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Trace the Flow of Blood to the Female Reproductive Tract with a 3D Model

Learning Outcomes:

1. Identify each bolded term, including organs, mesenteries, and vessels.
2. Describe the flow of blood from the heart to the ovaries and uterus and back to the heart, including the collateral circulation.
3. Discuss the consequences of failing to clamp off or close off (ligate) each component of this collateral circulation when surgically removing the ovaries and uterus (ovariohysterectomy).

Instructions: Read through these instructions carefully. Make sense of each step before proceeding with the action.

PART 1 - Caudal Abdominal Organ & Vessel Image:

1. Familiarize yourself with the Caudal Abdominal Organ & Vessel Image. Determine caudal and cranial, left and right, and dorsal and ventral.

2. Identify each organ/structure on the image from the list of bolded terms below. Identify the location of each mesentery.
   - ☐ Adrenal glands
   - ☐ Kidneys
   - ☐ Ureters
   - ☐ Urinary bladder
   - ☐ Descending colon (caudal portion)
   - ☐ Suspensory ligaments of the ovary
   - ☐ Proper ligaments of the ovary
   - ☐ Round ligaments of the uterus
   - ☐ Vaginal rings
   - ☐ Broad ligament
     - ☐ Mesovarium
     - ☐ Mesometrium
   - ☐ Ovaries
   - ☐ Uterine horns
   - ☐ Uterine body
   - ☐ Cervix

3. Identify each vessel on the image from the list of bolded terms below.
   - ☐ Abdominal aorta
   - ☐ Caudal vena cava
   - ☐ Renal arteries
   - ☐ Renal veins
   - ☐ Ovarian arteries
   - ☐ Ovarian veins
   - ☐ Caudal mesenteric artery

4. Identify each vessel on the image from the list of bolded terms below.
   - ☐ External iliac arteries
   - ☐ Internal iliac arteries
   - ☐ Caudal gluteal arteries
   - ☐ Internal pudendal arteries
   - ☐ Vaginal arteries
   - ☐ Uterine arteries

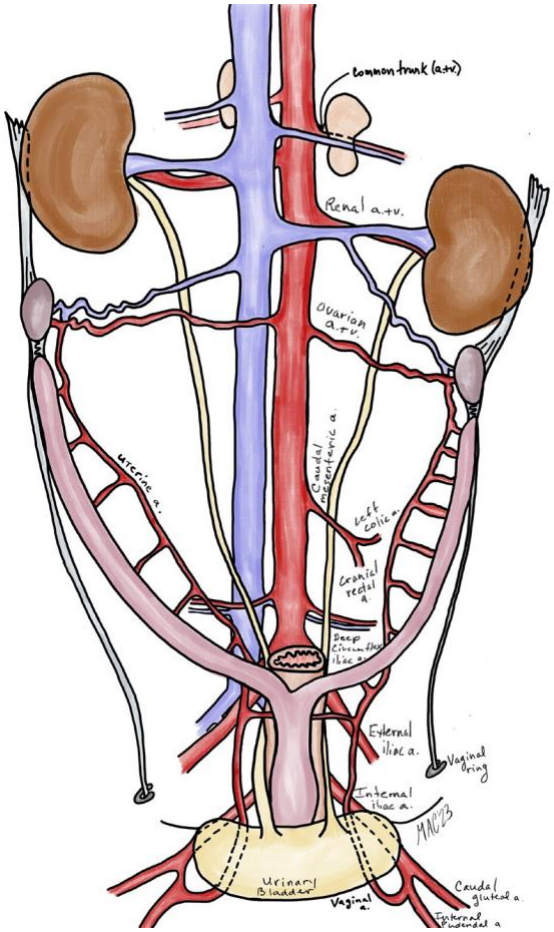
5. Follow the flow of blood from the heart to the ovaries and to the uterus and back to the heart. Use the image to observe the collateral circulation.

PART 2 - Arterial Blood Flow Model

1. Identify each vessel in the system.
   - ☐ Abdominal aorta
   - ☐ Ovarian arteries
   - ☐ Internal iliac arteries
   - ☐ Caudal gluteal arteries (artificially connected for model only; supply blood to each hindlimb)
   - ☐ Internal pudendal arteries
   - ☐ Vaginal arteries
   - ☐ Uterine arteries

2. Follow the flow of blood from the abdominal aorta to the ovaries and to the uterus, noting the collateral circulation.

3. Simulate proper clamping or ligature placement at relevant sites by using the forceps provided.
   - ☐ Proper ligament of the ovary
   - ☐ Ovarian artery and vein within the mesovarium
   - ☐ Uterine arteries (and veins) and proper ligament of the ovary
   - ☐ Uterine arteries (and veins) and uterine body



Focus on one side (left or right) of the reproductive tract but recognize that you would need to ligate both the left and right sides during an ovariohysterectomy.
