University Hospitals Bristol NHS
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Gynaecology

Evidence Update

July 2017

(Bimonthly)

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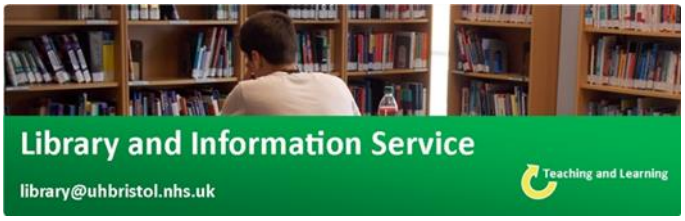

Training Calendar 2017

All sessions are one hour

July (13.00-14.00)

12th (Wed) Critical Appraisal
21st (Fri) Literature Searching
26th (Wed) Interpreting Statistics

August (12.00-13.00)

4th (Fri) Critical Appraisal
9th (Wed) Literature Searching
15th (Tues) Interpreting Statistics
24th (Thurs) Critical Appraisal

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Latest Evidence

NICE National Institute for Health and Care Excellence

Endometriosis: diagnosis and management (GID-CGWAVE0737) **September 2017** NICE guidelines

Heavy menstrual bleeding (update) (GID-NG10012) **November 2017** NICE guidelines

In development

Niraparib for ovarian cancer [ID1041] (GID-TA10135) May 2018 **Technology appraisal guidance**

Ovarian (epithelial), fallopian and peritoneal cancer - pazopanib (maintenance) [ID545] (GID-TAG444) TBC **Technology appraisal guidance**

Ovarian cancer - vintafolide (with pegylated liposomal doxorubicin) [ID564] (GID-TAG332) TBC **Technology appraisal guidance**

Ovarian, fallopian tube and peritoneal cancer - rucaparib [ID1184] (GID-TA10168) May 2018 **Technology appraisal guidance**

Tests in secondary care to identify people at high risk of ovarian cancer (GID-DG10012) November 2017 **Diagnostics guidance**

Interventional procedures guidance

Infracoccygeal sacropexy using mesh to repair uterine prolapse (IPG582) June 2017

Sacrocolpopexy with hysterectomy using mesh to repair uterine prolapse (IPG577) March 2017

Uterine suspension using mesh (including sacrohysteropexy) to repair uterine prolapse (IPG584) June 2017

Infracoccygeal sacropexy using mesh to repair vaginal vault prolapse (IPG581) June 2017

Sacrocolpopexy using mesh to repair vaginal vault prolapse (IPG583) June 2017

Cochrane Library

Cycle regimens for frozen-thawed embryo transfer

Tarek Ghobara, Tarek A Gelbaya, Reuben Olugbenga Ayeleke

Retroperitoneal drainage versus no drainage after pelvic lymphadenectomy for the prevention of lymphocyst formation in women with gynaecological malignancies

Kittipat Charoenkwan, Chumnan Kietpeerakool

Antibiotic prophylaxis for elective hysterectomy

Reuben Olugbenga Ayeleke, Selma Mourad, Jane Marjoribanks, Karim A Calis, Vanessa Jordan

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Overweight and risk of pelvic organ prolapse (June 2017)

Studies assessing the impact of body weight on risk of pelvic organ prolapse (POP) have reported conflicting results. A meta-analysis of 22 studies now reports that the risk of POP is increased by at least 36 percent in overweight and obese women compared with normal-weight peers [32]. This finding is noteworthy because body weight is one of the few modifiable risk factors for POP. (See "Pelvic organ prolapse in women: Epidemiology, risk factors, clinical manifestations, and management", section on 'Obesity'.)

GYNECOLOGIC SURGERY

Negative pressure dressing for closed abdominal wounds (May 2017)

Negative pressure dressings have been widely used to manage open wounds but are less commonly used for closed wounds. In a randomized trial of 50 patients with closed laparotomy incisions, the use of a negative pressure dressing, as opposed to a standard dressing, resulted in fewer wound infections and a shorter mean hospital stay [36]. If these findings are validated by other studies, negative pressure dressings could be used for closed abdominal wounds, particularly when the risk of wound complications is high, such as in obese patients or with a contaminated field. (See "Principles of abdominal wall closure", section on 'Negative pressure dressings'.)

GYNECOLOGIC ONCOLOGY

Oral contraceptives and ovarian cancer risk (June 2017)

Use of oral estrogen-progestin contraceptives is associated with a reduction in risk of ovarian cancer. In the largest and longest duration study of oral contraceptive use, the Royal College of General Practitioners' Oral Contraception Study followed over 46,000 women for up to 44 years and found that ever-use of oral contraceptives was associated with a 33 percent reduction in ovarian cancer risk [39]. This finding supports previous data and our recommendation for use of oral contraceptives in women who desire ovarian cancer risk

reduction who have not undergone risk reduction surgery and who are not trying to conceive. (See "Risk-reducing bilateral salpingo-oophorectomy in women at high risk of epithelial ovarian and fallopian tubal cancer" and "Epithelial carcinoma of the ovary, fallopian tube, and peritoneum: Epidemiology and risk factors", section on 'Oral contraceptives'.)

Breastfeeding and risk of endometrial cancer (June 2017)

Breastfeeding has many maternal and infant benefits. In a meta-analysis of epidemiologic studies of women with endometrial cancer, ever-breastfeeding was associated with an 11 percent reduction in risk compared with never breastfeeding, and the greatest reduction was among those who breastfed for at least three months per child [40]. A decreased risk of endometrial cancer appears to be an additional maternal benefit of breastfeeding. (See "Endometrial carcinoma: Epidemiology and risk factors", section on 'Breastfeeding'.)

Journal Tables of Contents

Click on the hyperlinked title (+ Ctrl) for contents. If you would like any of the papers in full then please email the library: library@uhbristol.nhs.uk

Journal	Month	Volume	Issue
British Journal of Obstetrics and Gynaecology	July 2017	124	8
International Journal of Gynaecology and Obstetrics	July 2017	138	1
Obstetrics and Gynaecology	July 2017	130	1
International Urogynecology Journal	July 2017	28	7
Gynecologic Oncology	July 2017	146	1
Human Reproduction Update	Jul/Aug 2017	23	4

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Exercise: Outcome reliability

Looks at the level of agreement between assessments by *one rater* of the same material at two or more different times.	
Refers to the level of agreement between the initial test results and the results of repeated measurements made at a later date.	
This measures the level of agreement between assessments made by *two or more raters* at the same time.	

Inter-rater reliability	**Intra-rater reliability**	**Test retest reliability**

Current Awareness Database Articles

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1. Paraneoplastic syndromes associated with gynecological cancers: A systematic review.

Author(s): Viau, Mathieu; Renaud, Marie-Claude; Grégoire, Jean; Sebastianelli, Alexandra; Plante, Marie

Source: Gynecologic oncology; Jun 2017

Publication Date: Jun 2017

Publication Type(s): Journal Article

PubMedID: 28655412

Abstract:A number of paraneoplastic syndromes have been described with gynecological cancers. These syndromes are induced by substances secreted by the tumor or by an immune response triggered by the cancer. Each system of the human body can be affected by different syndromes. Indeed, paraneoplastic syndromes occurring from tumors of the gynecologic tract were found to involve the nervous, ophthalmologic, dermatologic, rheumatologic, endocrine, hematologic and renal systems. These syndromes can manifest before, at the time, or after the diagnosis of cancer. They can also occur at the time of a recurrence. Knowledge about these syndromes is important for physicians caring for patients with cancers, as they can result in severe morbidity and must be treated appropriately. Literature regarding paraneoplastic syndromes associated with tumors of the female genital tract is scattered and the subject has not been reviewed recently. A systematic literature search was thus conducted to identify paraneoplastic syndromes associated with gynecologic cancers. This review focuses on the cancers involved with each paraneoplastic syndrome, and on their pathophysiology, clinical manifestations, possible complications, outcomes, and treatments. As the mainstay of treatment in these conditions is often to address the underlying tumor, it is of upmost importance that physicians be aware of these rare cancer manifestations.

Database: Medline

2. Statin use and survival outcomes in endocrine-related gynecologic cancers: A systematic review and meta-analysis.

Author(s): Xie, Weimin; Ning, Li; Huang, Yuenan; Liu, Yan; Zhang, Wen; Hu, Yingchao; Lang, Jinghe; Yang, Jiaxin

Source: Oncotarget; Jun 2017; vol. 8 (no. 25); p. 41508-41517

Publication Date: Jun 2017

Publication Type(s): Meta-analysis

PubMedID: 28489569

Abstract: Previous studies investigating the association between statin use and survival outcomes in gynecologic cancers have yielded controversial results. We conducted a systematic review and meta-analysis to evaluate the association based on available evidence. We searched the databases of the Cochrane Central Register of Controlled Trials (CENTRAL), Embase, and PubMed from inception to January 2017. Studies that evaluated the association between statin use and survival outcomes in gynecologic cancers were included. Pooled hazard ratios (HRs) for overall survival, disease-specific survival and progression-free survival were calculated using a fixed-effects model. A total of 11 studies involving more than 6,920 patients with endocrine-related gynecologic cancers were

identified. In a meta-analysis of 7 studies involving 5,449 patients with endocrine-related gynecologic cancers, statin use was linked to improved overall survival (HR, 0.71; 95% confidence interval [CI], 0.63 to 0.80) without significant heterogeneity (I2 = 33.3%). Statin users also had improved disease-specific survival (3 studies, HR, 0.72; 95% CI, 0.58 to 0.90, I2 = 35.1%) and progression-free survival (3 studies, HR, 0.68; 95% CI, 0.49 to 0.93, I2 = 33.6%) in endocrine-related gynecologic cancers. Our findings support that statin use has potential survival benefits for patients with endocrine-related gynecologic cancers. Further large-scale prospective studies are required to validate our findings.

Database: Medline

3. Compartment syndrome after gynecologic laparoscopy: systematic review of the literature and establishment of normal values for postoperative serum creatine kinase and myoglobin levels.

Author(s): Hefler-Frischmuth, Katrin; Lafleur, Judith; Brunnmayr-Petkin, Gudrun; Roithmeier, Franz; Unterrichter, Verena; Hefler, Lukas; Tempfer, Clemens

Source: Archives of gynecology and obstetrics; Jun 2017

Publication Date: Jun 2017

Publication Type(s): Journal Article

PubMedID: 28631073

Abstract:PURPOSETo evaluate published evidence in the literature on compartment syndrome (CS) in association with gynecologic surgery and to establish postoperative normal values for serum creatine kinase (CK) and myoglobin.METHODSThe present study consists of a case report of a patient with CS, a systematic review including 37 studies and 86 patients with CS, and a retrospective cohort study of 300 patients undergoing various types of laparoscopy for benign or malignant diseases in order to establish postoperative normal values.RESULTSWe report on a patient with early-stage ovarian cancer, who developed CS after laparoscopic surgery with massively elevated serum CK and myoglobin levels, i.e., 1109 U/L and 18151 µg/L, respectively. In our systematic review, median serum CK and myoglobin levels among women with CS were 19,223 (177-27,412) U/L and 1248 (285-1360) µg/L, respectively. In our cohort study, the median postoperative serum CK and myoglobin levels were 68 (14-1576) U/L and 45 (14-1040) µg/L, respectively. The 95th and 99th percentile of serum CK and myoglobin levels were 158 and 391.5 U/L, and 152.3 and 298.9 µg/L, respectively.CONCLUSIONMarkedly elevated postoperative serum levels of CK and myoglobin levels might raise the suspicion for CS and could therefore aid in the rapid diagnosis of CS.

Database: Medline

4. Systematic Review: The Impact of Cancer Treatment on the Gut and Vaginal Microbiome in Women With a Gynecological Malignancy.

Author(s): Muls, Ann; Andreyev, Jervoise; Lalondrelle, Susan; Taylor, Alexandra; Norton, Christine; Hart, Ailsa

Source: International journal of gynecological cancer : official journal of the International Gynecological Cancer Society; Jun 2017

Publication Date: Jun 2017

Publication Type(s): Journal Article

PubMedID: 28590950

Abstract:BACKGROUND AND AIMWorldwide, 1,470,900 women are diagnosed yearly with a gynecological malignancy (21,000 in the UK). Some patients treated with pelvic radiotherapy

develop chronic changes in their bowel function. This systematic review summarizes current research on the impact of cancer treatment on the gut and vaginal microbiome in women with a gynecological malignancy.METHODSThe Preferred reporting Items for Systematic Reviews and Meta-analyses guidelines for systematic reviews were used to ensure transparent and complete reporting. Quantitative studies exploring the gut or vaginal microbiome in this patient cohort were included. Animal studies were excluded. There were no language restrictions.RESULTSNo studies examined the possible effects of surgery or chemotherapy for gynecological cancers on the gut or vaginal microbiome.Three prospective cohort studies were identified using sequencing of changes in the gut microbiome reporting on a total of 23 women treated for gynecological cancer. All studies included patients treated with radiotherapy with a dosage ranging from 43.0 to 54.0 Gy. Two studies assessed gastrointestinal toxicity formally; 8 women (57%) developed grade 2 or 3 diarrhea during radiotherapy. The outcomes suggest a correlation between changes in the intestinal microbiome and receiving radiotherapy and showed a decrease in abundance and diversity of the intestinal bacterial species. Before radiotherapy, those who developed diarrhea had an increased abundance of Bacteroides, Dialister, and Veillonella ($P < 0.01$), and a decreased abundance of Clostridium XI and XVIII, Faecalibacterium, Oscillibacter, Parabacteroides, Prevotella, and unclassified bacteria ($P < 0.05$).CONCLUSIONThe limited evidence to date implies that larger studies including both the vaginal and gut microbiome in women treated for a gynecological malignancy are warranted to explore the impact of cancer treatments on the microbiome and its relation to developing long-term gastrointestinal toxicity. This may lead to new avenues to stratify those at risk and explore personalized treatment options and prevention of gastrointestinal consequences of cancer treatments.

Database: Medline

5. Do women offered assisted reproduction technologies have a higher incidence of gynecologic cancer? A systematic review and meta-analysis.

Author(s): Schwarze, Juan Enrique; Valdebenito, Paulina; Ortega, Carolina; Villa, Sonia; Crosby, Javier; Pommer, Ricardo

Source: JBRA assisted reproduction; Jun 2017; vol. 21 (no. 2); p. 115-119

Publication Date: Jun 2017

Publication Type(s): Journal Article Review

PubMedID: 28609278

Abstract: The last two decades have seen an increase in the number of women diagnosed with infertility. The consequent growth in the use of assisted reproductive technologies (ART) calls for the determination of its long-term effects, including the risk of cancer. Many studies have attempted to answer this question, albeit with contradictory results. This review aimed to assess whether assisted reproductive technologies are associated with an increased risk of gynecological cancer. A search for papers in the literature was carried out on MEDLINE, TRIP DATABASE and NICE, resulting in 11 studies enrolling 3,900,231 patients altogether. Of these, 118,320 were offered ART. The incidence of gynecological cancer in the group offered ART was 0.6%, while the incidence in the group not offered ART was 2.1%. Taking all the studies into consideration, women offered ART were not at greater risk of having gynecological cancer; instead, a protective association was found.

Database: Medline

6. Is the neutrophil-to-lymphocyte ratio prognostic of survival outcomes in gynecologic cancers? A systematic review and meta-analysis.

Author(s): Ethier, Josee-Lyne; Desautels, Danielle N; Templeton, Arnoud J; Oza, Amit; Amir, Eitan; Lheureux, Stephanie

Source: Gynecologic oncology; Jun 2017; vol. 145 (no. 3); p. 584-594

Publication Date: Jun 2017

Publication Type(s): Journal Article Review

PubMedID: 28222899

Abstract:BACKGROUNDPresence of a high neutrophil-to-lymphocyte ratio (NLR) has been associated with increased mortality in several malignancies. Here, we quantify the effect of NLR on survival in patients with gynecologic cancers, and examine the effect of clinico-pathologic factors on its prognostic value.METHODSA systematic search of electronic databases was conducted to identify publications exploring the association of pre-treatment blood NLR with overall survival (OS) and event-free survival (EFS) among patients with ovarian, endometrial and cervical cancers. Data from studies reporting a hazard ratio (HR) and 95% confidence interval (CI) or a p-value (P) were weighted by generic inverse-variance and pooled in a random effects meta-analysis. Subgroup analyses were conducted according to primary tumor type. Meta-regression was performed to evaluate the influence of clinico-pathologic factors on the HR for OS and EFS. All statistical tests were two-sided.RESULTSTwenty-six studies comprising 10,530 patients were included. Studies used different cut-offs to classify high NLR (range 0.89 to 5.03). The median cut-off for high NLR was 2.95 among twenty-six studies reporting a HR for OS, and 2.79 in seventeen studies reporting EFS outcomes. NLR greater than the cut-off was associated with worse OS (HR 1.65, 95% CI=1.44 to 1.89; P<0.001) and EFS (HR 1.57, 95% CI=1.35 to 1.82; P<0.001). This association was present in all tumor types. Most studies were comprised of patients with both early-stage and advanced disease. In cervical cancer, significant associations between NLR and OS were observed in studies of early- and mixed-stage patients and regression analysis showed a greater magnitude of effect in patients with locally advanced disease and in those who received both chemotherapy and radiation.CONCLUSIONSHigh NLR is associated with an adverse OS and EFS in patients with gynecologic malignancies.

Database: Medline

7. The Role of Stereotactic Ablative Body Radiotherapy in Gynaecological Cancers: A Systematic Review.

Author(s): Mendez, L C; Leung, E; Cheung, P; Barbera, L

Source: Clinical oncology (Royal College of Radiologists (Great Britain)); Jun 2017; vol. 29 (no. 6); p. 378-384

Publication Date: Jun 2017

Publication Type(s): Journal Article

PubMedID: 28209456

Abstract:AIMSTo summarise and evaluate the current literature in gynaecological tumours treated with stereotactic ablative body radiotherapy (SABR) through a systematic review using the Preferred Reported Items for Systematic Reviews and Meta-analysis (PRISMA) guideline.MATERIALS AND METHODSA literature search through Medline, EMBASE and Cochrane databases resulted in 22 pertinent manuscripts. Selected studies evaluated the locoregional role of SABR in gynaecological tumours, regardless of SABR clinical indication. Data on local control, toxicity and SABR dose and technique were extracted by at least two investigators.RESULTSIn total, 330 patients received locoregional SABR for gynaecological tumour and had measurable clinical outcomes. Six different clinical scenarios were identified: (i) boost to external beam radiotherapy (EBRT) for cervical cancer as radical treatment; (ii) boost to EBRT for non-operable endometrial cancer; (iii) treatment for pelvic and/or para-aortic node metastases; (iv) adjuvant treatment after surgery in uterine/cervix

cancers; (v) salvage of non-nodal pelvic recurrences and (vi) vulvar or vaginal malignancies. Except for SABR as a boost for non-operable endometrial cancer, local control over 80% was found in a range of median follow-up of 4-132 months. Local control in non-operable endometrial tumours receiving SABR was 53%. In salvage treatments for non-nodal pelvic relapses, SABR was associated with about a 20% grade 3-4 gastrointestinal toxicity.CONCLUSIONThere is no clear consensus or evidence on the defined role of SABR in gynaecological tumours. Local control and toxicity associated with SABR seems reasonable for most clinical indications found by this review with a short median follow-up. When used for salvage of non-nodal pelvic recurrences, SABR may be associated with high rates of grade 3-4 late gastrointestinal toxicity.

Database: Medline

8. Do prophylactic antibiotics in gynecologic surgery prevent postoperative inflammatory complications? A systematic review.

Author(s): Boesch, Cedric Emanuel; Pronk, Roderick Franziskus; Medved, Fabian; Hentschel, Pascal; Schaller, Hans-Eberhard; Umek, Wolfgang

Source: Archives of gynecology and obstetrics; Jun 2017; vol. 295 (no. 6); p. 1383-1391

Publication Date: Jun 2017

Publication Type(s): Journal Article Review

PubMedID: 28466180

Abstract:PURPOSEThe aim of this study was to systematically review the literature on antibiotic prophylaxis in gynaecologic surgeries to prevent inflammatory complications after gynaecological operations. The study was carried out as a systematic review.METHODSOnly randomised controlled trials of women undergoing gynaecological surgery were included. The Medline and the Cochrane library databases were searched from 1966 to 2016. The trials must have investigated an antibiotic intervention to prevent an inflammatory complication after gynaecological surgery. Trials were excluded if they were not randomised, uncontrolled or included obstetrical surgery.RESULTSProphylactic antibiotics prevent inflammatory complications after gynaecological surgery. Prophylactic antibiotics are more effective in surgery requiring access to the peritoneal cavity or the vagina. Cefotetan appears to be more capable in preventing the overall inflammatory complication rate than cefoxitin or cefazolin. No benefit has been shown for the combination of antibiotics as prophylaxis. No difference has been shown between the long-term and short-term use of antibiotics. There is no need for the primary use of an anaerobic antibacterial agent.CONCLUSIONAntibiotics help to prevent postoperative inflammatory complications after major gynecologic surgeries.

Database: Medline

9. A high plasma D-dimer level predicts poor prognosis in gynecological tumors in East Asia area: a systematic review and meta-analysis.

Author(s): Xu, Lei; He, Fan; Wang, Hongcai; Gao, Bei; Wu, Huini; Zhao, Shuping

Source: Oncotarget; May 2017

Publication Date: May 2017

Publication Type(s): Journal Article

PubMedID: 28564635

Abstract: High pre-treatment plasma D-dimer levels have been reported as a factor associated with a poor prognosis in different types of malignancies, including pancreatic, gastric, colorectal, lung, and

nasopharyngeal carcinoma. Here, we performed a meta-analysis to determine the association of plasma D-dimer levels and long term survival in gynecological cancers, including ovarian, cervical and endometrial carcinoma. We searched all eligible publications in PubMed and Web of Science Databases up to August 2016. Primary outcomes, including overall survival (OS), disease-free survival and hazard ratios (HR) of were extracted and analyzed. Heterogeneity and publication bias were also assessed. A total of 7 eligible studies with 1112 cases were included in this study and all included studies are conducted in East Asia area. We found that gynecological cancer patients with high D-dimer demonstrates a much lower 5-year survival rate than those with low D-dimer levels (OR 4.12, 95% CI 3.04-5.58, P<0.00001). No significant heterogeneity is found (I2 = 10 %; P = 0.35). Importantly, pooled analysis showed that high plasma D-dimer levels are predictive of a shorter OS in gynecological cancers (HR 2.09, 95% CI 1.59-2.74). No heterogeneity is observed (I2=5%, P=0.39). Additionally, a subgroup analysis of ovarian cancer is conducted. In conclusion, this meta-analysis showed that a high plasma D-dimer level predicts poor prognosis in gynecological tumors.

Database: Medline

10. Surgical treatment of adhesion-related chronic abdominal and pelvic pain after gynaecological and general surgery: a systematic review and meta-analysis.

Author(s): van den Beukel, Barend A; de Ree, Roy; van Leuven, Suzanne; Bakkum, Erica A; Strik, Chema; van Goor, Harry; Ten Broek, Richard P G

Source: Human reproduction update; May 2017; vol. 23 (no. 3); p. 276-288

Publication Date: May 2017

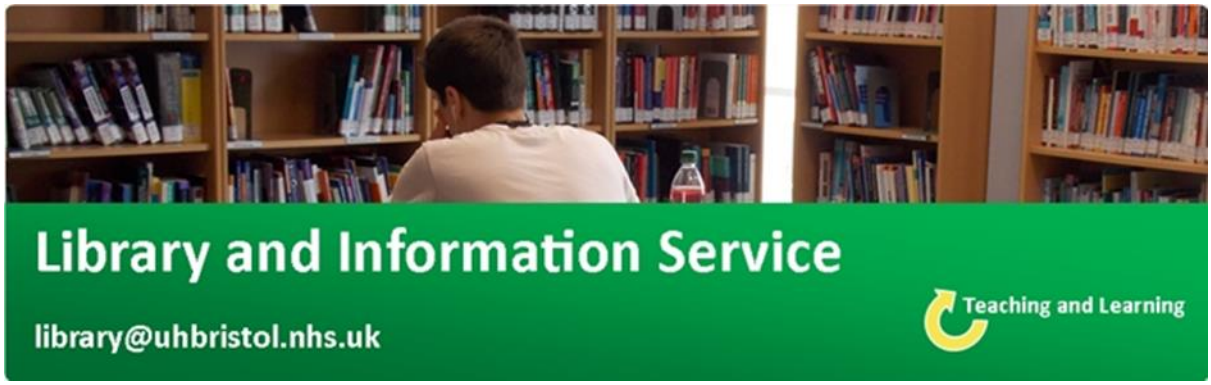
Publication Type(s): Journal Article

PubMedID: 28333221

Abstract:BACKGROUNDChronic pain is a frequent post-operative complication, affecting ~20-40% of patients who have undergone surgery of the female genital or alimentary tract. Chronic pain is an important risk factor for diminished quality of life after surgery. Adhesions are frequently associated with chronic post-operative pain; however, surgical treatment of adhesion-related pain is controversial.OBJECTIVE AND RATIONALEThe aim of this study was to investigate the efficacy and harms of surgical interventions for chronic post-operative pain attributable to adhesions.SEARCH METHODSA search was conducted using PubMed, EMBASE and CENTRAL, without restrictions pertaining to date, publication status or language. Randomized trials and cohort studies from all surgical interventions for chronic post-operative pain were considered eligible. Patients with a concomitant diagnosis that could cause chronic pain (e.g. endometriosis or inflammatory conditions) were excluded. Outcome measures were graded according to clinical relevance, with improvement of pain at long-term follow-up regarded as most clinically relevant.OUTCOMESA total of 4294 unique citations were identified, of which 13 studies met the criteria for inclusion. Two of the analysed studies were randomized trials, of which one had a low risk of bias. Only one trial, randomizing between laparoscopic adhesiolysis without an adhesion barrier and diagnostic laparoscopy, reported improvement of pain at long-term follow-up. In this trial, pain improved in 55.8% of patients after adhesiolysis and in 41.7% of patients in the control group; however, the difference was not significant (relative risk (RR) 1.34; 95% CI: 0.89-2.02). Most non-randomized studies had mid-length follow-up (6-12 months). In pooled analyses of trials and non-randomized studies, improvement of pain was reported in 72% of patients who underwent adhesiolysis (95% CI: 61-83%) at any follow-up longer than 3 months. The incidence of negative laparoscopies was 20% (95% CI: 10-30%). The overall incidence of complications following laparoscopic adhesiolysis was 4% (95% CI: 1-6%).WIDER IMPLICATIONSLaparoscopic adhesiolysis reduces pain from adhesions in ~70% of patients in the initial phase after treatment. However, there is little evidence for long-term efficacy of adhesiolysis for chronic pain. Other drawbacks of laparoscopic adhesiolysis are the high rate of negative

laparoscopies and the risk of bowel injury. At present, there is little evidence to support routine use of adhesiolysis in treatment for chronic pain. New research is needed to investigate whether the results of adhesiolysis can be improved with new techniques for diagnosis and prevention of adhesion reformation.

Database: Medline



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