


- 66-year-old man with onset of pain approximately 08:30 on 10/29, when complained to his son about the onset of pain in both legs and abdomen during a walk.
 - 10/29
 - 08:30 approximate time of symptom onset
 - 12:25 BP 141/63 at ED of Henry Ford health system, Jackson MI
 - 12:43 bilateral DP pulses weak
 - 12:52 creatinine 1.12, AST 20, lactate 5.1
 - 12:42 BP 122/89
 - 13:27 CT of chest abdomen and pelvis
 - 13:45 BP 189/74, Esmolol started
 - 13:48 BP 181/75
 - 14:02 BP 155/70
 - 15:15 BP 115/56
 - 15:21 arrived at Michigan Medicine, BP 119/59 (85). Legs pulseless, cold LLE
 - 17:56 start of IR procedure
 - 19:47 finished IR procedure, followed by vascular surgery exploration of his left leg with thrombectomy and 4-compartment fasciotomies then by general surgery performing laparotomy and total colectomy.
- M
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- ### IR findings
- Hemodynamically stable acute type A dissection with
- left renal artery supplied by false lumen
 - dynamic obstruction of the celiac, SMA, right renal, IMA, and right common iliac arteries
 - dynamic + static obstruction of left common iliac artery, with
 - additional dynamic + static obstruction of left superficial femoral artery + true lumen thrombus.
- M
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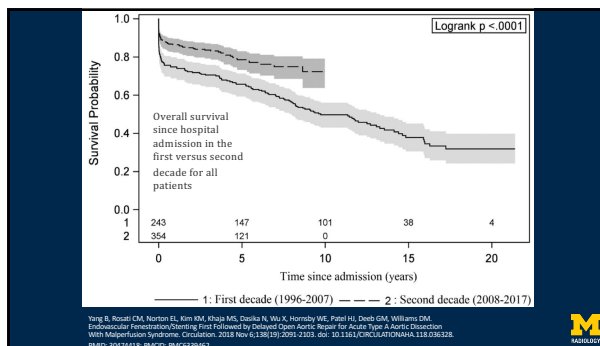
- ### Procedures
- IR (from 17:56 to 19:47): goal is restore perfusion
- Thrombolysis in left iliac and superficial femoral arteries (TEE monitoring)
 - Supraceliac fenestration and suprarenal aorta TL stenting
 - Infrarenal aorta fenestration and aortoiliac TL stenting, with unresolved obstruction of left SFA
- #### Vascular Surgery
- Left SFA embolectomy
 - Left leg 4 compartment fasciotomy
- #### General Surgery
- Laparotomy
 - Subtotal colectomy
- #### Nephrology
- Hemodialysis for 10 days
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Chronology

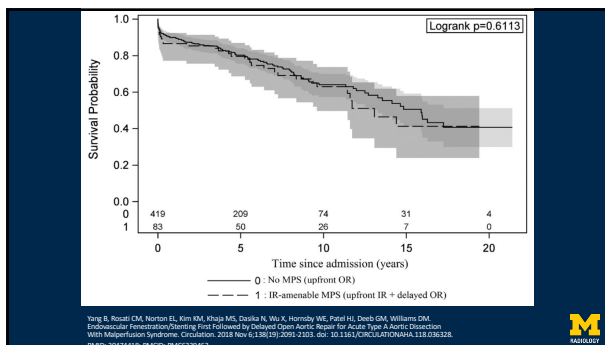
- 10/29
- IR procedure, left leg embolectomy and 4-compartment fasciotomy, subtotal colectomy
- 11/13
- Intermittent bacteremia with fluid collection in pelvis
- 11/14
- US-guided tube placement, complicated by through and through injury to small bowel.
- 11/16
- 17/03 CT abdomen and pelvis
- 20/50 laparotomy and bowel repair
- 12/1 now s/p IR fenestration, total colectomy, 4-compartment LLE fasciotomies, L leg revascularization via cutdown on 10/30 and AKI requiring CRRT (10/29-11/9)
- 12/5 fasciotomy sites healing well
- 7/6 no change in aorta diameter, no A.I. Fasciotomy sites have healed. Decubitus ulcer continues slow healing. Biliary drain present 7/6 but removed later. Because of all his co-morbidities, his aorta has not yet been repaired, now 2 years later.



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Conclusion

When ATAAD is accompanied by cardiovascular complications or when malperfusion is not associated with tissue damage, then root repair takes precedence over organ re-perfusion.

Note that this standard of care risks embolization of coexisting TL thrombus in SMA, renal, and iliofemoral arteries, which is masked as post-operative complication and should be kept in mind by treatment team.

In uncomplicated ATAAD accompanied by malperfusion syndrome (organ perfusion deficit with organ damage) or ATBAD with malperfusion, patient survival improves in a program of aggressive IR-first management of critical arterial obstruction with directed treatment of damaged organs followed by root repair if indicated, when clinical status and blood markers permit.



THANK YOU FOR YOUR ATTENTION

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