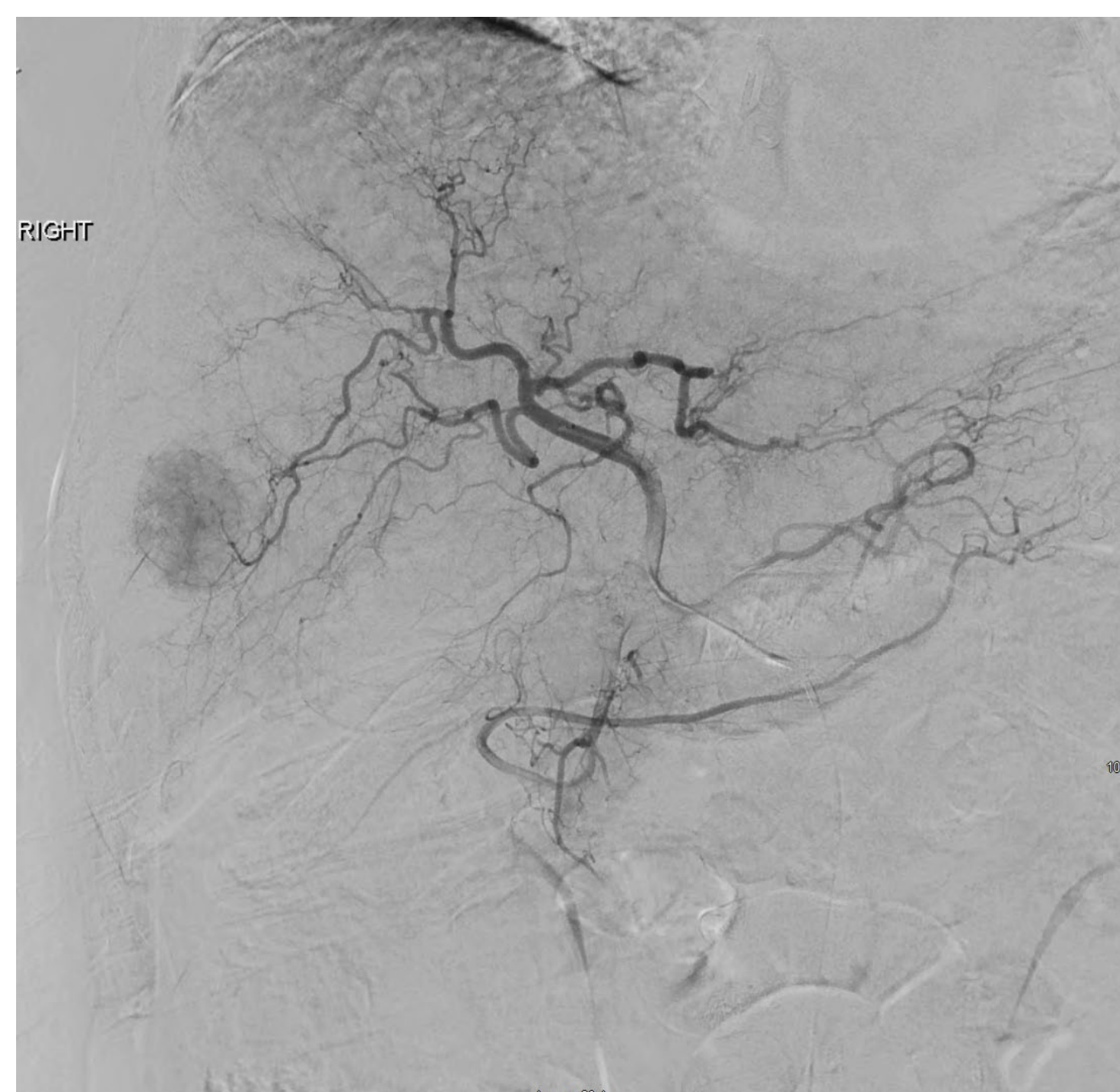


Incidence and Characterization of Carcinoid Crises post Embolization of Neuroendocrine Tumor Liver Metastases

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INTRODUCTION

- Carcinoid crises are periods of hemodynamic instability following NET manipulation
 - not reported or well-studied post embolizations
- Lack of standard care for these events
- Objective:** investigate the incidence of carcinoid crises post embolization of neuroendocrine tumor liver metastases (NETLMs) and direct future studies addressing the management of carcinoid crises.



METHODS

- Collected retrospectively from patients undergoing transarterial embolization (bland embolization, chemoembolization, and radioembolization) for a NETLM from January 1, 2010 to January 1, 2024
 - 211 procedures
 - 113 patients
- Crisis definition:
 - intra-procedural crisis as documented by the performing physician
 - clinically important hemodynamic instability (sustained systolic BP <80 or >180mmHg or sustained tachycardia >120bpm) not attributable to other factors within 48 hours post-procedure.

The incidence of carcinoid crises within 48hr of NET liver metastasis embolization was 4.3%, and most occurred post-procedurally .

Occurrence	Crisis Timing	Prophylactic Octreotide	Managed with Octreotide	SIRS response
1	Intra-procedurally	IV drip	✓	-
2	Post-procedurally	-	-	✓
3	Post-procedurally	-	✓	-
4	Post-procedurally	500mcg bolus	-	✓
5	Post-procedurally	-	-	✓
6	Post-procedurally	500mcg bolus	-	-
7	Post-procedurally	500mcg bolus	-	-
8	Post-procedurally	500mcg bolus	-	-
9	Post-procedurally	-	-	-

RESULTS

- No demographic differences
- Incidence of 4.3%
- 8/9 crises occurred post-procedurally
- 3 SIRS responses
- 2/9 crises managed with octreotide

Population Characteristic	Crisis	No Crisis	P value
Demographics			
Total	9 (4.3%)	202 (95.7%)	
Sex			0.504
Male	5	86	
Female	4	116	
Age	57.8 ±15.3	57.2 ±12.7	0.892
Primary Location			0.679
Small Intestine	3	75	
Pancreas	3	71	
Lung	1	26	
Unknown	2	16	
Other	0	11	
Large Intestine	0	3	
Embolization Technique			>0.999
Bland	9	185	
Chemoembolization	0	2	
Radioembolization	0	15	

DISCUSSION

SIRS Criteria

Criteria	≥2 of the following
Temperature (°C)	>38 or <36
Heart Rate	>90
Respiratory Rate	>20
WBC	>12,000 or <4,000

- Lower observed incidence than surgery (typically 30-40%)
- SIRS response supports a mechanism of distributive shock
- No consistent management protocol utilized

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