ED QUICK QUIZ
WHAT IS THE DIAGNOSIS?

BACKGROUND

A 55 year old man attends the ED due to back pain.

The pain started two hours ago, he describes it as sharp bilateral back pain radiating towards his groins. The radiating pain is greater on the right. Shortly after it started he felt dizzy, which he put down to the acuity of the pain. He also felt his legs were very weak for a short period of time, this has settled but it is now painful to walk.

He denies any precipitating injury/ activity

He is a smoker has poorly controlled hypertension and a history of renal colic, but never bilateral pain.

Observations:

- RR 16
- SpO2= 100%
- HR= 90
- BP= 110/55
- Temp= 36.5

Examination of his chest and abdomen is unremarkable except for mild thoraco- lumbar tenderness.

QUESTIONS

1) What diagnosis **must** be considered?

2) What are the risk factors for this condition?

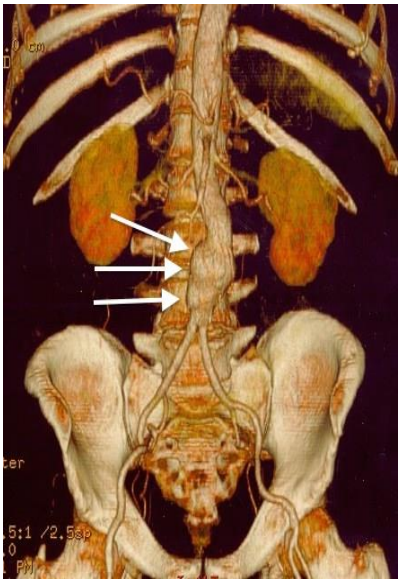
3) What else could be done on clinical examination?

4) How can this condition be screened for in the ED?

ANSWERS & DISCUSSION

1) Abdominal Aortic Aneurysm (AAA) Rupture
For any patient over the age of 50 presenting with renal colic, especially bilaterally AAA rupture should be considered.

AAA is a localised enlargement of the abdominal aorta of a diameter >3cm or 50% its normal size (males= 1.7cm; females= 1.5ccm). They are usually asymptomatic unless they rupture. Uncomplicated AAA is usually operated on if it grows to >5.5cm. Greater than 90% of patients suffering a ruptured AAA die before they reach theatre.



Approximately 85% of AAAs are infrarenal.
Up to **20% of ruptures are intraperitoneal**. Haemorrhage is usually so rapid that the patient exsanguinates before reaching hospital.
80% rupture retroperitoneally, this gives the **classic triad of back pain, hypotension and a pulsatile abdominal mass**. Another classic sign is Grey-Turner's sign of flank bruising. However, more than **50% do not have all these features.** These ruptures may tamponade themselves, giving a "contained leak" Unusual sites of rupture include formation of a fistula between the aorta and inferior vena cava (3-4%) and a fistula between the aorta and duodenum <1%.

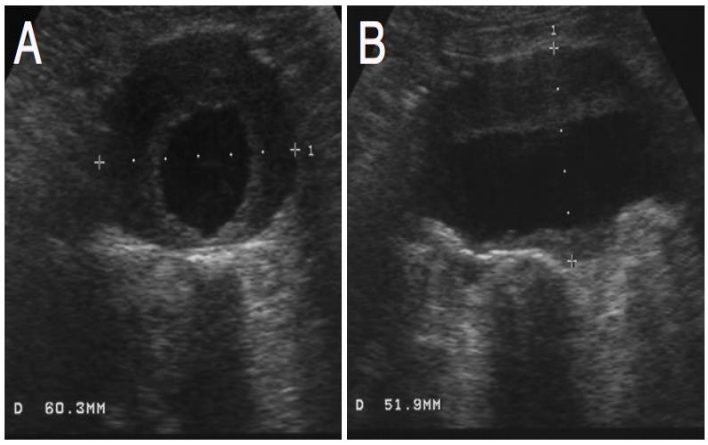
Unusual presenting symptoms include:

- Transient lower limb paralysis
- RUQ pain
- Groin or testicular pain
- Testicular bruising (blue scrotum sign of Bryant)
- Inguinoscrotal mass mimicking hernia

Although this patient's blood pressure is reasonable for most people, given his poorly controlled hypertension and mild tachycardia (he is likely Beta Blocked), he has a relative hypotension. His initial dizziness and leg weakness are related to the initial rupture interrupting blood supply, and his ongoing leg pain is due to ischaemia. Aneurysms can spread to involve iliofemoral arteries, hence his right groin pain.

2) Risk factors:

- Smoking
- Family history
- Other cardiovascular disease
- Hypertension
- Genetic conditions e.g. Marfan's & Ehlers-Danlos syndromes



3) Palpate for radio- femoral delay. Palpate a radial and femoral pulse at the same time, there should be no detectable delay. **Also palpate both femorals simultaneously** to assess for asymmetry, potentially indicating aneurysmal spread.

4) Ultrasound scan of their aorta

All patient's over the age of 50 presenting with 'renal colic' should have imaging to exclude AAA rupture. This could take the form of CTKUB or an ultrasound of their aorta. Many of the ED seniors can perform this.