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# R-EVAR is it feasible?

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# Disclosure

Speaker name:

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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

# Background

ruptured abdominal aortic aneurysms (rAAAs) have high mortality (35–55%) and morbidity rates when treated by standard open - surgical methods

# NEEDS

- Professional team
- High learning curve
- Facilities
- Inventory
- Protocols
- Trained nurses and technicians

# Tricks

- Keep the left arm away from anesthesia
- Resuscitation or hypotensive
- Occlusion balloons from least tortuous iliac artery
- Double balloon (tandem) technique

# Permissive Hypotension

strict restriction of fluid and blood resuscitation in the rAAA setting is mandatory. If blood pressure is in the 50 – 70 mmHg range, it should be left there.

# Take Care

Patients with rAAAs frequently deteriorate with induction of anesthesia. If that occurs and the blood pressure falls below 50 mmHg or is unobtainable, administration of fluid and blood become necessary

the intra-operative administration of intravenous heparin during open or endovascular rAAA repair is controversial.



# DVT

According to the American College of Chest Physicians, patients undergoing repair of a rAAA are categorised as high risk for the development of deep venous thrombosis (DVT)

# MORTALITY

The reported perioperative (in hospital or 30 day) mortality rates after EVAR for rAAAs vary in the literature and range from 13% to 53%

# COMPLICATIONS

however, a recent analysis of the Vascular Quality Initiative (2003e 2013) database (514 EVAR, 651 OSR) suggested that EVAR is associated with lower in hospital morbidity than OSR. Specifically, the incidence of **cardiac complications** (EVAR, 29% vs. OSR, 38%;  $p \approx 0.001$ ), **respiratory complications** (28% vs. 46%;  $p < 0.0001$ ), **renal insufficiency** (24% vs. 38%;  $p < 0.0001$ ), lower extremity ischaemia (2.7% vs. 8.1%;  $p < 0.0001$ ), **and bowel ischaemia** (3.9% vs. 10%;  $p < 0.0001$ ) were significantly lower after EVAR than after OSR.

In the most recent publication from the IMPROVE trial, the re-intervention rates were similar after EVAR and OSR for rAAA and most common in the first 90 days

# Abdominal Hypertension

IAH is defined as a sustained or repeated pathological elevation in IAP  $> 12$  mmHg. ACS is defined as a sustained intraabdominal pressure (IAP)  $> 20$  mm Hg (with or without an abdominal perfusion pressure  $< 60$  mmHg) that is associated with **new organ dysfunction/failure**. Abdominal perfusion pressure is defined as the mean arterial pressure minus the IAP.

# Abdominal compartmental

- AP is most easily measured by means of bladder pressure through a urinary drainage catheter.
- chemical markers have been studied in an attempt to diagnose the onset of ACS at an earlier time. Horer et al placed microdialysis catheters into the peritoneal cavity and found that elevated lactate/pyruvate ratios and glycerol levels were early markers that were associated with the subsequent development of ACS

When IAH/ACS is suspected, at first, **non-surgical** management should be attempted to reduce IAP. If conservative measures prove unsuccessful and a full blown ACS has developed, **decompression** is indicated.

# Conservative management

- Improve abdominal wall compliance

Pain relief (epidural anaesthesia)

Avoid morphine

Neuromuscular blockade (may reduce IAP by 50%)

- Evacuate intra-luminal/abdominal content

Nasogastric decompression

Paracentesis (seldom feasible)

- Correct positive fluid balance

Avoid over resuscitation and crystalloids

Whole blood and colloids (20% albumin)

Diuretics (furosemide)

Renal replacement therapy if indicated

- Organ support

Optimize ventilation (PEEP)

Vasopressors (APP > 60 mmHg)



# Our example case

Male pt 70yrs, smoker

HTN,DM

Presented by abdominal pain , destintion and attack of hypotension followed by normotensive state

CT angiography was done

Sudden drop of Bl pr to 70/40 with pulse rate 120





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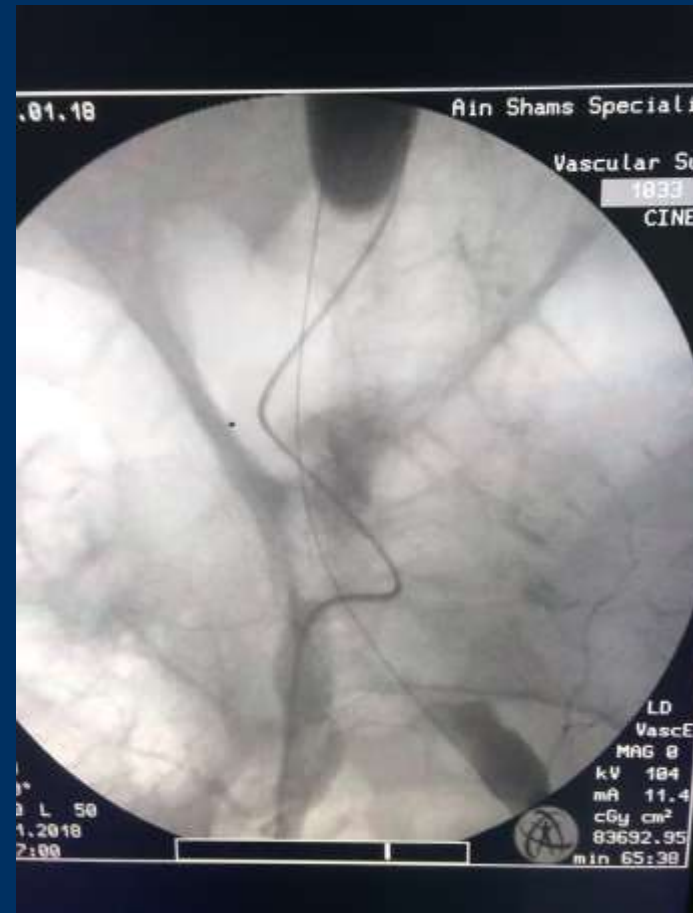
Acc Num: 89251

YARVA TERAHIM ELALF

Transferred to OR

Aortic balloon under local anathesia

Resuscitation was done after proximal control





# postoperative

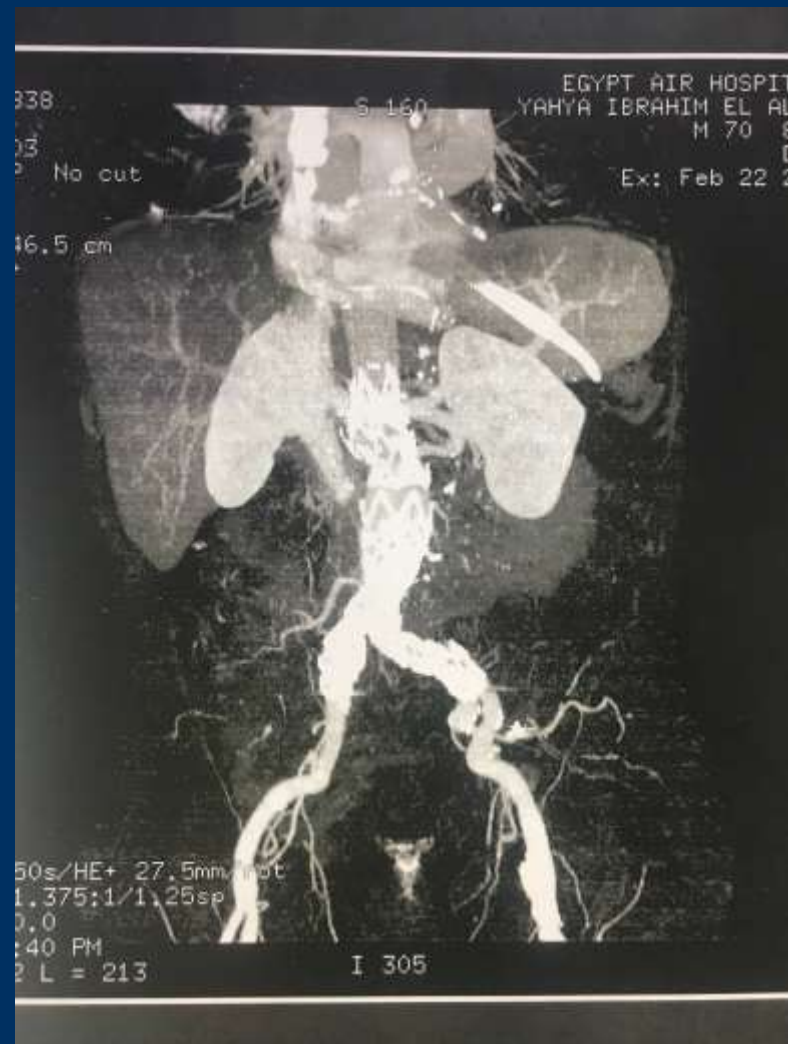
Vitally stable

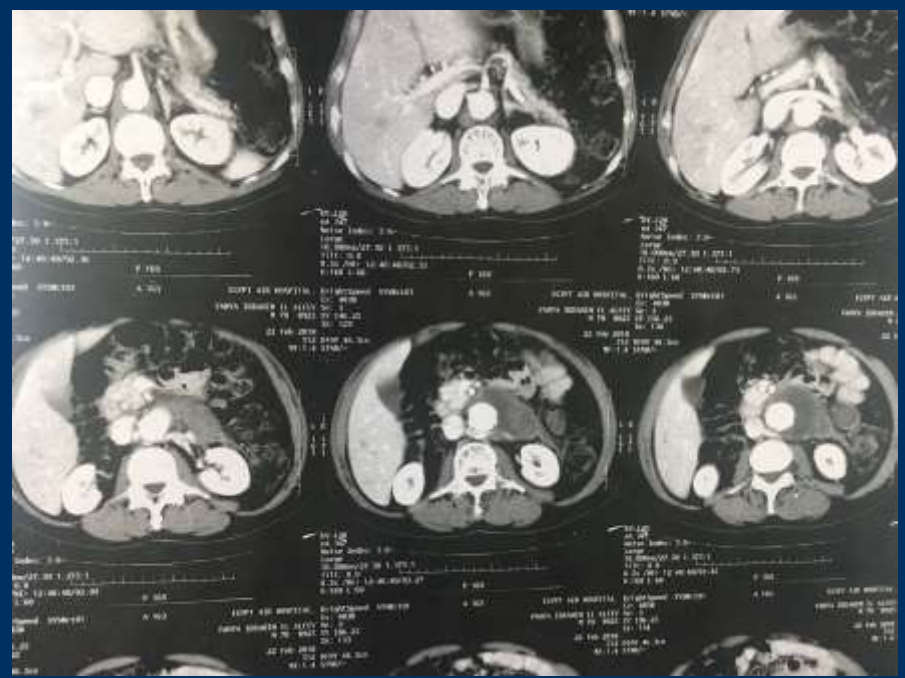
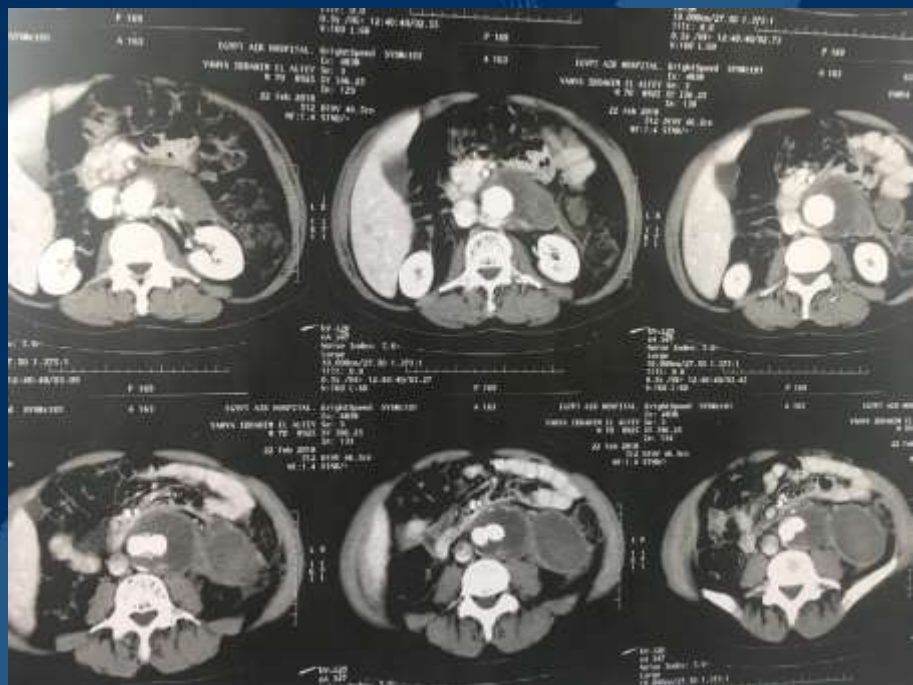
HGB 10

IAP 22-28 mm HG

Nasogastric tube with rectal tube and monitoring  
with very low dose of diuretics ,lower the IAP to  
17 mm HG

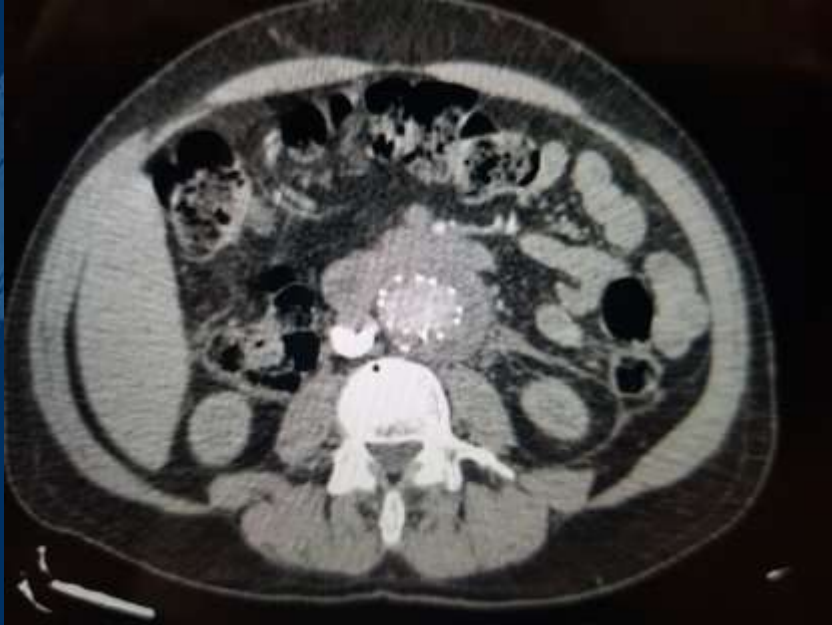








6 Months



# CONCLUSION

REVAR is feasible with special requirement and suitable anatomy ,abdominal compartment is still one of major complication specially with endovascular treatment of rAAA

# THANK YOU



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