We are presenting an interesting case of recurrent upper GI bleeding detected by sequential imaging with tagged RBCs.

**Case Report**

An 80 years old male presented with recent history of malena and severe anemia. Past history documented a CABG in 1996. His initial hemoglobin was 5.4 mg/dl and upper GI endoscopy revealed no bleeding focus and lower GI endoscopy showed clots of altered blood in the ascending colon. He was managed conservatively with transfusions. Next day he again dropped his hemoglobin with passage of malenic stool. A Tc-99m tagged RBC study was performed which revealed no evidence of active
intra-abdominal bleeding till 4 hrs after the injection (Figure 1a). Again patient was transfused and managed conservatively. After 2 days he had another episode of hemoglobin drop and melena and a repeat tagged RBC study was performed. The initial study till 2 hours after the tracer injection showed no active bleeder (Figure 1b). However, sequential images at 4 hours after tracer injection revealed abnormal tracer accumulation in the left hypochondrium with progressive increase in tracer intensity and distal and medial traveling (Figure 1c-d). These findings were consistent with bleeding from the duodenal-jejunal region. Immediately patient was transferred to catheterization laboratory. Selective angiogram of duodenal artery revealed extra-vasation of the contrast into the second part of the duodenum (Figure 2a). Embolization of the bleeder was performed with platinum coil and poly-vinyl alcohol (PVA) with complete disappearance of spill (Figure 2b). Patient stayed in hospital for 5 more days with no further episode of melena.

Discussion

Recent advances in red blood cell labeling have made scintigraphy a sensitive test for detecting both acute and intermittent GI bleeding. Another important advantage is that bleeding rates as low as 0.1 ml/min can be detected with scintigraphy, as compared with higher rates of 0.5 ml/min detected by angiography. Localization of GI bleeding is a real diagnostic dilemma as detection depends upon the active bleeding at the time of procedure. Contrast angiogram is the most accurate method with added advantage of therapeutic embolization but it is invasive, expensive and false negative study if bleeding is not active during the angiographic procedure. Radionuclide tagged RBC study is a very sensitive technique and has an advantage of sequential imaging till 24 hours with single tracer injection. Therefore, if the first study is negative, intermittent bleeders can be detected using the sequential imaging with less radiation burden to the patient and cost effective as well.

References