Fusion Images, Laser & Fenestration In Situ (FIL&FIS) for complex aortic aneurysm using CTA image overlay: feasibility study.

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History:

- In 2007 Professor Panneton from the USA first created with laser fenestration for LSA.

- This technique at the renovisceral arteries level began almost 3 years ago in Marie Lannelongue Hospital in France.

- In the Department of Pascal Desgranges we first did a laser procedure in September 2016 and now we have 15 cases utilizing this technique. We used Images Fusion for this procedure.
Stages of the procedure
Fusion Images, Laser &
Fenestration In Situ
FIL&FIS, material:
- EXCIMER Laser System
- Endurant Medtronic, Dacron-endoprosthesis
- Sonds Spectranetics 0.9mm, used for laser aterectomy
- Turbo-Elite, Laser Atherectomy Catheter
- APTUS. Lanceur (introducteur SG4) CATHETER HELIFX Medtronic
- Cutting balloon 2.5mm Boston Scientific
- Balloon 4 – 20
- Stent V12, Advanta
1st stage: Images fusion.
2\textsuperscript{nd} stage. Endurant stent-graft on the level of target arteries.
3rd stage: Positioning APTUS Lanceur.
4th stage:
Laser Atherectomy Catheter, Spectranetics 0.9mm was used for stent-graft perforation.
5th stage: Pre-dilatation with cutting balloon 2.5mm (guide 0.14)
6th stage: Second pre-dilatation with balloon 4–20.
7th stage: Stenting with V12 stent and Flaring with balloon 10-20.
Henri Mondor: patients

- 15 patients
- Mean age = 71 years (61 – 84)
- 10 juxta renal AAA
- 3 ATA
- 1 dissection type B
- 1 Endoleak type 1A
- Mean diameter = 64 mm (51 – 98)
- 1 target = 2 procedures
- 2 targets = 7 procedures
- 3 targets = 6 procedures
- 2 CT
- 11 SMA
- 22 RA
Henri Mondor, Results

- Mean arterial ischemia:
  - SMA = 38 +/- 15 min
  - RRA = 35 +/- 15 min
  - LRA = 68 +/- 15 min
  - CT = 82 min

- Mean duration of procedure = 142 +/- 30 min
- Mean duration of scoping = 75 +/- 32 min
- Mean iradiation dose = 385000 +/- 191000 Mg°
- Mean contrast = 100 ml +/- 40 ml°
Henri Mondor: complications

✓ intraoperative dissections:
  - SMA = 1,
  - RA= 1 (stented)

✓ Post operative deaths= 2/14 (14%)
  - 1 multiple emboli @ day 5,
  - 1 MOF @ 2 months

✓ Duration of hospitalization= 11+/−7,5 day

✓ Post- operative (mean F’up =1 month)
  - type I endoleak= 1 treated
  - occlusion of target 1/32 (3%)
  - type II endoleak= 1

NO CHANGE IN CREATININ AND LACTATES
Conclusion:

New technique FIL&FIS can be used:

- Emergent situations.
- Contraindications of FEVAR.
- In planned stent-grafts.
- In EVAR and TEVAR complications.
- In the future in rupture or symptomatic of complex juxta and supra-renal reconstructions.
Thank you very much for your attention

Dziękuję bardzo za uwagę

Merci beaucoup pour votre attention
Unfriendly upper neck.

- **Fenestrated** graft custom-made, Pbranch, home-made, **FIS**
  - **Branched** graft custom-made, Tbranch,
  - **Chimney** technique (EVAR, EVAS)
    - **Periscope** (Snorkel) technique
      - **Sandwich** technique
        - **Hybrid** technique
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