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KING'S College LONDON

Mid term outcome of hybrid revascularisation procedures for TASC C and D aorto-iliac and femoro-popliteal disease

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What is a hybrid procedure?

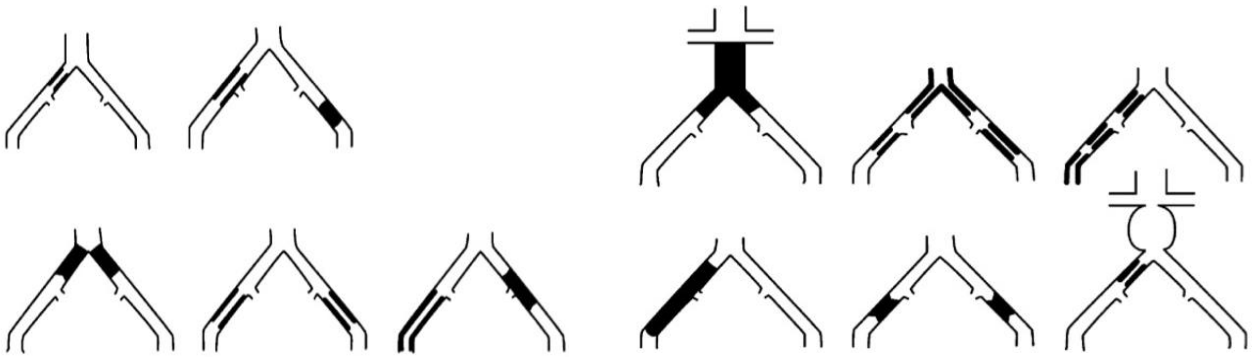
- Hybrid revascularisation combines both open and endovascular techniques simultaneously

Advantages of hybrid revascularisation procedures

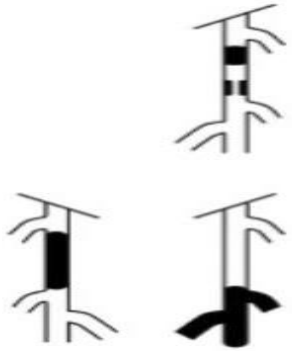
- Less invasive than open revascularisation
- Allows prompt lower limb revascularisation
- Reduces length of hospital stay and overall cost
- Convenient to patients
- Alternative to open surgery in medically high risk patients

Increasingly used in multilevel arterial occlusive disease

- Lack of long term outcome and durability data.
  - Particularly in TASC C and D lesions



Aorto-iliac TASC C and D Lesions



Femoro-popliteal
TASC C and D lesions

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Aim

- To look at mid term outcomes of hybrid revascularisation procedures in advanced (TASC C and D) lesions

Methods

- Retrospective analysis of consecutive patients between 2011 – 2013
  - Inclusion
    - Procedure for critial limb ischaemia or incapacitating intermittent claudication
    - TASC C & D aorto-iliac or femoro-popliteal lesions
    - Simultaneous open and endovascular procedures
  - Exclusion
    - Acute limb ischaemia

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Endpoints

- 1) Primary and assisted primary patency by Kaplan-Meier analysis

- 2) Amputation free survival and limb salvage by Kaplan-Meier analysis

Results

- 83 hybrid procedures in 79 patients
  - Indications for treatment
    - Critical limb ischaemia (63%)
    - Incapacitating intermittent claudication (37%)
  - Mean clinical follow up
    - 19 (+/- 10 months)
  - Median inpatient stay
    - 7 Days (1-106)

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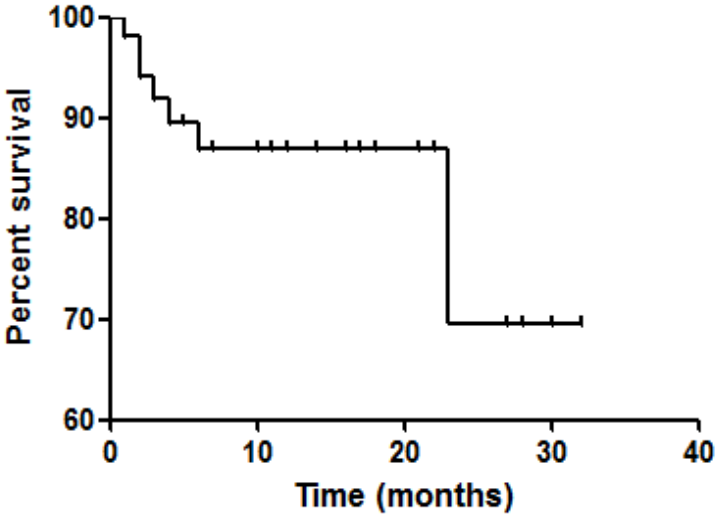
Procedural variables

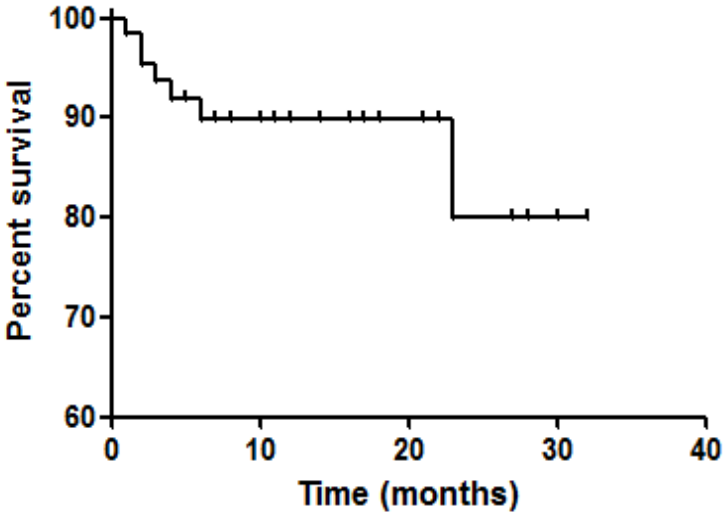
	No.(%) N=83
Open Procedure	
CFA Endarterectomy	73 (88)
CFA Interposition graft	5 (6)
Femoral-Femoral cross over graft	3 (4)
Infrainguinal bypass	2 (2)
Endovascular Target Artery	
Common/External iliac	46 (55)
Superficial Femoral/Popliteal	33 (40)
Infra-genicular vessel	4 (5)
Endovascular Technique	
Nitinol Stent	55 (66)
Covered Stent	23 (28)
Balloon angioplasty	5 (6)

Primary and assisted primary patency



Primary patency

- 86% at 1 year
- 69% at 2 years



Assisted primary patency

- 89% at 1 year
- 80% at 2 years

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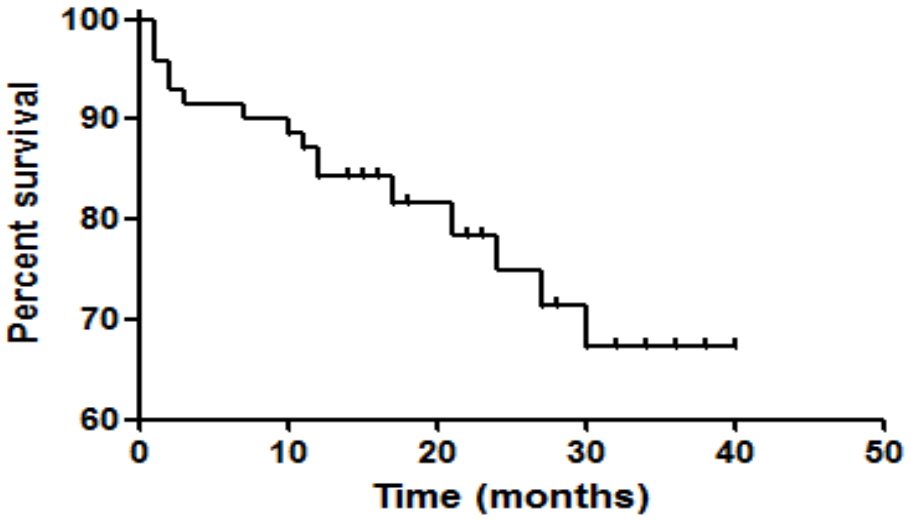
Amputation free survival – limb salvage rate

Amputation free suvival

- 84% at 1 year
- 75% at 2 years



Limb salvage rate

- 93% at 1 year
- 84% at 2 years

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Results

Technical success rate	96.3%
30 day mortality	2.4 %

endovascular interventions to maintain target vessel patency	14
patients required subsequent bypass surgery	5
major lower limb amputations	9

Complications	
patch/graft infections	3
pseudoaneurysms	2
wound complications	3

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Conclusion

- Hybrid revascularisation for advanced occlusive lesions has a high technical success rate
- Good limb salvage and amputation free survival rates
- Is now a real alternative to extensive open surgery

What's next?

- Increase case numbers in the series
- Long term follow up
- Look at aorto-bifemoral results

Any Questions?