (see Image 1). An ultrasound was performed which showed an intact uterine scar, however photo imaging and histopathological examination of the product confirmed foreign 'Surgicel' material. It was hypothesised that the Surgicel had migrated through the uterine scar with uterine involution, and was passed. Case 2 involved a patient whom underwent a second stage emergency caesarean section. The surgery was performed by a senior registrar and consultant. The surgery was complicated by a vertical extension towards the cervix, and Surgicel was placed at the site of uterine incision and extension to achieve haemostasis. The patient represented 8 days postnatally with fever and malodorous discharge, and CT scan showed a collection anterior to and communicating with the uterus. The patient returned to theatre for a laparotomy, where a full thickness uterine dehiscence was found covered by the disintegrated Surgicel dressing, and large washout and re-closure was performed. It was hypothesised that the Surgicel migrated and contributed to the dehiscence. Discussion(s): These cases highlight the challenges involved with use of surgical artificial material in operative obstetrics. These are not the first cases described in literature that have involved similar clinical outcomes. Oxidised cellulose has its place in surgery, however surgeons must be mindful of its use and potential complications.

Database: EMBASE

3. Biosurgicals and the Minimally Invasive Gynecologic Surgery (MIGS) Surgeon

Author(s): Kondrup J.D.; Anderson F.R.; Katz M.R.

Source: Surgical technology international; Oct 2016; vol. 29 ; p. 172-180

Publication Date: Oct 2016

Publication Type(s): Review

PubMedID: 27728942

Abstract: Biosurgical materials (biosurgicals) have a wide array of uses for providing hemostasis, including decreasing the risk of postoperative bleeding and, intraoperatively, controlling bleeding. These materials are especially useful in situations where electrocautery, sutures, or clips are not feasible. Biosurgicals have long been used in general surgery and surgical subspecialties to provide hemostasis; however, they still are not commonly used during obstetric and gynecologic procedures. Three commonly used classes of biosurgicals will be discussed in this article: oxidized regenerated cellulose, flowables, fibrin sealants, and fibrin sealant patches. Each of these agents has a different role to play during minimally invasive gynecologic surgery (MIGS), either singularly or in combination with each other. One unique fibrin product is a fibrin sealant patch, which is a combination of products used to treat bleeding of various intensities, including acute, severe hemorrhagic situations. It is important for the MIGS surgeon to understand the nature and use of each product to be able to use biosurgicals appropriately for hemostasis management. This article reviews biosurgical products, their composition, and application in minimally invasive gynecologic surgery. Included will be a few of the "on label" and "off-label" uses of biosurgicals-either singularly or in combination-and tips for introducing these materials during MIGS procedures.

Database: EMBASE

4. Surgicel granuloma mimicking ovarian cancer: A case report

Author(s): Cormio L.; Di Fino G.; Carrieri G.; Cormio G.; Loizzi V.; Scavone C.; Sanguedolce F.

Source: Oncology Letters; Aug 2016; vol. 12 (no. 2); p. 1083-1084

Publication Date: Aug 2016

Publication Type(s): Article

Available at [Oncology letters](#) - from ProQuest (Health Research Premium) - NHS Version

Available at [Oncology letters](#) - from PubMed Central

Available at [Oncology letters](#) - from Unpaywall

Abstract: Surgicel is an absorbable sterile mesh composed of oxidized cellulose that is used to control intraoperative capillary or venous bleeding, due to its capacity to bind hemoglobin, thus allowing the formation of an artificial clot. In the present study, a large granuloma mimicking ovarian cancer, which developed following placement of a Surgicel sponge during a combined pubovaginal sling procedure and cystocele repair, is reported. The aim of the present case report is to emphasize the fact that hemostatic measures should be removed following their use, and to alert surgeons to the risk of using and leaving in situ oxidized cellulose. Furthermore, accurate evaluation of the surgical history of the patient should always be performed prior to attempting surgery. Copyright © 2016, Spandidos Publications. All rights reserved.

Database: EMBASE



5. Intraovarian oxidized cellulose (Surgicel) mimicking acute ovarian pathology after recent pelvic surgery

Author(s): Zhang F.; Ventrelli S.M.; Furlan A.; Bonidie M.J.

Source: Radiology Case Reports; Dec 2015; vol. 10 (no. 4); p. 39-41

Publication Date: Dec 2015

Publication Type(s): Article

Available at [Radiology case reports](#) - from Europe PubMed Central - Open Access

Abstract: Oxidized regenerated cellulose (Ethicon Surgicel) is often used during surgery to achieve hemostasis. The appearance of Surgicel on postoperative computed tomography (CT) may be mistaken for abscess. Meanwhile, the literature regarding its ultrasound appearance remains scant. We report the CT and sonographic appearances of Surgicel in the right ovary of a 21-year-old woman presenting to the emergency department with pelvic pain 7 days after ovarian cystectomy. The patient was discharged home with only supportive measures, and follow-up ultrasound obtained 26 days later demonstrated resolution of the sonographic abnormality. This case stresses the importance of familiarity with common imaging appearances of topical hemostatic agents and the need to correlate radiologic findings with the patient's clinical condition and prior operative reports to identify patients suitable for conservative management. Copyright © 2015 The Authors. Published by Elsevier Inc.

Database: EMBASE

6. Accuracy of diagnosis on CT scan of Surgicel® Fibrillar: results of a prospective blind reading study.

Author(s): Frati, Albane; Thomassin-Naggara, Isabelle; Bazot, Marc; Daraï, Emile; Rouzier, Roman; Chéreau, Elisabeth

Source: European journal of obstetrics, gynecology, and reproductive biology; Jul 2013; vol. 169 (no. 2); p. 397-401

Publication Date: Jul 2013

Publication Type(s): Comparative Study Journal Article

PubMedID: 23706532

Abstract: **OBJECTIVE** Oxidized regenerated cellulose is a hemostatic agent used in surgery to control bleeding. Some case reports have suggested that it could lead to a mistaken diagnosis of abscess on postoperative CT scan. The objective of this study was to evaluate the diagnostic accuracy of CT scan for Surgicel® Fibrillar. **STUDY DESIGN** We prospectively registered all patients who had Surgicel® Fibrillar left in the operative site during one year. Patients who had a CT scan for medical reasons (e.g. fever, pain, or occlusive syndrome) were evaluated and we compared the radiologists' conclusions with or without information about the use of Surgicel® (two different radiologists, one blinded to the use of Surgicel®). **RESULTS** 18 patients who underwent pelvic laparotomy had Surgicel® Fibrillar left in the operative site. On first interpretation, the radiologist's conclusion was an abscess in 11% of cases, hematoma in 28%, collections with hydro-aeric levels in 33%, lymphocele in 6% and no conclusion in 11% of cases. For only 2 patients (11%) was the conclusion Surgicel® Fibrillar. After second interpretation by a radiologist aware of the presence of Surgicel® Fibrillar, Surgicel® Fibrillar was the main conclusion on 15 CT scans (83%). **CONCLUSION** Oxidized regenerated cellulose is a

differential diagnosis for abscess or collection. The radiologist should be informed about its presence to increase appropriate evaluation of CT scans and avoid inappropriate treatment.

Database: Medline

7. Surgicel® (oxidized regenerated cellulose) granuloma mimicking local recurrent gastrointestinal stromal tumor: A case report.

Author(s): Wang, Hao; Chen, Ping

Source: Oncology letters; May 2013; vol. 5 (no. 5); p. 1497-1500

Publication Date: May 2013

Publication Type(s): Journal Article

PubMedID: 23759739

Available at [Oncology letters](#) - from ProQuest (Health Research Premium) - NHS Version

Available at [Oncology letters](#) - from PubMed Central

Available at [Oncology letters](#) - from Unpaywall

Abstract:Unexpected clinical and/or imaging evidence of the recurrence of gastrointestinal stromal tumors soon after surgical resection may be complicated due to certain biological behavioral features of gastrointestinal stromal tumors. However, local hemostatic materials routinely used in abdominal surgery to achieve hemostasis intraoperatively may cause a foreign-body reaction, which appears to be indistinguishable from recurrent tumors in imaging studies. Thus, a second examination may be necessary to settle the true nature of the findings in such cases. If the resection and examination reveals a recurrent tumor, further proper oncological treatment is warranted, whereas if a foreign-body reaction is observed, radical or potentially harmful therapy may be withheld or cancelled. The present study retrospectively analyzes the case of an 83-year-old male patient who presented with a recurrent gastrointestinal stromal tumor four months after surgical resection, which was later identified as an intra-abdominal foreign-body granuloma caused by retained Surgicel® residue. The present study aimed to demonstrate why foreign-body granuloma induced by local hemostatic materials should be incorporated into the differential diagnosis of recurrent gastrointestinal stromal tumors post-operatively, particularly soon after surgical resection has been performed.

Database: Medline

8. Oxidized regenerated cellulose imitating pelvic abscess



Author(s): Behbehani S.; Tulandi T.

Source: Obstetrics and Gynecology; Feb 2013; vol. 121 (no. 2); p. 447-449

Publication Date: Feb 2013

Publication Type(s): Article

PubMedID: 23344404

Available at [Obstetrics and gynecology](#) - from Ovid (Journals @ Ovid) - Remote Access

Abstract:Background: Oxidized regenerated cellulose is a topical hemostatic agent that is used commonly in abdominal and pelvic surgery. Although oxidized regenerated cellulose mimicking an abscess has been reported after different operations, little is known about its side effects after gynecologic surgery. Cases: Two women were diagnosed with postoperative abscess and intra-abdominal oxidized regenerated cellulose was identified as an abscess or as part of an abscess on computed tomography imaging. Both women recovered after treatment with antibiotics with and without drainage. Conclusion: Oxidized regenerated cellulose may be mistaken for an abscess or as part of an abscess on imaging studies. It is important to reveal information about oxidized regenerated cellulose use to the imaging department. © 2013 by The American College of Obstetricians and Gynecologists. Published by Lippincott Williams & Wilkins.

Database: EMBASE

9. Review of hemostatic agents used in robotic assisted laparoscopic gynecological surgeries

Author(s): Wolny Y.; Tam T.

Source: Journal of Minimally Invasive Gynecology; 2012; vol. 19 (no. 6)

Publication Date: 2012

Publication Type(s): Conference Abstract

Abstract:Study Objective: To review characteristics and applications of various hemostatic agents in robotic assisted laparoscopic surgeries. Different hemostatic agents are used adjunctively in laparoscopic surgeries to achieve bleeding control. Proper selection of a hemostatic agent should depend on a thorough understanding of their mechanism of action and efficacy. The different characteristics of these hemostatic agents are highlighted and their mechanism of action, in relation to the coagulation cascade, is emphasized. Design: Review of four categories of hemostatic agents including seven examples used in robotic assisted laparoscopic gynecological surgeries. Setting: Community based urban teaching hospital with advanced laparoscopic and robotic technology. Patients: Seven patients undergoing robotic assisted gynecological surgery. Intervention: Robotic assisted gynecologic procedures are presented where hemostatic agents are utilized to provide adequate bleeding control. Measurements and Main Results: Seven commercially available hemostatic agents were utilized in patients undergoing robotic assisted benign gynecological procedures. Four different categories with some examples are provided. 1. Oxidized regenerated cellulose: Surgicel FibrillarTM and Surgicel SnowTM 2. Flowable gelatins that provide a hemostatic matrix: SurgiFlo and Floseal, 3. Fibrin sealants: Evicel and VitagelTM, 4. Absorbable hemostat: AristaTM. The choice of a specific hemostatic agent was dependent on the severity of bleeding, type of procedure and surgeon preference. Adequate hemostasis was achieved in all surgeries. Conclusion: Hemostatic agents are very beneficial in optimizing bleeding control during gynecological surgery. A comprehensive knowledge of the product characteristics and mechanism of action will provide the gynecologic surgeon a clearer understanding on indication of use and encourages patient safety. (Table Presented) .



Database: EMBASE

10. A comprehensive review of topical hemostatic agents: efficacy and recommendations for use.

Author(s): Achneck, Hardean E; Sileshi, Bantayehu; Jamiolkowski, Ryan M; Albala, David M; Shapiro, Mark L; Lawson, Jeffrey H

Source: Annals of surgery; Feb 2010; vol. 251 (no. 2); p. 217-228

Publication Date: Feb 2010

Publication Type(s): Research Support, Non-u.s. Gov't Journal Article Review

PubMedID: 20010084

Available at [Annals of surgery](#) - from Ovid (LWW Total Access Collection 2019 - with Neurology)

Abstract: Since ancient times we have attempted to facilitate hemostasis by application of topical agents. In the last decade, the number of different effective hemostatic agents has increased drastically. In order for the modern surgeon to successfully choose the right agent at the right time, it is essential to understand the mechanism of action, efficacy and possible adverse events as they relate to each agent. In this article we provide a comprehensive review of the most commonly used hemostatic agents, subcategorized as physical agents, absorbable agents, biologic agents, and synthetic agents. We also evaluate novel hemostatic dressings and their application in the current era. Furthermore, wholesale acquisition prices for hospitals in the United States are provided to aid in cost analysis. We conclude with an expert opinion on which agent to use under different scenarios.

Database: Medline

11. Topical haemostatic agents

Author(s): Seyednejad H.; Jamieson T.; Seifalian A.M.; Imani M.

Source: British Journal of Surgery; Oct 2008; vol. 95 (no. 10); p. 1197-1225

Publication Date: Oct 2008

Publication Type(s): Review

PubMedID: 18763249

Available at [British Journal of Surgery](#) - from Wiley Online Library Science , Technology and Medicine Collection 2017

Available at [British Journal of Surgery](#) - from Unpaywall

Abstract: Background: A variety of local haemostatic agents is now available to stop troublesome bleeding. These agents are indicated for use during surgical interventions where conventional methods of haemostasis are not applicable because of the site of surgery or the degree of bleeding. Method: A literature search using the PubMed and ISI Web of Knowledge databases identified relevant studies on topical haemostatic agents. Manufacturers' recommendations were also sought through commercial websites. Results and conclusion: A significant body of evidence now exists to support the use of topical haemostatic agents in a wide variety of clinical situations. The advantages and disadvantages of many of these agents are highlighted. Copyright © 2008 British Journal of Surgery Society Ltd Published by John Wiley & Sons Ltd.

Database: EMBASE



12. Clinical benefits and risk analysis of topical hemostats: A review

Author(s): Tomizawa Y.

Source: Journal of Artificial Organs; Sep 2005; vol. 8 (no. 3); p. 137-142

Publication Date: Sep 2005

Publication Type(s): Review

PubMedID: 16235029

Available at [Journal of artificial organs : the official journal of the Japanese Society for Artificial Organs](#) - from SpringerLink - Medicine

Available at [Journal of artificial organs : the official journal of the Japanese Society for Artificial Organs](#) - from ProQuest (Health Research Premium) - NHS Version

Abstract: A variety of local hemostats including absorbable gelatin sponge, collagen hemostat, and oxidized cellulose are commercially available. Local hemostats are applied when cautery, ligature, or other conventional hemostatic method is impractical. Proper handling is essential to control bleeding and only the required amount should be used, even though the hemostat is expected to dissolve promptly. A dry local hemostat absorbs body fluid of several times its own weight and expands postoperatively. Therefore, when an absorbable hemostatic agent is retained on or near bony or neural spaces, the minimum amount should be left after hemostasis is achieved. Documentation is important with regard to the hemostat used, including the name of the agent, site, and amount. This information is used as a reference in the interpretation of postoperative diagnostic images, since retained hemostat may sometimes mimic an abscess or recurrent tumor. The antigenicity of collagen is known to be low because of homology. When the safety of collagen was evaluated, the incidence of positive reactions was reported as 3.0%, and collagen may cause allergic reactions. Minimum inflammation without strong foreign body reactions or blockade of healing is desirable after the use of local hemostats. Strong foreign body reactions, chronic inflammation, and infections can cause granuloma formation after local hemostat use. By using local hemostats, it is possible to improve the condition of the patient, reduce complications, and lower direct and indirect costs. © The Japanese Society for Artificial Organs 2005.

Database: EMBASE



13. Comparative evaluation of absorbable hemostats: advantages of fibrin-based sheets.

Author(s): Krishnan, Lissy K; Mohanty, Mira; Umashankar, P R; Lal, Arthur Vijayan

Source: Biomaterials; Nov 2004; vol. 25 (no. 24); p. 5557-5563

Publication Date: Nov 2004

Publication Type(s): Comparative Study Journal Article Evaluation Studies

PubMedID: 15142738

Abstract: Bioactive hemostats and wound dressings consist of either inherently active materials or act as delivery vehicles which contain such materials. Fibrin is a natural hemostat and scaffold, guiding the direction of wound contraction and closure. In order to improve the ease of application of liquid fibrin glue, we have made a freeze-dried form of polymerized fibrin that supports hemostasis and wound healing. The bleeding from the middle ear artery of rabbits was found to be arrested instantaneously on application of fibrin sheets, even when the animal was heparinized systemically. As the fibrin sheet was found to be fragile, gelatin was incorporated to the sheet and thus the mechanical stability was improved without compromising the hemostatic effect. The efficacy of the fabricated fibrin and fibrin-gelatin sheets to seal traumatized rat liver was compared with commercially available hemostats, Abgel (cross-linked gelatin) and Surgicel (cross-linked cellulose). Tissue compatibility of all the hemostats was studied by analyzing the liver tissue 15 days after application. While the hemostatic effect was best with fibrin and fibrin-gelatin sheets, both Surgicel and Abgel were not capable of arresting the bleeding quickly. Gross analysis of tissue on the 15th day of application, visibly, Abgel was not only degraded but resulted in severe adhesions of internal organs and histologically capsule formation around the implant was evident. Though Surgicel was also seen as cream soft material on the site of application that joined two pieces of liver, there was no adhesion of other internal organs and histologically, immune reaction and foreign-body-type giant cells were present in large amounts. Fibrin was not found grossly on application site whereas fibrin-gelatin was seen as a small white spot. Granulation tissue formation and cell migration into the fibrin-based sheets were evident, and therefore, fibrin-based sheets are not only efficient hemostats but showed optimum degradation and wound healing.

Database: Medline

14. Oxidized cellulose (SurgicelTM) granuloma mimicking a primary ovarian tumor

Author(s): Gao H.-W.; Lin C.-K.; Yu C.-P.; Chen A.; Yu M.-S.

Source: International Journal of Gynecological Pathology; Oct 2002; vol. 21 (no. 4); p. 422-423

Publication Date: Oct 2002

Publication Type(s): Article

PubMedID: 12352194

Available at [International journal of gynecological pathology : official journal of the International Society of Gynecological Pathologists](#) - from Ovid (Journals @ Ovid) - Remote Access

Abstract: A 37-year-old woman presented with left lower quadrant pain and vaginal spotting 1 month after hysterectomy and right salpingo-oophorectomy, which were performed for hemoperitoneum related to a ruptured corpus luteum. An 8-cm left ovarian mass was removed that had a microcystic, mucoid sectioned surface. Histological examination revealed that the mass

consisted of a massive foreign-body granulomatous reaction to oxidized cellulose (Surgicel™). To our knowledge, this is only the second report of an ovarian Surgicel™ granuloma.

Database: EMBASE

15. Foreign body reaction (gossypiboma) masking as recurrent ovarian cancer

Author(s): Deger R.B.; LiVolsi V.A.; Noumoff J.S.

Source: Gynecologic Oncology; 1995; vol. 56 (no. 1); p. 94-96

Publication Date: 1995

Publication Type(s): Article

PubMedID: 7821856

Abstract: Surgicel is an absorbable sterile mesh composed of oxidized cellulose used to control capillary or venous bleeding. Although the manufacturer recommends its removal after hemostasis is achieved, in clinical practice it is usually left in situ to reabsorb spontaneously, usually with no untoward effect. We report the first case of foreign body reaction (gossypiboma) masking as recurrent malignancy discovered 13 months post-cytoreductive surgery for ovarian carcinoma.

Database: EMBASE

16. Comparison of absorbable materials for surgical haemostasis

Author(s): Blair S.D.; Backhouse C.M.; Harper R.; Matthews J.; McCollum C.N.

Source: British Journal of Surgery; 1988; vol. 75 (no. 10); p. 969-971

Publication Date: 1988

Publication Type(s): Article

PubMedID: 3219544

Abstract: The haemostatic effect of two new materials has been compared with surgical gauze and oxidized cellulose using a standardized liver laceration in New Zealand White rabbits. Following excision of a 3 cm² disc of tissue from the liver, 42 rabbits were randomized to the use of gauze swabs (n = 6), oxidized cellulose (Surgicel) (n = 12), porcine collagen (Medistat) (n = 12) or calcium alginate (Kaltostat) (n = 12) to control the resulting haemorrhage. Blood loss and time to haemostasis were accurately recorded. The absorbable materials were left in situ and animals killed between 2 weeks and 6 months later to examine speed of absorption and resulting adhesions. Calcium alginate stopped bleeding in < 3 min in all animals compared with a mean (+/- s.e.m.) of 5.7 +/- 0.75 min for porcine collagen, 12.5 +/- 0.9 min for oxidized cellulose and > 15 min with gauze (P < 0.001). Oxidized cellulose and calcium alginate reabsorbed within 3 months leaving a fibrous scar, but a vigorous foreign body reaction was seen with porcine collagen which caused intestinal obstruction in 5 out of 12 animals within 3 months.

Database: EMBASE



17. Surgicel: its fate following implantation.

Author(s): Pierce, A M; Wiebkin, O W; Wilson, D F

Source: Journal of oral pathology; Dec 1984; vol. 13 (no. 6); p. 661-670

Publication Date: Dec 1984

Publication Type(s): Journal Article

PubMedID: 6440959

Abstract: Surgicel, a local haemostatic gauze, is claimed to consist of oxidised regenerated cellulose. It is a polyanion, the functional unit of which is termed polyanhydroglucuronic acid. The ability of tissues to absorb Surgicel and its inherent haemostatic properties have been extensively investigated. This study was undertaken a) to determine the time required for absorption of Surgicel from implantation sites in the chest wall muscles of rats, and b) to establish mechanisms for its removal. Data derived from sequential uronic acid assays, histochemistry using the stain alcian blue, and transmission electron microscopy of implanted Surgicel were interpreted to reveal that Surgicel consists of at least two active components. These are a soluble uronic acid component which is lost after 6 h, and a fibrous component which persists. The latter material resembles Surgicel in the electron microscope and is still evident at the implantation site at 48 h post-implantation. Moreover, Surgicel can be characterized in vitro into at least two components according to its solubility under dissociative salt conditions (4M guanidinium chloride). A residual fibrous material could then be hydrolysed with 0.3N sodium hydroxide. We postulate that the absorption of the former salt soluble uronate in vivo is by early degradation and/or systemic clearance, whilst removal of the fibrous material requires phagocytosis.

Database: Medline

18. ABSORBABLE COTTON, PAPER AND GAUZE : (OXIDIZED CELLULOSE).

Author(s): Frantz, V K

Source: Annals of surgery; Jul 1943; vol. 118 (no. 1); p. 116-126

Publication Date: Jul 1943

Publication Type(s): Journal Article

PubMedID: 17858245

Available at [Annals of surgery](#) - from PubMed Central

Database: Medline



Strategy 682758

#	Database	Search term	Results
1	Medline	(surgicel*).ti,ab	405
2	Medline	exp "CELLULOSE, OXIDIZED"/	841
3	Medline	(Oxidized ADJ2 cellulose).ti,ab	856
4	Medline	(Oxidised ADJ2 cellulose).ti,ab	68
5	Medline	(1 OR 2 OR 3 OR 4)	1518
6	Medline	(ovar*).ti,ab	226605
7	Medline	exp OVARY/	88991
8	Medline	(6 OR 7)	259611
9	Medline	(5 AND 8)	30
10	Medline	(dissolv* OR dissolution).ti,ab	97790
11	Medline	(5 AND 10)	25
12	EMBASE	(surgicel*).ti,ab	604
13	EMBASE	(Oxidized ADJ2 cellulose).ti,ab	886
14	EMBASE	(Oxidised ADJ2 cellulose).ti,ab	86
15	EMBASE	exp "OXIDIZED CELLULOSE"/	751
16	EMBASE	(12 OR 13 OR 14 OR 15)	1768
17	EMBASE	(dissolv* OR dissolution).ti,ab	126105
18	EMBASE	(16 AND 17)	30
19	EMBASE	(disappear*).ti,ab	166791



20	EMBASE	(16 AND 19)	15
21	EMBASE	(ovar*).ti,ab	315006
22	EMBASE	exp OVARY/	148375
23	EMBASE	(21 OR 22)	393514
24	EMBASE	(16 AND 23)	27
25	EMBASE	("abdominal cavity").ti,ab	12526
26	EMBASE	exp "ABDOMINAL CAVITY"/	1895
27	EMBASE	((pelvic OR pelvis OR gynecolog* OR gynaecolog*) ADJ2 surg*).ti,ab	19941
28	EMBASE	exp "GYNECOLOGIC SURGERY"/ OR exp "PELVIS SURGERY"/	153468
29	EMBASE	(27 OR 28)	161498
30	EMBASE	(16 AND 29)	99
31	EMBASE	(absorb*).ti,ab	141164
32	EMBASE	(12 AND 31)	100
33	EMBASE	("re absorb*" OR reabsorb* OR reabsorption OR "re absorption").ti,ab	22822
34	EMBASE	(12 AND 33)	4
35	EMBASE	exp "TIME FACTOR"/	27643
36	EMBASE	(16 AND 35)	2
37	Medline	exp "TIME FACTORS"/	1154420



38	Medline	(5 AND 37)	74
39	Medline	("abdominal cavity").ti,ab	9087
40	Medline	exp "ABDOMINAL CAVITY"/	54789
41	Medline	((pelvic OR pelvis OR gynecolog* OR gynaecolog*) ADJ2 surg*).ti,ab	15907
42	Medline	exp "GYNECOLOGIC SURGICAL PROCEDURES"/	79989
43	Medline	(39 OR 40 OR 41 OR 42)	152351
44	Medline	(5 AND 43)	100
45	Medline	("foreign body").ti,ab	23359
46	Medline	exp "FOREIGN-BODY REACTION"/	7612
47	Medline	(45 OR 46)	28333
48	Medline	(5 AND 47)	59
49	Medline	(degrad* OR "de grad*" OR "re absorb*" OR reabsorb* OR reabsorption OR "re absorption").ti,ab	377482
50	Medline	(5 AND 49)	82
51	Medline	(biodegrad*).ti,ab	40416
52	Medline	(5 AND 51)	41
53	EMBASE	exp BIODEGRADABILITY/ OR exp BIODEGRADATION/	46446
54	EMBASE	(16 AND 53)	28



55	EMBASE	(surgicel*).ti	156
56	EMBASE	exp "FOREIGN BODY REACTION"/	5026
57	EMBASE	(16 AND 56)	35
58	EMBASE	exp "OBSTETRIC OPERATION"/	145826
59	EMBASE	(16 AND 58)	24
60	Medline	exp "OBSTETRIC SURGICAL PROCEDURES"/	128523
61	Medline	(5 AND 60)	17