

**EMBOLIZATION OF THE INFERIOR
EPIGASTRIC ARTERY BLEEDING IS
BECOMING
AN INCREASINGLY COMMON
PROCEDURE**

Disclosure

Speaker name:

Cristina Pantoja Peralta

I have the following potential conflicts of interest to report:

- Consulting
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)

- I do not have any potential conflict of interest

Introduction

- Spontaneous rectus sheath hematoma (SRSH) is a clinical condition resulting from bleeding epigastric arteries.
- Nowadays it is becoming an increasingly common event.
- Mortality: 4% overall, 25% in cases with anticoagulation therapy.
- The aim of this study was to review our recent experience in the management and outcomes of patients with SRSH who were treated in *Hospital Universitari Joan XXIII (Tarragona)*.

Methods

- A retrospective study included all patients who underwent an endovascular treatment for bleeding inferior epigastric artery between January 2017-August 2019.
- We excluded patients with trauma hematoma, venous bleeding, conservative management or open surgery.

Table 1- Characteristics of 10 patient.

Variables	N (%)
Median age (Inter quartile range)	75 (72-80)
Women	9 (90%)
Arterial hypertension	7 (70%)
Dyslipidemia	4 (40%)
Diabetes mellitus	3 (30%)
Ischemic heart disease	2 (20%)
Chronic kidney failure	4 (40%)
Hepatopathies	1 (10%)
Chronic obstructive pulmonary disease	2(20%)
Active neoplasia	1 (10%)
Antiplatelet therapy	1 (10%)
Anticoagulant therapy:	
Acenocumarol	3 (30%)
LMWH*	6 (60%)
Acenocumarol+LMWH*	1 (10%)
Risk of Hemorrhage (RIETE SCORE/HAS-BLED SCORE):	
High	1 (10%)
Intermediate	7 (70%)
Low	2 (20%)
Median hemoglobin decrease (gr/dl)	4,4 (3-7)
Packed red blood cells transfused (before or in surgery). (Inter quartile range)	3 (1,75-5)
Clinical state:	
Hemodynamic instability	6 (60%)
Hemodynamic stability	4 (40%)
First-line treatment:	
Conservative treatment	1 (10%)
Endovascular treatment	9 (90%)

* Low Molecular Weight Heparin

Results

- A total of 10 patients.

Table 2- Patients treated with an endovascular treatment per year.

	2017	2018	2019 (until August)
Number of patients	2	5	3

Table 3- Laboratory investigation on admission.

Parameters	Value (median, Inter quartile range)
Platelets (mCL)	223 (176-297)
International Normalized Ratio	1,19 (1,11-1,65)
Partial Thromboplastin Time (seconds)	13,5 (12,9-38,7)
Activated Partial Thromboplastin Time (seconds)	30,4 (26,1-35,3)

Results

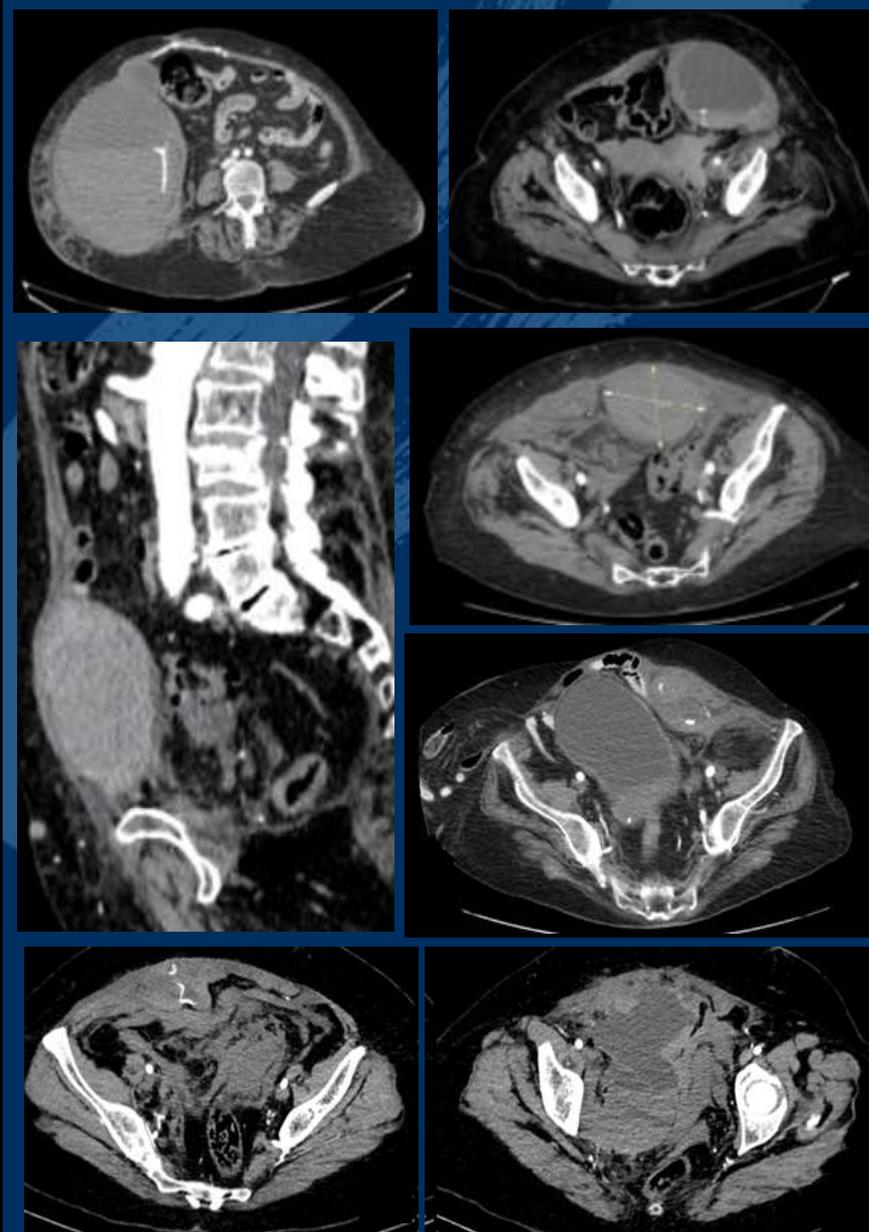
➤ Radiological diagnosis:

- CT angiography.
- Hematoma classification:

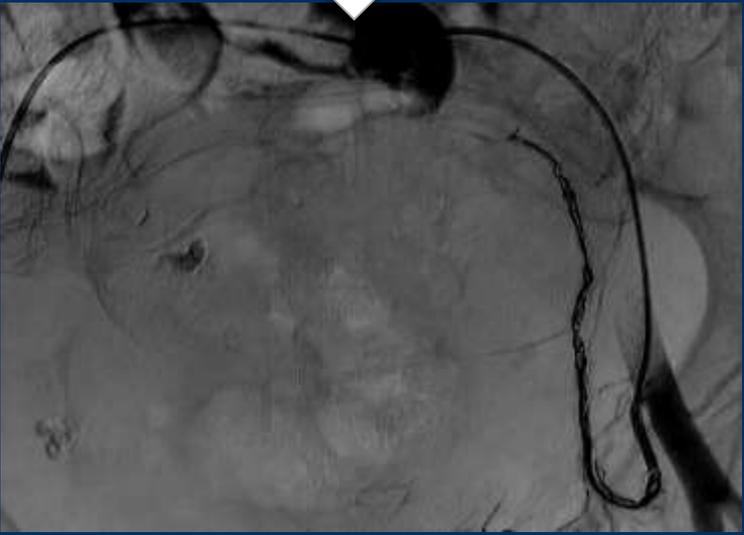
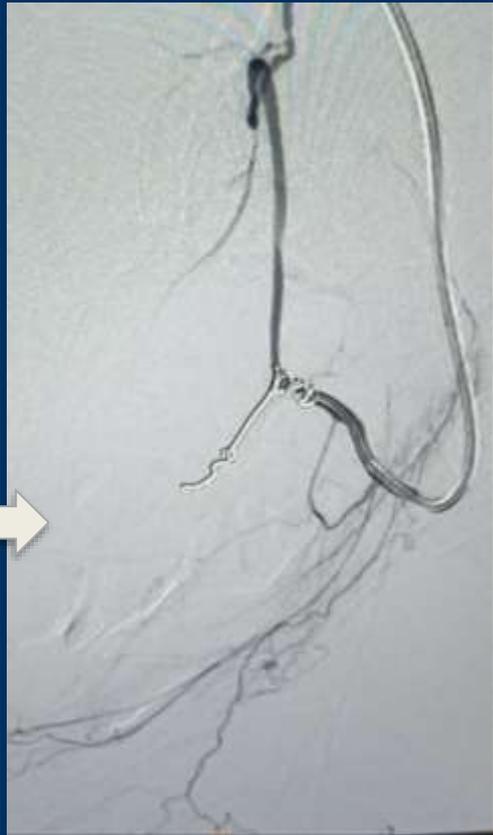
Hematoma	N (%)
type II	6 (60%)
type III	4 (40%)

➤ Treatment:

1. Anticoagulation reversal, transfusions, intravenous fluid resuscitation.
2. Angiography and embolization.



Results



Embolization materials	N (%)
Gelfoam+ Microcoils	4 (4%)
Microcoils	3 (30%)
Microsphere + Microcoils	3 (30%)

➤ Technical success reached 100%.

Results

- Recovery period:
 - 3 cases developed compartment syndrome and required other surgeries.
 - 1 case presented an iliac venous thrombosis, therefore an inferior vena cava filter was placed.
- The median duration of in-hospital stay was 19 days (range 8-71 days).
- The 30 days mortality was 30% (n=3).

COMMENTS

- Probably the epigastric artery bleeding is increasing due to excessive use of anticoagulant therapy in elderly patients with high morbidity.
- Our experience suggests that the epigastric artery injury in patients under anticoagulation can be a serious and life-threatening condition.
- Thus, in patients with anticoagulation and hematoma type II-III, probably the endovascular treatment can be crucial to avoid serious complication and decrease mortality.

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