Retained Products of Conception Primary Care Pathway

Quick links: Pathway primer | Expanded details | Provider resources | Patient resources

1. History

Gather recent history of pregnancy details, including:

- Spontaneous abortion (miscarriage)
- Pregnancy termination
- Vaginal or cesarean delivery

More details

2. Assessment

Main symptoms:

- Abnormal vaginal bleeding
- Pelvic pain
- Persistent pregnancy symptoms
- Passage of tissue
- Infectious symptoms (fever, chills, foul-smelling vaginal discharge, general malaise)

Consider

Alarm features/red flags: Red flags

- Heavy vaginal bleeding – soaking through > 1 pad per hour for two or more hours
- Severe pain
- Fever, tachycardia, hypotension, presyncope or syncope
- Foul/purulent vaginal discharge
- Signs of sepsis

If red flags present: Call 911 for immediate evaluation or refer patient to ED

Physical exam:

- General appearance (do they look ill?)
- Vital signs
- Abdominal exam – assess for uterine tenderness
- Speculum exam – check for vaginal bleeding, tissue at cervical os

Consider

If infectious signs/symptoms are present consider diagnosis of endometritis

ABO/Rh status: If not done → Order → If Rh negative → *Prescribe WinRho® if indicated over 12 weeks gestation

*RhIG not recommended for Rh(D)-negative patients under 12 weeks gestation

Stable patient with no alarm features

3. Duration of bleed

- Persistent bleeding > 6 weeks
- < 6 weeks after pregnancy → Expectant management, provide reassurance

4. Investigations

Transvaginal ultrasound

Suspicious findings

Findings suspicious for RPOC (one or more of the following): More details

- Presence of echogenic intrauterine mass is most sensitive and specific finding
- Thickened endometrium (≥ 15mm)
- Increased vascularity with use of color Doppler

Specialist Link tele-advice or urgent referral to Gynecology

No findings to suggest retained products of conception (thin lining, no mass, no vascularity)

Order → Urine or Serum β-hCG → Review differential diagnosis → Specialist Link tele-advice

Consider → CBC/Ferritin

Consider → Elevated WBC and CRP, infectious signs/symptoms

Consider → Treating endometritis

More details

PATHWAY PRIMER

Retained products of conception (RPOC) refers to placental or pregnancy tissue that persists in the uterus following a pregnancy event, including spontaneous abortion (miscarriage), pregnancy termination, or vaginal or caesarean delivery. Several weeks of light bleeding can be a normal part of the recovery process. Most cases resolve spontaneously without medical or surgical intervention.[1-3]

Diagnosing RPOC can be challenging as symptoms are non-specific. Associated symptoms include bleeding, pelvic pain or cramping, persistent pregnancy symptoms or positive pregnancy test, infectious symptoms, and, less commonly, amenorrhea. In medically stable patients, routine ultrasonography is generally unnecessary unless bleeding persists beyond six weeks. Because RPOC and blood clot can have a similar appearance on ultrasound, there can be false positive findings which may lead to unnecessary interventions with potential for complications. Diagnostic accuracy is improved when clinical assessment and imaging are used together.[4,5] Clinicians should try to distinguish new-onset bleeding from persistent bleeding during the follow-up period, as new bleeding may be related to the return of menses or a new pregnancy.

The aim of this pathway is to reduce low-value testing in the immediate follow-up period after a pregnancy event. For clinically well patients with ongoing bleeding in the first six weeks, expectant management should be encouraged, as most cases of RPOC will resolve spontaneously. Current evidence does not support that medical treatment of RPOC improves outcomes compared to expectant management.[3] Avoiding unnecessary surgical interventions avoids risk of complication including hemorrhage, intrauterine adhesions, infection, and uterine perforation.

EXPANDED DETAILS

The incidence of RPOC is approximately 1-6% after a pregnancy event.

1. History

Risk factors[6-8]

- Miscarriage and abortion factors
    - Medical treatment (versus surgical) – RPOC/incomplete expulsion is more common with medical treatment for early pregnancy loss or pregnancy termination
    - Later gestational age: second trimester
- Anatomical
    - Abnormal placentation – placenta accreta spectrum, placenta previa
    - Prior cesarean section, curettage, or uterine surgery
    - Uterine anomalies
- Labor and delivery risk factors
- History of RPOC

Clinical details

- Pregnancy event
    - Type of pregnancy event and date
    - Gestational age
    - Management (medical, surgical, vaginal or cesarean delivery)
    - Previous ultrasound confirmation of intrauterine pregnancy – assess risk for ectopic pregnancy

- Bleeding
  - Persistent or new after a bleeding-free interval
  - Volume, duration, passage of tissue
- Associated symptoms
  - Pelvic pain
  - Fever, foul-smelling discharge
  - Dizziness, syncope
  - Persistent pregnancy symptoms
- Other factors
  - Sexual activity and contraception since event
  - History of molar pregnancy

2. Assessment

Physical examination

- Vital signs
  - Fever, tachycardia, hypotension – refer patient to Emergency Department for urgent consultation.
- Signs of anemia
- Abdominal examination – assess for uterine tenderness
- Speculum examination – assess volume of bleeding, tissue present at cervical os, purulent discharge
  - A vaginal swab can be used to investigate a suspected infection but will often not be specific (polymicrobial infection). Contact Specialist LINK (specialistlink.ca) for advice.

Investigations

- Urine or serum β-hCG
- CBC
- Blood type and Rh factor
  - Blood type and Rh factor should be reviewed or tested to ensure eligible patients have received Rh immune globulin (RhIG)
  - RhIG administration is no longer recommended for Rh(D)-negative patients who are under 12 weeks gestation with both spontaneous and induced abortion, or bleeding less than 12 weeks in a viable pregnancy (threatened miscarriage)
  - RhIG should be reserved for gestational ages greater than 12 weeks, when indicated
- Pelvic ultrasound if the patient has alarm features or bleeding is persistent beyond six weeks

Consider endometritis if:

- Fever, tachycardia, lower abdominal pain, uterine tenderness on examination, purulent vaginal discharge
- If presenting symptoms and physical assessment suggest an infection, see Suspected endometritis for guidance on transvaginal ultrasound investigation and empiric antibiotic treatment.

Alarm features / red flags

The presence of these alarm features warrants a referral to Emergency for immediate evaluation in hospital.

- Heavy vaginal bleeding – soaking through > 1 pad per hour for two or more hours
- Severe pain
- Fever, tachycardia, hypotension, presyncope or syncope
- Foul/purulent vaginal discharge
- Signs of sepsis

3. Duration of bleeding

Less than six weeks:

Symptomatic patients

- For patients with persistent bleeding for less than six weeks, expectant management is recommended as most cases will resolve spontaneously
- Ultrasound and laboratory testing is not required unless alarm symptoms are present or clinical concern for endometritis
- If the patient is hemodynamically or medically unstable, refer to Emergency for immediate evaluation in hospital.

More than six weeks:

- For patients with persistent bleeding beyond six weeks, investigations should be initiated to guide management
    - Transvaginal ultrasound, serum β-hCG, CBC

4. Investigations

Transvaginal ultrasonography

- Ultrasonography is the first line imaging modality to assess for RPOC
- Primary criterion – The presence of an echogenic mass or heterogenous/hyperechoic intrauterine material.[9-10]
    - This is the most sensitive and specific sonographic finding of RPOC, and a diagnosis of RPOC is uncommon in its absence
- Supportive criterion – Endometrial thickness equal to or greater than 15 mm[11-13]
    - No cutoff is universally validated for endometrial thickness to diagnose RPOC, thresholds in the literature range from 8-40 mm
    - An endometrial thickness less than 10 mm with no visible mass on ultrasound is reassuring against clinically significant RPOC, though it does not completely exclude the diagnosis
    - When the endometrial thickness is borderline (10-15 mm) without an associated mass, interpretation should be guided by the clinical context and overall clinical judgment
- Supportive criterion - Endometrial/intracavitary vascularity on color Doppler[10,13,14]
    - Vascularity can be graded as absent, moderate, or marked, increasing the likelihood of RPOC
    - Absent Doppler flow does not exclude RPOC – chronic or detached placental remnants may no longer be perfused and can lack a Doppler signal despite still being clinically significant

Other imaging modalities

- MRI and CT are reserved for specific situations such as equivocal ultrasound findings or acute hemorrhage.

Findings suspicious for RPOC

- If the results of a transvaginal ultrasound are suspicious for RPOC, use Specialist Link (specialistlink.ca) for medical or surgical management advice or refer to Early Pregnancy Assessment Clinic.

No ultrasound findings to suggest RPOC

Consider ordering

- Serum β-hCG
    - A single quantitative serum β-hCG has limited diagnostic value for RPOC, as levels remain elevated in the immediate period after pregnancy loss, termination or delivery
    - The rate of decline depends on the initial level, and complete resolution may take several weeks
- CBC/Ferritin – to assess for anemia, elevated WBC can suggest endometritis
- If endometritis suspected, see treatment listed below and consider advice via Specialist Link.
- Consider alternative diagnosis[13]
    - Intrauterine blood clots
    - Uterine arteriovenous malformations (AVM)
    - Endometrial polyp
    - Gestational trophoblastic disease

5. Treatment

Medication[3,15-17]

- Recommendation: expectant management is favored as first line in stable, asymptomatic or mildly symptomatic patients for at least six to eight weeks
- Uterotonic agents such as misoprostol (a prostaglandin E1 analogue) have been studied mainly in incomplete first-trimester miscarriage, where they have not shown a clear benefit over expectant management
- Reserve misoprostol for patient preference or logistic reasons after shared decision-making, there is no clear evidence-based advantage over expectant management
- Current evidence supports both misoprostol and expectant management as acceptable alternatives to routine surgical evacuation
- If misoprostol is chosen, administer 800 mcg vaginally with a repeat dose in 24 hours if there is no bleeding or passage of tissue
- Surgical intervention can be avoided in many patients who are managed expectantly for 8 weeks

Surgical

Urgent – via Emergency Department

- Hemodynamic instability (tachycardia, hypotension) or hemorrhage soaking >1 pad/hour
- Sepsis or severe infection with suspected retained tissue as source
- Dilated cervix with tissue visibly at the os causing ongoing hemorrhage

Non-emergent referral for surgical evaluation

- RPOC >30 mm on TVUS and/or marked vascularity on Doppler - higher complication risk with expectant or medical management and most likely to require surgical intervention
- Failed expectant or medical management – persistent bleeding after 6-8 weeks of expectant management or trial of misoprostol
- Endometritis with confirmed RPOC on TVUS – refer for surgical treatment rather than antibiotics alone
- Persistently elevated or rising serum β-hCG beyond 6 weeks – raises suspicion for persistent RPOC, retained trophoblastic tissue or gestational trophoblastic disease (assuming ectopic and new pregnancy have been ruled out)
- RPOC ≤17-20 mm with low/absent vascularity – can consider hysteroscopy for "see and treat"
- The Gutenberg classification is a four-type color Doppler ultrasound scoring system for RPOC, ranging from Type 0 (hyperechoic avascular mass) to Type 3 (highly vascularized mass with myometrial involvement) used to help stratify bleeding risk and guide management[18]
- Patient preference for surgical removal after a period of watchful waiting

Endometritis

- Medically stable patients with suspected endometritis should have a transvaginal ultrasound to identify any RPOC that needs to be removed to treat the infection
    - There are no ultrasound findings diagnostic of endometritis
    - If the ultrasound suggests RPOC, refer to Gynecology for surgical management via RAAPID
    - If the ultrasound is negative for RPOC, consider empiric antibiotic treatment for endometritis, can contact Gynecology via Specialist Link for advice
- For mild, clinically stable acute endometritis, oral amoxicillin-clavulanate is the best-supported single-agent oral option[19,20]

Follow-up

- If treatment has been initiated for RPOC and the patient becomes asymptomatic then no further follow-up with imaging or lab testing is required
- Patients with ongoing bleeding symptoms after medical management should have repeat imaging, a serum β-hCG, and be referred to gynecology for further assessment and management. Consider possibilities:
    - New intrauterine pregnancy
    - Ectopic pregnancy
    - Uterine arteriovascular malformation (AVM)
    - Gestational trophoblastic disease
    - Abnormal placentation
    - Return of menses if bleeding is new onset (rather than persistent)

BACKGROUND

About this pathway

- The pathway is intended to provide evidence-based guidance to support primary care providers in caring for patients with common gynecological conditions within the medical home.

Authors and conflict of interest declaration

- This pathway was reviewed and revised under the auspices of the Calgary Zone Department of Gynecology in 2026, by a multi-disciplinary team led by family physicians and gynecologists. Names of participating reviewers and their conflict-of-interest declarations are available on request.

Pathway review process, timelines

- Primary care pathways undergo scheduled review every three years, or earlier, if there is a clinically significant change in knowledge or practice. The next scheduled review is September 2029. However, we welcome feedback at any time. Please e-mail comments to specialistlink@calgaryareapcns.ca.

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DISCLAIMER

This pathway represents evidence-based best practice but does not override the individual responsibility of health care professionals to make decisions appropriate to their patients using their own clinical judgment given their patients' specific clinical conditions, in consultation with patients/alternate decision makers. The pathway is not a substitute for clinical judgment or advice of a qualified health care professional. It is expected that all users will seek advice of other appropriately qualified and regulated health care providers with any issues transcending their specific knowledge, scope of regulated practice or professional competence.

PROVIDER RESOURCES

Advice options, referral guidelines

- Refer patient to Emergency Department or call 911 if any red flags are present upon examination.
- Non-urgent advice is available via Specialist Link to support family physicians who have questions about:
  - Interpretation of ultrasound results
  - Medical management of RPOC for bleeding greater than six weeks
  - Persistently elevated serum β-hCG after six weeks

Contact information

- For RAAPID South, call 1-800-661-1700 or 403-944-4486. Visit https://www.albertahealthservices.ca/info/Page13345.aspx for more details.
- Family physicians can request Specialist Link non-urgent advice online at specialistlink.ca or by calling 403-910-2551. The service is available from 8 a.m. to 5 p.m. (with some exceptions), Monday to Friday (excluding statutory holidays). Calls are returned within two hours.
- Non-urgent electronic advice is also available across the province via Alberta Netcare eReferral eConsult (responses are received within five calendar days). View the eReferral Learning Centre for more information.

Resources, references

Title	Link
General Information on Retained Products of Conception (UpToDate®)	https://www.uptodate.com/contents/retained-products-of-conception?search=retained%20products%20of%20conception&source=search_result&selectedTitle=1~33&usage_type=default&display_rank=1
Pregnancy loss grief & support	**Foothills Medical Centre:** https://www.albertahealthservices.ca/fmc/Page16422.aspx **Pregnancy & Infant Loss Support Centre:** https://pilsc.org/
Pregnancy loss before 12 weeks	https://albertareferraldirectory.ca/PublicSearchController?direct=displayViewServiceAtFacility&serviceAtFacilityId=1133151
WinRho®/RhoGam®	Transfusion Medicine requisition: https://www.albertahealthservices.ca/frm-21448.pdf WinRho® monograph: https://www.albertahealthservices.ca/assets/wf/lab/if-lab-clin-tm-winrho.pdf

PATIENT RESOURCES

Title	Link
My Health.Alberta.ca: Information on pregnancy loss (miscarriage) before 20 weeks	https://myhealth.alberta.ca/health/Pages/conditions.aspx?hwid=hw44090#hw44155
“Am I bleeding too much?”: A visual reference of abnormal vaginal bleeding, please note that this is an acute care resource. For community patients, please contact your primary care provider if experiencing abnormal vaginal bleeding.	https://myhealth.alberta.ca/alberta/AlbertaDocuments/tms-wih-cal-pad-pictograph.pdf

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