

**CIRA CASE OF THE DAY**  
**FEBRUARY 2014**

**CASE COURTESY OF DR. ZACHARY PETERS**

# CLINICAL HISTORY

- 47 year old female presenting with large liver laceration following CPR for PEA arrest
  - Patient previously receiving treatment for PE
- Unsuccessful attempts to control hemorrhage with laparotomies and abdominal packing x 2
- CT scan Oct 24 showed large subcapsular liver hematoma and hemoperitoneum
- Labs: Hgb – 84, Plt – 51, INR – 1.8, aPTT – N
- No active extravasation was seen on CTA
- Patient was stabilized and sent to IR suite for arteriography and hepatic artery embolization Oct 25

# OCT 24 CT SCAN



# OCT 25 ANGIOGRAM

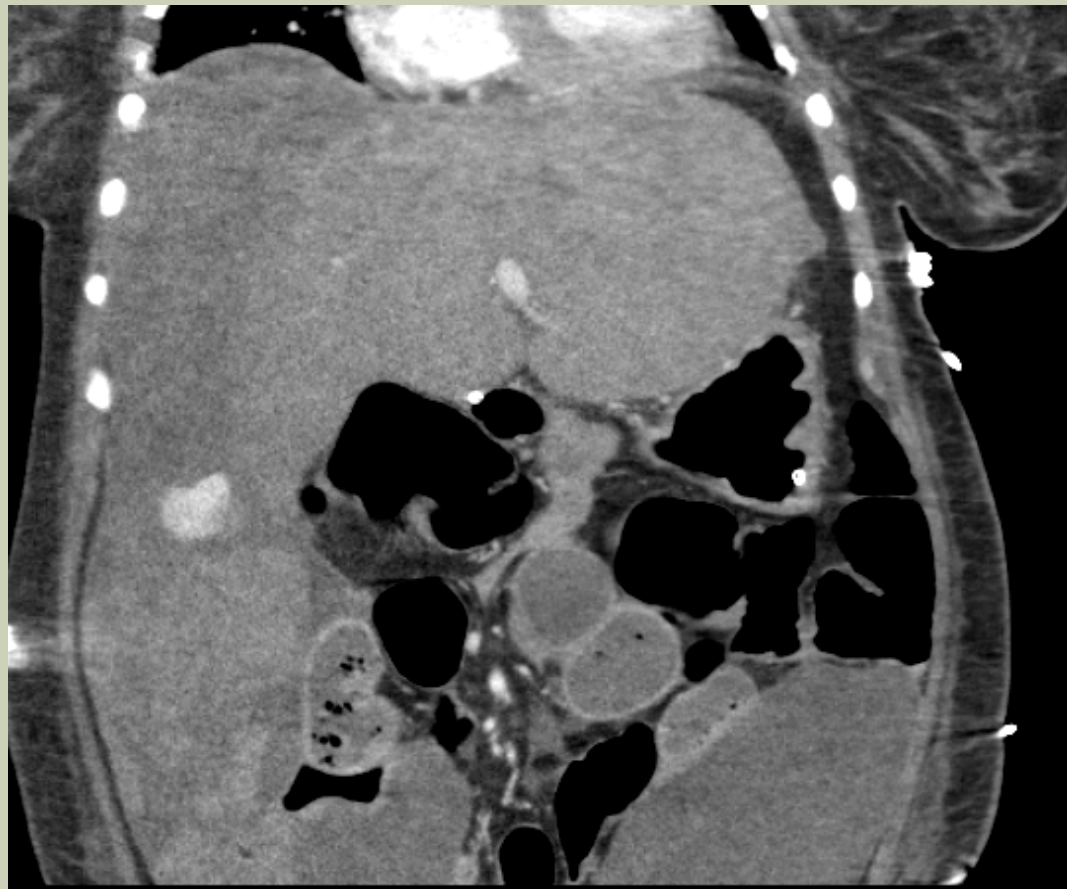


**Celiac arteriogram: No active bleeding. Right hepatic artery embolized with gelfoam**  
**SMA: Not imaged**

## CASE CONTINUED

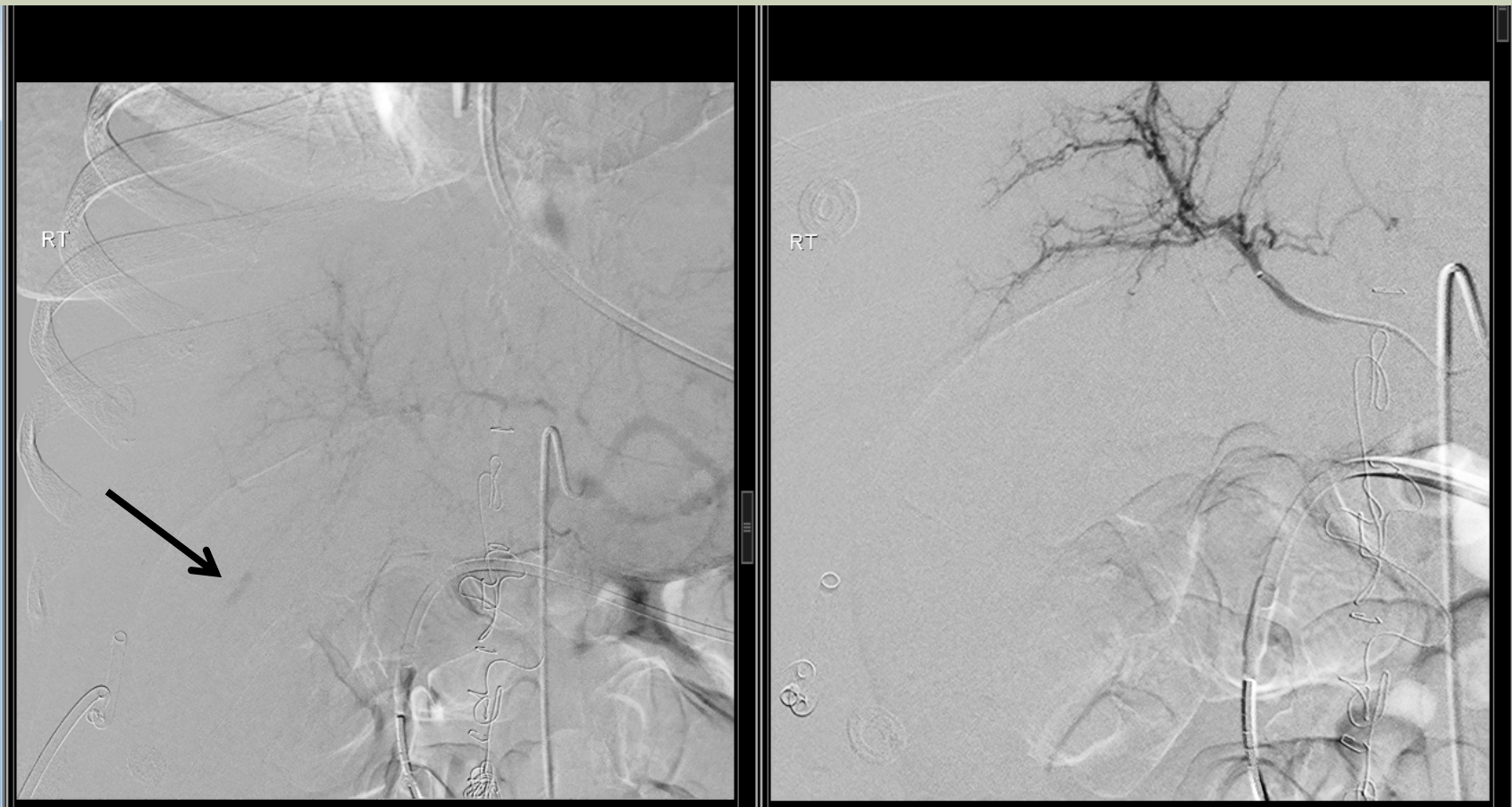
- The patient remained relatively stable in ICU following the embolization
- Approximately 3 weeks later, had IR drain (reluctantly) placed into subcapsular liver hematoma as there was clinical concern for infection/abscess formation
- Within hours the patient became unstable with drop in Hgb
- CTA was performed. The patient was then immediately transferred to the IR suite. . .

**NOV 14 CT**



**CTA: active extravasation into subcapsular liver hematoma. Large area of non-enhancing parenchyma in right lobe of liver.**

# NOV 15 ANGIO



**Celiac Arteriogram: Small focus of extravasation in RUQ, which was no longer seen with subselective right hepatic arteriogram.**

# NOV 15 ANGIO



**SMA Arteriogram**: Accessory RHA arising from SMA is the source of active bleeding.  
Artery was successfully embolized with gelfoam.

# TEACHING POINTS

- 1. Potential pitfall of draining a tense subcapsular hematoma that may be tamponading a source of bleeding
- 2. Relevance of knowing hepatic arterial anatomic variants
  - “Conventional” anatomy in only 61.3%<sub>1</sub> of patients
  - Most common variants are accessory (10.7%) or replaced (3.8%) LHA from LGA, and replaced RHA from SMA (8.7%)
  - Accessory RHA from SMA occurs in only 1.5%

<sub>1</sub>Covey AM, Brody LA, Maluccio MA et-al. Variant hepatic arterial anatomy revisited: digital subtraction angiography performed in 600 patients. Radiology. 2002;224 (2): 542-7