UNIVERSITY OF CAMBRIDGE

TTS 2024

NHS
Cambridge University Hospitals
NHS Foundation Trust

Mycotic aneurysms in intestinal transplantation

A case series

Nicola Colucci[1], Harry VM Spiers[1], Georgios Geropoulos[1], Neil K Russell[1], Andrew Winterbottom[2], Sara Upponi[2], Andrew J Butler[1], Irum Amin[1]

[1] The Roy Calne Transplant Unit, Department of Surgery, Cambridge University Hospitals NHS Foundation Trust, Cambridge, United Kingdom
[2] Department of Radiology, Cambridge University Hospitals NHS Foundation Trust, Cambridge, United Kingdom

UNIVERSITY OF CAMBRIDGE

TTS 2024

NHS
Cambridge University Hospitals
NHS Foundation Trust

Mycotic aneurysms (MA)

Potentially fatal complication following solid organ transplantation

Higher risk to develop MA in Intestinal Transplantation (ITx)

Nature of the explant
(eg chronic abdominal sepsis)

Enteric anastomosis
(potential for contamination)

Utilisation of aortic conduits

Higher immunosuppression

UNIVERSITY OF CAMBRIDGE

TTS 2024

NHS
Cambridge University Hospitals
NHS Foundation Trust

Methods

Retrospective review of a prospectively held database

All adult ITx
from December 2007 to March 2024

Complete lifelong follow-up

Results (1)

156 ITx performed

6 patients (3.8%) experienced
8 episodes of MA

Infra-renal aortic conduits
used in all cases

UNIVERSITY OF CAMBRIDGE

TTS 2024

NHS
Cambridge University Hospitals
NHS Foundation Trust

Results (2)

Median age at MA diagnosis was 36.5 years (range 24-70)

4 early occurrences
(2, 3, 6, 8 weeks)

2 late presentations
(55, 377 weeks)

Two recurrences
132.4 weeks from the initial diagnosis (range 69.6-195.3)

UNIVERSITY OF CAMBRIDGE

TTS 2024

NHS
Cambridge University Hospitals
NHS Foundation Trust

Results (3)

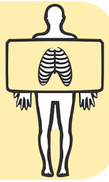
History of hollow viscus perforation or anastomotic leak identified in all cases except one (83.4%)

Diagnosis

Peri-operative
(2 cases)

Ruptured aneurysms requiring urgent laparotomy

Angio-CT
(4 cases + 2 recurrences)



Abdominal pain and ongoing sepsis

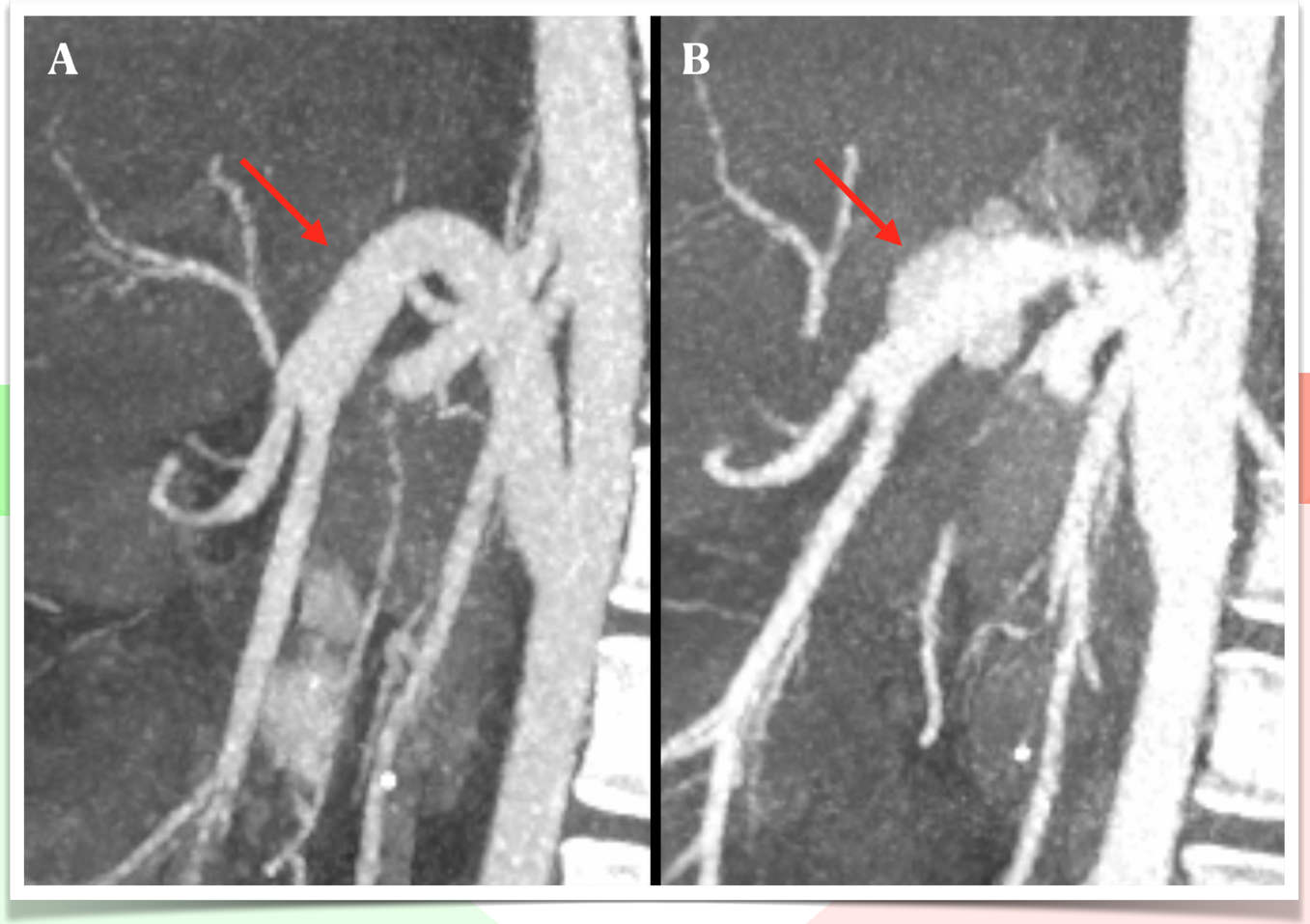
Clinical presentation of recurrences more subtle

UNIVERSITY OF CAMBRIDGE

TTS 2024

NHS
Cambridge University Hospitals
NHS Foundation Trust

Normal aortic conduit



Mycotic aneurysm

…2 weeks later

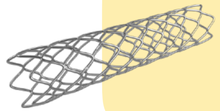
UNIVERSITY OF CAMBRIDGE

TTS 2024

NHS
Cambridge University Hospitals
NHS Foundation Trust

General management

Targeted antibiotic and antifungal treatment



Endovascular stent grafting (ESG)

Subtotal resection of the aneurysmal vessel

Creation of a new conduit
(Using third party vascular homograft)

High mortality

83.4% at a median follow-up of 8 months (range 1-121)

50% mortality within 1 week from diagnosis

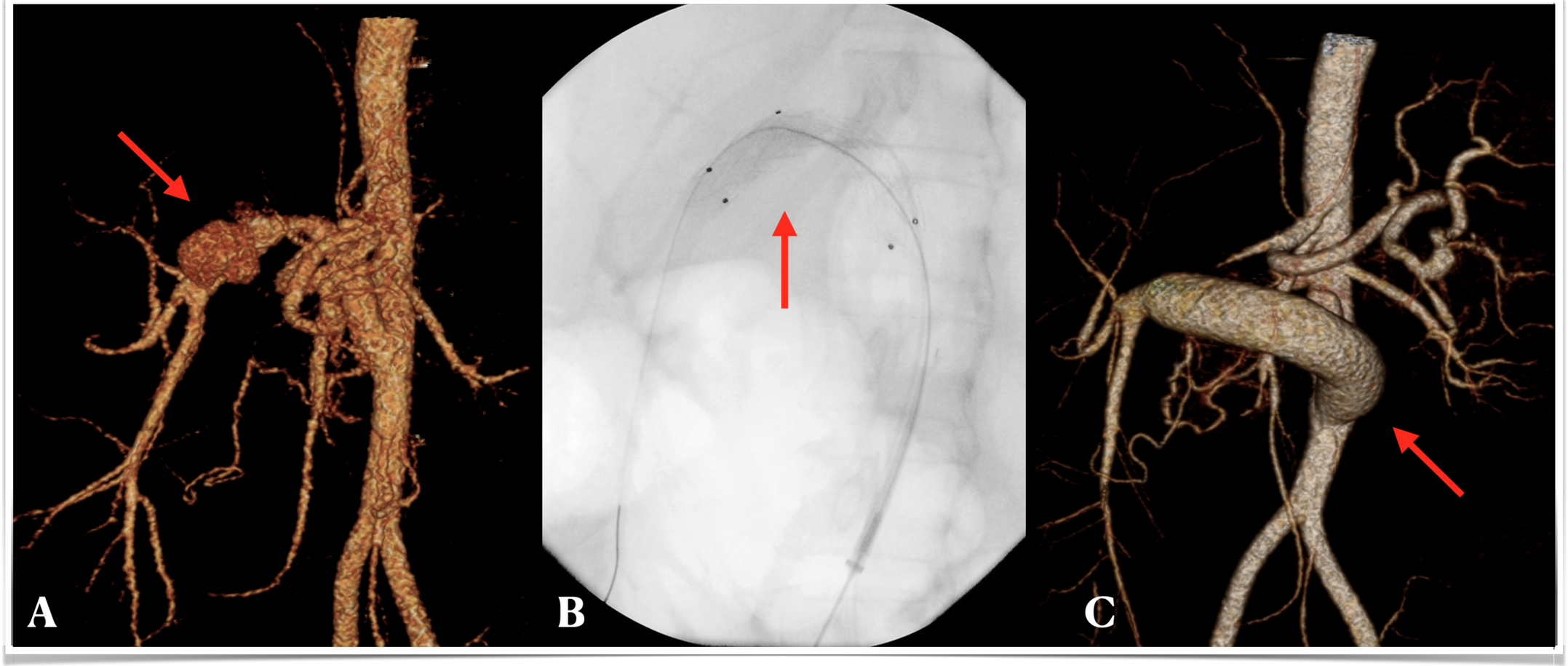
2 patients survived both initial diagnosis and recurrence

1 alive 5 years after first diagnosis

UNIVERSITY OF CAMBRIDGE

TTS 2024

NHS
Cambridge University Hospitals
NHS Foundation Trust



MA

Endovascular grafting

New third-party donor thoracic aortic conduit

UNIVERSITY OF CAMBRIDGE

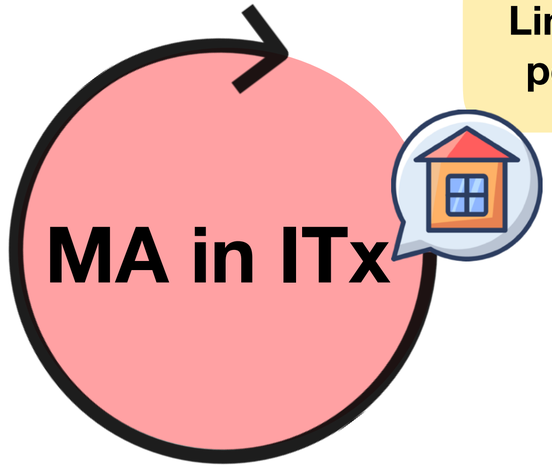
TTS 2024

NHS
Cambridge University Hospitals
NHS Foundation Trust

Conclusions

Uncommon complication with high mortality

Linked to history of hollow viscus perforation or anastomotic leak



Diagnosis relies on angio-CT
(but may occur peri-operatively during catastrophic bleeding from MA rupture)

Early control of contamination sources after ITx is paramount to prevent it

Treatment should entail ESG followed by conduit resection

UNIVERSITY OF CAMBRIDGE

TTS 2024

NHS
Cambridge University Hospitals
NHS Foundation Trust

Thanks for the attention

No conflicts of interest to disclose