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GYNAE SPECTRUM

Dear Doctor,
Greetings from Micro Labs. We are happy to bring you “Gynae Spectrum”, which contains latest and interesting news in the field of Obstetrics and Gynecology.

This issue contains:

1. A randomised controlled trial comparing delayed vs early umbilical cord clamping for near-term children delivered to preeclamptic women.
2. Urinary Incontinence After Cesarean Section Due to Iatrogenic Bladder Injury a Ten-Year Retrospective Analysis and Literature Review
3. A systematic review and meta-analysis of randomised controlled trials on the effect of active and passive warming on avoiding hypothermia and shivering during caesarean birth.
4. A case of secondary cystic adenomyosis in a young woman

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Looking forward to your valuable feedback.
Best Regards,
Medical Team, Micro Labs Limited



1. A randomized controlled trial comparing delayed vs early umbilical cord clamping for near-term children delivered to preeclamptic women.

Introduction:

Several randomised controlled trials and meta-analyses have shown that delaying umbilical cord clamping has significant health benefits for both preterm and term infants. It was discovered that delayed cord clamping (DCC) increased neonatal haemoglobin and ferritin levels stores out to 4 months, with higher myelin content out to 12 months in term infants. DCC in preterm infants provided numerous significant benefits, including increased red blood cell volume, decreased blood transfusions, improved transitional circulation, and decreased the incidence of intraventricular haemorrhage and necrotizing enterocolitis. ^[1] The average blood loss in patients undergoing caesarean section is at least double that of vaginal deliveries. This blood loss may increase as the uterine incision in DCC is delayed. ^[2] Preeclampsia complications affect approximately 10-15% of all pregnancies and are typically associated with a number of fetal and neonatal complications related to prematurity and uteroplacental insufficiency, resulting in a compromised fetal blood flow. Neonates born to mothers with hypertensive pregnancy disorders had a higher risk of polycythemia and thrombocytopenia than the general population. Preeclamptic mothers' newborns are at risk of numerous complications; however, no study has thoroughly investigated the effect of DCC on maternal blood loss during caesarean delivery and neonatal outcomes in these pregnancies. As a result, it was the focus of this research.

Methods:

A clinical trial involving 62 near-term preeclamptic mothers (36-38⁺⁶ weeks) scheduled for caesarean delivery was conducted. They were divided into two groups at random. The first group was the early cord clamping (ECC) group (n= 31), where the umbilical cord was clamped within 15 seconds, and the second group was the delayed cord clamping (DCC) group (n= 31), where the umbilical cord was clamped after 60 seconds. All patients were evaluated for intra-operative blood loss and the occurrence of primary postpartum haemorrhage (PPH). Otherwise, all neonates were evaluated for APGAR scores, jaundice, and the need for neonatal intensive care unit (NICU) admission, as well as blood tests (haemoglobin, haematocrit. and serum bilirubin).

Result:

The maternal estimated blood loss, PPH rates, post-delivery haemoglobin, and hematocrit levels did not differ significantly between the two groups. There was also no significant difference in APGAR scores at the first minute and after 5 minutes, day 1 serum bilirubin, day 3 serum bilirubin, and NICU admission rate. However, haemoglobin and hematocrit levels in the DCC group were considerably greater than in the ECC group.

Discussion:

The maternal and newborn outcomes of DCC for 60 seconds during caesarean delivery for near-term pregnancies (36-38⁺⁶ weeks) complicated by preeclampsia were investigated in this experiment. To the best of our knowledge, this study is the first to compare DCC against ECC



in caesarean delivery in pregnancies complicated by preeclampsia.

There have traditionally been some worries regarding the potential of increased maternal blood loss due to prolonged operating time as a result of delayed wound closure in the DCC group, which may lead to uterine atony. As a result, there was considerable worry regarding the advantages of DCC during caesarean birth, as well as certain hurdles to its use. [3] This study discovered that DCC in near-term pregnancies (36-38⁺⁶ weeks) accompanied by preeclampsia did not result in higher maternal blood loss as compared to ECC.

The objective method of evaluating blood loss through the preoperative vs postoperative decrease in haemoglobin and hematocrit levels was a particular strength in this study. A research that used objective evaluation methods, such as postoperative haemoglobin levels, found no significant difference in maternal blood loss. They also discovered no statistically significant increase in uterotonic treatment or blood transfusion rates with caesarean birth. [4] This study found a substantial rise in haemoglobin levels in the DCC group neonates at 4 and 24 hours of life, with no significant increase in jaundice. Previous research thought that the downside of ECC is that the benefits of DCC are lost. According to one study, the DCC approach in planned caesarean deliveries can result in a significant rise in infant haemoglobin levels from 24 to 72 hours of life. [4]

In addition to the better haematological state of newborns with DCC, no difference in neonatal jaundice and phototherapy needs was identified in recent trials comparing ECC with DCC. [5]

Conclusion:

There was no significant difference in maternal blood loss between the ECC and DCC groups among near-term (36-38⁺⁶ weeks) singleton expectant preeclamptic women planned for caesarean birth. However, delayed umbilical cord clamping resulted in significantly increased newborn haemoglobin and haematocrit throughout the first and second days following delivery.

Maternal outcomes in Caesarean section			
	ECC (n=31)	DCC (n=31)	p value
Number of soaked towels	5.32 ± 1.87	5.13 ± 2.33	0.720
Blood loss in suction apparatus (ml)	566.13 ± 126.09	606.45 ± 105.47	0.177
Estimated blood loss (ml)	756.29 ± 194.72	784.97 ± 322.39	0.673
Postpartum Hb (g/dl)	10.59 ± 1.10	10.18 ± 1.12	0.154
Postpartum HCT (%)	30.72 ± 2.90	29.20 ± 4.05	0.092
Incidence of postpartum haemorrhage	2 (6.45%)	3 (9.68%)	0.100

Neonatal clinical characteristics			
	ECC (n=31)	DCC (n=31)	p value
Gestational age			
- 36 weeks	7 (22.58%)	12 (38.71%)	0.387
- 37 weeks	19 (61.29%)	15 (48.39%)	
- 38 weeks	5 (16.13%)	4 (12.90%)	
Neonatal weight (gm)	2922.26 ± 118.74	2882.58 ± 232.25	0.401
APGAR at the first minute.	5.45 ± 0.85	5.45 ± 0.57	1.000
APGAR after 5 minutes.	8.55 ± 0.51	8.32 ± 0.60	0.114
Neonatal day 1 Hb (g/dl)	17.01 ± 1.70	18.89 ± 1.55	<0.001
Neonatal day 2 Hb (g/dl)	16.29 ± 1.41	17.90 ± 1.08	<0.001
Neonatal day 1 HCT (%)	50.44 ± 4.34	56.05 ± 3.91	<0.001
Neonatal day 2 HCT (%)	47.85 ± 3.77	53.09 ± 3.64	<0.001
Neonatal day 1 bilirubin (mg/dl)	2.37 ± 0.68	2.26 ± 0.73	0.561
Neonatal day 3 bilirubin (mg/dl)	9.91 ± 1.89	10.14 ± 2.48	0.676
NICU admission (%)	2 (6.45%)	4 (12.90%)	0.671

In terms of maternal blood loss, there is no discernible difference between DCC and ECC. DCC, on the other hand, has much greater neonatal haemoglobin.

Reference:

1. Rashwan A, Eldaly A, El-Harty A, Elsherbini M, Abdel-Rasheed M, Eid MM. Delayed versus early umbilical cord clamping for near-term infants born to preeclamptic mothers; a randomized controlled trial. BMC Pregnancy and Childbirth. 2022 Dec;22(1):1-7.



2. Rottenstreich M, Sela HY, Shen O, Michaelson-Cohen R, Samueloff A, Reichman O. Prolonged operative time of repeat cesarean is a risk marker for post-operative maternal complications. BMC pregnancy and childbirth. 2018 Dec;18(1):1-6.
3. Anton O, Jordan H, Rabe H. Strategies for implementing placental transfusion at birth: a systematic review. Birth. 2019 Sep;46(3):411-27.
4. Purisch SE, Ananth CV, Arditì B, Mauney L, Ajemian B, Heiderich A, Leone T, Gyamfi-Bannerman C. Effect of delayed vs immediate umbilical cord clamping on maternal blood loss in term cesarean delivery: a randomized clinical trial. Jama. 2019 Nov 19;322(19):1869-76.
5. Shao H, Gao S, Lu Q, Zhao X, Hua Y, Wang X. Effects of delayed cord clamping on neonatal jaundice, phototherapy and early hematological status in term cesarean section. Italian Journal of Pediatrics. 2021 Dec;47(1):1-7.

2. Urinary Incontinence After Cesarean Section Due to Iatrogenic Bladder Injury A Ten-Year Retrospective Analysis and Literature Review

Introduction:

The most common obstetric surgical technique and the most common abdominal surgery performed globally is Caesarean delivery (CD). ^[1] A large number of studies have been conducted to enhance clinical outcomes by focusing on short-term problems and the advantages of Caesarean section. ^[2] Emergency and/or recurrent CD, adhesions (particularly between the bladder and the lower uterine section), uterine rupture, and attempted vaginal delivery following CD are all risk factors. ^[3] Nonetheless, there is a paucity of data on the long-term repercussions of bladder injuries during CD and their effects on lower urinary tract dysfunctions (LUTDs). Urinary incontinence is the most common urinary dysfunction reported by women and is defined as any involuntary loss of urine. The study looked at the long-term prevalence of urine incontinence following iatrogenic bladder damage during CD in a singleton first-level patient. Furthermore, we presented the findings of a systematic analysis of the literature on urinary symptoms, namely urine incontinence, related with bladder damage following Caesarean delivery.

Methods:

All patients with bladder injuries who underwent caesarean birth in our first-level obstetrics department were included and contacted for a phone interview. A rigorous literature review was also carried out. Data selection and extraction were carried out in line with the PICOS (Population, Intervention, Comparison, Outcome, and Study design) study selection criteria, utilising a piloted form particularly built for obtaining information on the study and its features.

Results:

The analysis detected 16 individuals with iatrogenic bladder damage among 3725 caesarean deliveries in our department's obstetrics database, with an overall frequency of 0.43%. Ten out of sixteen patients (63%) attended the interview, and four (40%) had urine incontinence. The criteria for the systematic review were satisfied by three research. The rate of bladder injury ranged from 0.05 to 0.47%. The prevalence of urine incontinence ranged from 4.9 to 37.5%, independent of kind, with no information on treatment requirements.

Discussion:

Any complaint of involuntary urine loss is classified as urinary incontinence. This disorder has

a significant impact on an individual's quality of life. According to the research, the prevalence of any type of urine incontinence in women is between 25 and 45%. Stress incontinence and urge incontinence frequently coexist as a group of symptoms known as mixed urine incontinence. Aside from age and inherited predisposition, several risk factors connected with the development of urine incontinence are related to the patient's obstetric history, particularly parity and method of birth.

Results of the systematic review.											
First author	Year	Country	Study design	Patients N	Median age	Incidence of bladder injuries (%)	Primary CD n (%)	Repeated CD n (%)	Elective CD n (%)	Emergent CD n (%)	UI incidence n (%)
S. Naicker	2020	South Africa	CS	17	28.9	0.05	2 (11.8)	15 (88.2)	4 (23.4)	13 (76.5)	2 (11.8)
L. Salaman	2017	Israel	CS	81	35.5	0.47	8 (9.9)	73 (90.1)	49 (60.5)	32 (39.5)	4 (4.9)
TOTAL				98	34.36		10 (10.2)	88 (89.8)	53 (54.1)	45 (45.9)	6 (6.1)
CS, case series											

Iatrogenic bladder damage is a rather uncommon intraoperative complication that occurs following Caesarean delivery. The significance of iatrogenic bladder damage in the development of female urine incontinence is a topic that has received little attention, owing to the exceedingly low incidence and the necessity for a large population database. The study highlighted the epidemiological characteristics of this clinical illness using a single centre retrospective analysis. According to the literature, the incidence of bladder injuries related with CD was 0.43% in this cohort (0.05-0.47%).^[4]

The rate increased to 17% in Crocetto's study, but in this series, all patients were hospitalised for Caesarean hysterectomy for placenta accreta, which is a prominent cause of maternal morbidity and death. Furthermore, in severe situations, the placenta penetrates the uterine serosa or even invades the bladder wall, increasing the risk of injury or necessitating the inescapable necessity to open the bladder to remove the placenta and uterus.^[5]

Urinary incontinence following bladder damage is recorded in 40% of patients in this retrospective study, which is much higher than the other studies in the literature. The majority of patients (75%) experienced stress urine incontinence, with 15% experiencing "wet overactive bladder" symptoms.

Conclusion:

Furthermore, urine incontinence may be caused by iatrogenic bladder damage after caesarean section. As a result, pelvic floor muscle training programmes should be prioritised for these individuals in terms of prevention.

In this population, the rate of bladder damage linked with caesarean birth was comparable to that described in the literature. Even though just three publications were reviewed, the incidence of urine incontinence resulted in a broad range of authors. In conclusion, urine incontinence appears to be linked to iatrogenic bladder damage after caesarean delivery, although further research is needed to fully identify the causation relationship.

Reference:

1. Marta Cicuti, Stefano Manodoro, Sara Bosio, Anna Maria Marconi. Urinary Incontinence after Iatrogenic Bladder Injury during Cesarean Section. A Ten-Year Single-Center Retrospective Analysis and Review of

- the Literature. *Clin. Exp. Obstet. Gynecol.* **2022**, 49(10), 224.
2. Chill HH, Karavani G, Reuveni-Salzman A, Lipschuetz M, Shimonovitz T, Cohen N, Shveiky D. Urinary bladder injury during cesarean delivery: risk factors and the role of retrograde bladder filling. *International Urogynecology Journal*. 2021 Jul;32(7):1801-6.
 3. Salman L, Aharony S, Shmueli A, Wiznitzer A, Chen R, Gabbay-Benziv R. Urinary bladder injury during cesarean delivery: maternal outcome from a contemporary large case series. *European Journal of Obstetrics & Gynecology and Reproductive Biology*. 2017 Jun 1;213:26-30.
 4. Naicker S, Naidoo TD, Moodley J. Obstetric-associated lower urinary tract injuries: A case series from a tertiary centre in a low-resource setting. *Case Reports in Women's Health*. 2020 Jul 1;27:e00218.
 5. Crocetto F, Saccone G, Raffone A, Travaglino A, Gragnano E, Bada M, Barone B, Creta M, Zullo F, Imbimbo C. Urinary incontinence after planned cesarean hysterectomy for placenta accreta. *Urologia Internationalis*. 2021;105(11-12):1099-103.

3. A systematic review and meta-analysis of randomised controlled trials on the effect of active and passive warming on avoiding hypothermia and shivering during caesarean birth.

Introduction:

Hypothermia and shivering are found in 30 to 60% of parturients after caesarean delivery under neuraxial anesthesia. The drop in body temperature is connected with simultaneous spinal and epidural anesthesia due to vasodilation of the lower level neuraxial sensory blockage. Maternal hypothermia leads to the progression of maternal shivering and hypothermia in newborn offspring. Shivering is another typical consequence of caesarean section (CS). Furthermore, perioperative hypothermia and shivering result in complications such as surgical site infection, coagulopathy, and increased blood loss.^[1] In women with CS, both active warming (AW) and passive warming (PW) are frequently utilised to avoid perioperative hypothermia and shivering. In CS women, AW therapies such as forced-air warming, warmed IV fluid, and conduction mattress warming are used. PW, like cotton blankets or reflective blankets, enhances heat retention. In patients undergoing surgery under general or regional anaesthesia, AW is related with a lower incidence of perioperative hypothermia and shivering. The effects of various warming procedures have been observed to be variable in CS groups under neuraxial anaesthesia.^[2] In order to explore the effects of AW and PW on avoiding hypothermia and shivering in pregnant women after caesarean birth, a systematic review and meta-analysis of randomised controlled trials (RCTs) were done.

Methods:

The purpose of this study was to look at the impact of AW and PW on mother and baby perioperative outcomes following caesarean birth. Various sources were utilised to look for randomised controlled trials in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses. The systematic review papers were evaluated using the Cochrane risk of bias assessment technique. Continuous data were analysed using weighted mean differences (WMDs) with 95% CIs, while categorical data were examined using the random-effects model.

Results:

For the final meta-analysis, 1241 individuals from twelve RCTs were chosen. The presence of AW was linked to a decreased incidence of maternal hypothermia and shivering. High maternal temperature was linked to AW. In terms of hypothermia, temperature, and umbilical vein PH in infants, there was no significant difference between AW and PW.

Discussion:

It was discovered in this study that AW reduced the incidence of maternal hypothermia and shivering when compared to PW. In contrast, there was no difference between AW and PW in newborn temperature or umbilical vein PH. Furthermore, anesthetic, temperature location, and research quality may all have an impact on AW and PW treatment results. As a result, AW happens prior to PW in order to prevent perioperative hypothermia during CS.

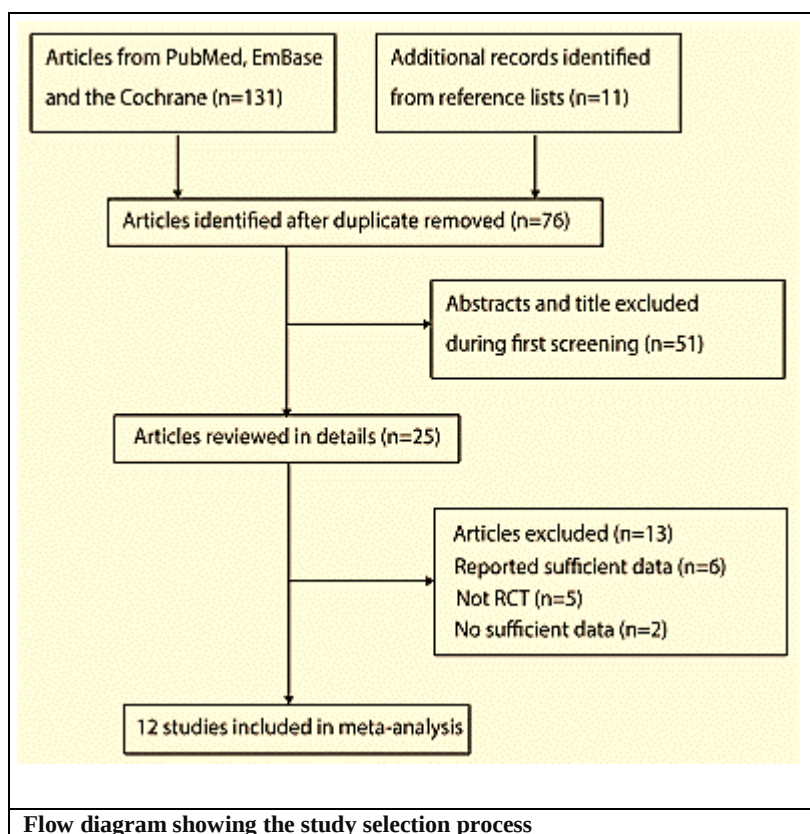
The outcomes of the analysis revealed that the majority of the included studies found that AW was related with high maternal temperature. However, three of the included trials found no statistically significant differences between AW and PW.

A plausible hypothesis is that there is a transfer of intravascular volume from the core to the peripheral compartment below the level of sympathectomy, which leads to increased radiant heat loss.^[3]

This study found no significant changes in hypothermia, temperature, or umbilical vein pH between AW and PW in neonates. The limited sample size of the included trials might explain this finding. Furthermore, the period spent handling newborns after birth and then skin-to-skin care may influence the temperature of newborn infants. Prematurity, low birth weight, a poor Apgar score, and prenatal steroid therapy are all factors that contribute to the occurrence of neonatal hypothermia following delivery.^[4]

Temperature location had an influence on maternal and newborn temperature, anaesthesia type had an effect on neonatal temperature and umbilical vein pH, and research quality had an effect on neonatal temperature, according to subgroup analyses. There are numerous explanations for these findings: (1) Different temperature locations accounted for the differences in maternal and neonatal temperature between AW and PW. (2) Anesthesia type resulted in uncontrolled biases in pregnant women's conditional variation. (3) Individual trial research quality varies.

Conclusion:



Finally, the results of this investigation showed that AW outperformed PW in reducing maternal hypothermia and shivering. More large-scale randomised controlled trials should be done to explore the effect of AW and PW on newborn outcomes following caesarean birth. Because of the RCTs, low risk of bias, consistency, and accuracy, the overall quality of the included research is good. The study determined that the overall quality of the evidence from the study was GRADE I.

These data showed that AW can prevent maternal hypothermia and shivering more effectively than PW. In infants, however, no significant effect was detected. Because of the RCTs, low risk of bias, consistency, and accuracy, the overall quality of the included research is good. The study determined that the overall quality of the survey evidence was GRADE I.

Reference:

1. Zhuo Q, Xu J-B, Zhang J, Ji B. Effect of active and passive warming on preventing hypothermia and shivering during cesarean delivery: a systematic review and meta-analysis of randomized controlled trials. BMC Pregnancy Childbirth [Internet]. 2022;22(1).
2. Carpenter L, Baysinger CL. Maintaining Perioperative Normothermia in the Patient Undergoing Cesarean Delivery. Obstetric Anesthesia Digest. 2013 Dec 1;33(4):185-6.
3. Munday J, Osborne S, Yates P, Sturges D, Jones L, Gosden E. Preoperative warming versus no preoperative warming for maintenance of normothermia in women receiving intrathecal morphine for cesarean delivery: a single-blinded, randomized controlled trial. Anesthesia & Analgesia. 2018 Jan 1;126(1):183-9.
4. Miller SS, Lee HC, Gould JB. Hypothermia in very low birth weight infants: distribution, risk factors and outcomes. Journal of Perinatology. 2011 Apr;31(1):S49-56.

4. A case of secondary cystic adenomyosis in a young woman

Introduction:

Adenomyosis is a frequent benign gynecologic disease that is defined by endometrial matrix or gland expansion into the myometrium. The condition can be focal or widespread, and it manifests as tiny cystic cavities, generally 5 mm in diameter, that contain a little quantity of ancient blood. Cystic adenomyosis occurs when the fused or single lumen of the cystic cavity has a diameter larger than or equal to 1 cm. CA is a kind of localised adenomyosis that is also known as cystic adenomyoma or adenomyotic cyst. Its most prevalent clinical manifestation is dysmenorrhea, which is more common in younger women (under the age of 30) with no history of uterine surgery. ^[1] Different surgical procedures might be used depending on the location and extent of the lesion. Surgical intervention might be conservative or complete hysterectomy depending on whether the uterus is retained. ^[2] CA is more frequent in women of reproductive age, thus preserving fertility is critical. This is a kind of adenomyosis, and following surgery, there may be persistent ectopic endometrium. As a result, it is critical to take necessary precautions to prevent recurrence.

Case Report:

The report describes secondary CA in a young lady for the first time, with increased menstrual volume as the predominant clinical sign. A 23-year-old lady with a history of two uterus operations was admitted to the hospital with increased menstrual flow volume but no dysmenorrhea or any pain. A uterine myoma was misdiagnosed with ultrasound. She underwent laparoscopic surgery for adenomyoma removal and the installation of a levonorgestrel-releasing intrauterine device (LNG-IUS). The lesions were entirely removed

during surgery using ultrasound guidance, and a specimen bag was employed to eliminate remaining lesions in the abdominal cavity. She was given a gonadotropin-releasing hormone analogue as a postoperative treatment.



Ultrasound tomographs of the patient. (A) At the age of 21, the patient's first ultrasound examination showed a mass with mixed echogenicity in the uterine cavity of $2.0 \times 1.8 \times 1.3$ cm in size, with 3–4 echogenicity points and no obvious blood flow signal. (B) At the age of 21, her ultrasonography 2 months later showed a $4.3 \times 3.4 \times 2.6$ cm heterogeneous echogenic mass on the left wall of the uterine cavity and myometrium (close to the serous layer), with multiple nonechogenic masses distributed within the cavity. The largest nonechogenic mass was 3.4×1.2 cm, and a few blood signals were observed inside the mass. (C) The ultrasound demonstrated two hypoechoic nodules in the posterior wall of the uterus, 4.3×3.3 cm and 4.1×3.0 cm in size; the two nodules were fused and protruded into the uterine cavity

CA was verified by surgical findings and postoperative histology. She has been observed for two years and there has been no recurrence.

Discussion:

CA is classified into two types: juvenile CA (JCA) and adult CA. JCA is a condition that causes severe dysmenorrhea in women under the age of 30 who have never had uterine surgery, and imaging findings indicate cystic lesions with a diameter of more than 1 cm that are independent of the uterine cavity and covered by the muscle layer.

The report describes a rare instance of CA in a patient under the age of 30 who had a history of uterine surgery and was unable to be identified with JCA or adult CA. She should be evaluated for secondary CA caused by surgery. Secondary adenomyoma in this patient may have been caused by JZ damage during myomectomy, resulting in endometrial invasion of the myometrium. The fact that patients recurred just 6 months following surgery lends credence to this notion. CA most likely developed as a result of the second operation. The uterine adenomyoma protruded from the uterine cavity and expanded to the muscularis vessels, increasing the risk of intraoperative JZ damage. Although intraoperative tight electrocoagulation and postoperative hysteroscopy indicated no leftover tissue after secondary surgery, intraoperative ultrasound images did. The cystic lesion was still in the same place, and signs of increased menstrual volume occurred. This indicates that surgical remnant tissue or JZ injury is a potential.

The most often used imaging approach in the diagnosis of adenomyosis is ultrasound, which may distinguish between adenomyomas and myomas. The accuracy of ultrasonography is determined by the operator's experience and expertise, as well as the quality of the equipment.

[3]

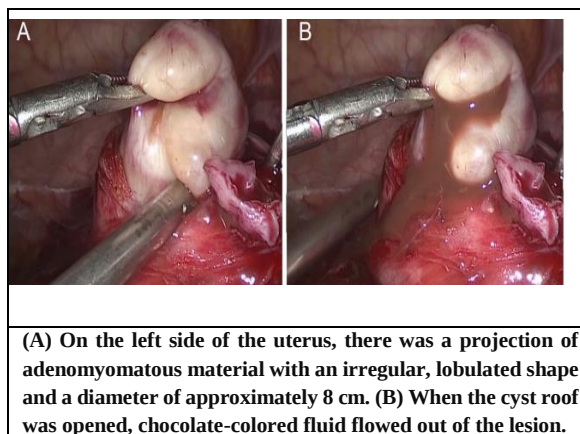
The contents of the CA, endometrial and muscle tissue, and the connection region may all be properly assessed by MRI. On T1-weighted imaging, the fluid in the cysts has a high signal

intensity, whereas the surrounding muscle layer has a low signal intensity on T2-weighted images. [4] The ultrasound misdiagnosed this patient with uterine fibroids, and no additional MRI study was undertaken, nor was the mass collected for pathological investigation during hysteroscopy. MRI is critical for adenomyosis patients, especially in identifying recurring myoma lesions in young children. In addition, hysteroscopy is critical for the detection and treatment of intrauterine masses.

In this case, the lesion was entirely excised using ultrasonic monitoring, and the mass was placed in a sample bag and gradually evacuated from the puncture site, minimising remaining tissue in the abdominal cavity. Postoperative therapy with GnRHa and an LNG-IUS was utilised to minimise symptoms and avoid recurrence. For the first time, we describe the effective treatment of a secondary CA patient under the age of 30 with surgery and medication. This is also the case with the longest follow-up to yet. She was observed for about two years and there was no recurrence or obvious pain. Her pregnancy results require additional investigation.

Conclusion:

Secondary CA can occur in younger individuals with a history of uterine surgery, and the clinical symptoms may not include the characteristic excruciating dysmenorrhea. MRI evaluation is critical for individuals with ambiguous ultrasonography diagnosis. Hysteroscopy can collect a sample for pathologic diagnosis or therapy of intrauterine lesions in patients. Complete surgical excision and residual tissue reduction, along with postoperative therapy with GnRH-a and an LNG-IUS, can successfully prevent recurrence and enhance prognosis. CA's prognosis and pregnancy outcomes are yet unknown, and further research is needed.



In young individuals with a history of uterine surgery, a CA diagnosis should be investigated for clinical indications of increased monthly volume and dysmenorrhea. Magnetic resonance imaging (MRI) is crucial in the diagnosis of CA. Recurrence can be effectively avoided with conservative surgery along with GnRH-a and LNG-IUS treatment.

References:

1. Hong-Xuan Li, Ke-Juan Song, Nan-Nan Xia, Xiao-Yu Ji, Lei Sui, Qin Yao. Secondary cystic adenomyosis in a young woman: a case report. *Clin. Exp. Obstet. Gynecol.* 2022, 49(10), 223.
2. Fan YY, Liu YN, Li J, Fu Y. Intrauterine cystic adenomyosis: report of two cases. *World Journal of Clinical Cases.* 2019 Mar 6;7(5):676.
3. Sam M, Raubenheimer M, Manolea F, Aguilar H, Mathew RP, Patel VH, Low G. Accuracy of findings in the diagnosis of uterine adenomyosis on ultrasound. *Abdominal Radiology.* 2020 Mar;45(3):842-50.
4. Chua HA, Goh SC, Upamali V, Seet MJ, Wong PA, Phoon WJ. Subserosal adenomyotic cysts and



peritoneal inclusion cysts—unusual differential diagnoses of multicystic pelvic masses: a review of two cases. Case Reports in Women's Health. 2020 Jul 1;27:e00193.



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