Clinical History:

49 year old male with past medical history of:
   Autosomal dominant polycystic kidney disease, aortic valve replacement (on anticoagulation), ischemic colitis, gastric ulcers.

Admitted for placement of dialysis catheter.
   - New onset bright red blood per rectum while in hospital.
   - Started oral colon prep for planned colonoscopy +/- EGD.
   - Partially through the oral prep, the rectal bleeding increased and he became dizzy with dropping blood pressure.
   - CT angiogram ordered due to suspected rapid bleeding and low likelihood of completing the colon prep.
Luminal contrast accumulation arising from the low rectal wall

The collection increases in size and changes shape on the portal phase, indicating active hemorrhage.

Virtual noncontrast image shows only high attenuation hematoma in the rectal lumen
Multiple actively bleeding rectal ulcers were identified and treated with endoscopic clipping and epinephrine injection. Knowing the location of the bleeding allowed for targeted colonoscopy, despite the incomplete colon preparation.
Teaching Points:

- CT angiography and fluoroscopic angiography are acceptable methods to evaluate suspected acute lower GI bleeding when:
  - Colonoscopy is contraindicated, OR
  - When a patient is unlikely to complete their oral colon preparation.

- Depending on the time of day and institution, CT may be faster to obtain than a fluoroscopic exam. In the setting of a truly unstable patient, fluoroscopic angiography would be a more appropriate choice due to its potential for therapeutic intervention.

- CT angiography can identify the location and potential cause of GI bleeding. This information is helpful for choosing the best interventional modality.
Teaching Points:

- Active hemorrhage can be identified by:
  Detecting a new contrast collection when comparing with precontrast or virtual noncontrast series OR by detecting a change in attenuation and shape between contrast enhanced phases.

- The differential diagnosis for the bleeding in this case would include:
  Hemorroids
  Anorectal fissures or ulcers
  Vascular malformations
  These are the most common causes of lower GI bleeding in patients < 50 years old.
References

