Novel use of the Solitaire® AB re-deployable stent for exclusion of wide neck peri-hilar Renal Artery Aneurysms (RAAs)

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Disclosure

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I do not have any potential conflict of interest
Background

- Low incidence, ~70% asymptomatic, incidental finding

- Indications for repair: limited evidence, interpretable

- Common ethiology: FMD, ATS, Vasculitis, Trauma

- Treatment strategies: Surgical in-vivo/ex-vivo, embolisation, stents, endografts, combination therapy

- Complex cases: risk of parenchymal infarction, nephrectomy
Case 1

- 55 yr old hypertensive female
- Incidental finding
- 2.5 cm wide neck saccular Right RAA
- Multidisciplinary review, informed consent
- 7 French Destination©* renal double curve shaped sheath

*Terumo Interventional Systems, Surrey, UK
Technique

- Separate micro catheter placed in main body
- Selective catheterization of upper pole branch
- 6mm by 3 cm Solitaire© AB* positioned/repositioned

* Covidien, eV3 Intl, Herts, UK
Technique

- Embolization coils deployed via selective micro catheter

- Stent then detached in a satisfactory position

- Completion angiography:
  - successful exclusion
  - preservation of both arteries
Post Procedure

• No major or minor complications

• Dual antiplatelet for 6 weeks - lifelong aspirin

• 3 months post procedure:
  2 antihypertensives stopped & eGFR 74

• Follow up MRA at 60 days
  • patent renal vessels
  • minor proximal filling but vast majority of aneurysm excluded
Case 2

- 55 yr old female - FMD
- Incidental finding
- Multidisciplinary review
- 2 cm dumbbell shaped aneurysm at bifurcation of main renal
Technique

- A 6Fr Chariot© shapeable sheath

- 6mm by 3 cm Solitaire© AB* positioned/repositioned & deployed

- Aneurysm catheterised via same access sheath

* Boston Scientific, Herts, UK
Technique

- Multiple detachable embolization coils deployed via selective micro catheter

- Stent detached in a satisfactory position
Post Procedure

• Completion angiography:
  • successful exclusion
  • preservation of both upper & lower pole arteries

• No other major or minor procedure related complications

• Follow up at 60 days normotensive and eGFR 79
Discussion

• Elective open & endovascular repair reported equivalent

• Surgical opinion - complex, higher risk

• Endovascular opinion - incomplete exclusion, parenchymal loss

• Indication for repair - symptomatic, patient preference
Conclusion

• Solitaire© AB stent – novel use in management of RAA

• Adequate positioning/repositioning

• Optimal radial force for flexibility in tortuous anatomy & coil mass support

• Multidisciplinary approach for complex cases

• Safe & efficacious in combined management of wide-neck RAAs