TAAA – Extent 1,2,3 & 5
Prevention and treatment of paraplegia

Background - paraplegia from spinal cord ischaemia
- intercostal and lumbar arteries arising from the aneurysm supply the anterior spinal artery and cannot all be reconnected to the graft
- so blood supply to the anterior spinal artery is precarious after surgery
- intra-operative spinal cord ischaemia may cause post-op cord oedema and raised CSF pressure
- **most of the cases of paraplegia occur post-operatively, often in association with an episode of hypotension**

Prevention of paraplegia
- maintain MAP > limit set – usually 80 mm Hg and avoid episodes of marked hypotension
- drain CSF for 48 hours post-op then, if there has been no leg weakness, turn off the tap and leave CSF drain in place for a further 24 hours ((but if there has been leg weakness more prolonged CSF drainage and a gradual increase in drainage pressure may be appropriate)
- **Zero level of the CSF drain system is placed at the level of the heart** (same as a-line / CVP zero level)
- the mmHg scale is used (not cm H_2O)

Detection of paraplegia.
- sedate patient lightly using short-acting agents to permit hourly assessment of leg movements
- assess and chart movements in each leg hourly on the ITU 24-hour chart using the scale below
- if leg weakness develops or increases inform vascular anaesthetist and vascular surgeon immediately
- **assessment and charting of leg movements should continue throughout the hospital admission**

Treatment of paraplegia.
- raise MAP
- lower CSF pressure
- switch off epidural infusion

Leg movement score – based on epidural chart score to avoid need for two separate scores	
Score	Description
0	Full power
1	Weak but able to raise legs
2	Able to bend knees but not raise legs
3	Minimal movement
4	Complete paralysis

BP and CSF drainage instructions					
Keep MAP above	Set CSF **drainage level** at	Date	Time	Signature	Name
80 mm Hg	+ 10 mm Hg				
mm Hg	mm Hg				
mm Hg	mm Hg				
mm Hg	mm Hg				
mm Hg	mm Hg				

If no CSF drains for two consecutive hours, lower the drain level briefly to zero to ensure that a drop or two of CSF drains confirming that the catheter is not blocked. Then immediately raise the drain back to the previous level. If no CSF drains please inform the vascular anaesthetist immediately.

The main risk of CSF drainage is subdural or cerebellar haematoma. Observe for decreasing conscious level or severe headache. If the CSF drain level is set at < 10 mm Hg avoid sitting the patient up or more than a slight head-up position.