Internal iliac artery angioplasty for the treatment of buttock claudication and erectile dysfunction: a systematic review

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Aims

- Investigate the role of angioplasty for the treatment of buttock claudication and erectile dysfunction in patients with proven lesions of the pelvic circulation

- Investigate the safety profile of angioplasty in these conditions

- To Synthesise the eligible data
Methods

- Review Methods were as the Preferred Reporting Items for Systematic Reviews and Meta Analysis (PRISMA) guidelines

- PubMed, EMBASE and CENTRAL databases were searched

- Exclusion Criteria
  - Revascularisation following exclusion for AAA repair
  - Open revascularisation
15 papers excluded
6 Open revascularisation
3 Abstracts only
1 EIA stenting
1 Review
1 Internal iliac aneurysm
1 penile gangrene
1 Italian paper
1 Peripheral claudication
Results

- 24 studies eligible for analysis
- 124 patients treated for buttock claudication
- 59 patients treated for Erectile dysfunction
- Data extraction encompassed time period from 1982-2016
Buttock Claudication

- 124 patients
  - 107 IIA lesions
    - 74 treated with PTA
    - 33 treated with PTA + stent
  - 54 SGA lesions
    - 36 treated with PTA
    - 18 treated with PTA + stents

- Complete relief in 66% patients
- Partial relief in 21% patients
- No change in 13%

- Complete relief in 91% patients
- Partial relief in 2% patients
- No change in 7% patients
Restenosis rates

- Restenosis occurred in 9% of IIA patients
  - 75% had further endovascular procedures
  - 25% treated conservatively
  - 100% had relief of symptoms

- Restenosis occurred in 31% of SGA patients
  - 100% had further endovascular procedures
  - 64% had relief of symptoms post re-intervention
Erectile dysfunction

- 59 patients

- 86 lesions of IIA, SGA and IPA treated

- 2 studies reported changes in IIEF changes

- 8 studies reported resolution of symptoms
Erectile dysfunction

- 2 papers reporting IIEF
  - 39 patients
  - 55 lesions treated with PTA alone
  - 2 lesions treated with PTA + stent

- 8 papers reporting resolution
  - 18 patients
  - 26 lesions treated with PTA alone
  - 3 lesions treated with PTA + stent

Conflicting results
- Von Allmen reported no change in IIEF
- Rogers reported 59.3% patients had improvement in IIEF >4

- 50% had complete resolution of symptoms
- 6% had partial resolution of symptoms
- 44% had no change in symptoms
Complication rates

Claudication population
- 4% complication rate
  - 2 dissection of ipsilateral CIA
  - 2 episodes of extravasation of contrast into buttocks
  - 1 dissection of ipsilateral EIA

Erectile dysfunction population
- 2% complication rate
  - 1 Bleed requiring open repair of arteriotomy
Limitations

- Small studies
- Paucity of data
- Positive publications bias
- Inconsistent reporting
Conclusions

- Angioplasty for buttock claudication appears to be an effective treatment in patients with proven IIA or SGA stenosis.

- Angioplasty for erectile dysfunction remains controversial with varying effect size.

- Angioplasty appears to be safe in these selected patients.
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