

Ovarian Torsion

A plain-English guide for you and your family

WHAT IS HAPPENING

Your ovary normally hangs quietly in your pelvis, held in place by a ligament (like a rope) that also carries the ovarian artery and vein—the blood vessels that feed it oxygen and drain waste. It doesn't move much. But if the ovary grows a cyst (a fluid-filled balloon inside it) or if you're pregnant and hormones make it swell, it gets heavier and can flip or twist on that rope. When it twists, the vein (the drain pipe) squeezes shut first, so blood flows in but can't get out. The ovary swells like a water balloon. Then the artery (the supply pipe) kinks, and oxygen stops reaching the tissue. Without oxygen, the ovary starts to die. You feel sudden, sharp pain on one side of your belly—worse than almost anything you've felt—and you may throw up. The pain might ease for a moment if the ovary untwists a little, then roar back when it twists again. If hours pass, the dying tissue gets infected, fever starts, and your blood count rises as your body tries to fight. This is a race against the clock: if a surgeon untwists the ovary in time, blood flows again and the ovary lives. If too many hours pass, the tissue dies for good, and you may lose the ovary or face infection spreading through your belly. Every symptom—the pain, the vomiting, even your heart beating faster—is your body sounding the alarm that something vital is being strangled.

What you might feel

- Sudden, sharp pain on one side of the lower belly
- Pain that comes and goes in waves, then becomes constant
- A lump or mass you can feel in the lower belly or pelvis
- Severe nausea and vomiting
- Fever (in some cases)
- Pain that gets worse with movement or activity
- History of a known ovarian cyst or mass
- Torsion during pregnancy or after fertility treatment

Call the doctor right away if...

- Sudden, severe one-sided lower belly pain in a girl or young woman — do not assume it is a kidney stone, urinary infection, or pelvic infection without imaging the ovaries.
- Pain plus vomiting that does not stop — the ovary may be dying and needs surgery within hours.
- Fever with one-sided belly pain and a known ovarian cyst or mass — the tissue may already be dead (necrotic) and at risk for infection or rupture.

What the care team will do

- Establish large-bore IV access and start normal saline fluid bolus at 500 to 1000 milliliters over one hour
- Give IV opioid pain medicine like morphine 4 to 10 milligrams or hydromorphone 0.5 to 2 milligrams and measure pain level every 15 minutes
- Administer anti-nausea medicine like ondansetron 4 milligrams IV or metoclopramide 10 milligrams IV
- Keep the patient NPO (nothing by mouth including water) and notify the gynecology surgeon immediately
- Monitor vital signs every 15 minutes watching for falling blood pressure below 90 systolic or rising heart rate above 110
- Position the patient on her side or with the head of bed elevated if vomiting continues
- Document the exact time pain started and whether a pelvic mass can be felt during abdominal exam
- Prepare for emergency ultrasound and have informed consent signed for possible surgery including ovary removal

Medicines you may be given — and why

Intravenous normal saline (IV fluids)

Keeps blood volume steady and blood pressure normal while the body is under stress from pain and nausea. It replaces fluid lost from vomiting and keeps the kidneys flushed so they can clear waste.

Morphine or fentanyl (opioid analgesics)

Blocks pain signals in the brain and spinal cord by attaching to opioid receptors (special docking spots that turn down the volume on pain). This does not fix the twisted ovary, but it quiets the alarm bells so the patient can tolerate the wait until surgery.

Ondansetron (Zofran)

Blocks serotonin receptors in the gut and in the brainstem's vomiting center. When the ovary is twisted, pain signals and stress hormones trigger the release of serotonin in the gut, which activates the vomiting reflex. Ondansetron sits on the serotonin docking spots (5-HT₃ receptors) so serotonin cannot land and flip the nausea switch.

Ketorolac (Toradol)

Blocks the enzyme cyclooxygenase (COX), which cells use to make prostaglandins (chemicals that trigger pain, swelling, and fever). When the ovary is twisted, damaged cells release prostaglandins that amplify pain signals. Ketorolac stops prostaglandin production, so pain signals are quieter and inflammation is lower.

Where this information comes from

- ACOG Practice Bulletin No. 194: Ovarian Torsion, 2018 (reaffirmed 2023)
- American College of Emergency Physicians (ACEP) Clinical Policy on Acute Pelvic Pain
- Cochrane Database of Systematic Reviews
- UpToDate Clinical Guidelines (Ovarian Torsion)

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