Dialysis access angioplasty / stenting / thrombectomy under sonographic guidance (without fluoroscopy): a pilot study

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Inclusions: current status
From 09/2011 to 12/2015 55 interventions (25 patients)
Age 64 ± 12 (mean ± SD)
Mean 1.5 (1 to 3) stenosis/patient

6 Fr 4 cm introducer

GW through acute thrombosis

Rotarex 6 Fr thrombectomy

Inclusion criteria:
- patient with any type of dialyse access, requiring endovascular PTA, stenting, cutting B, thrombectomy, endoprothesis, sealing of pseudoA

Exclusion criteria:
- Suspected or known central vein stenosis (subclavian vein or proximal)

Results
- Primary success: 94.5%
- No severe adverse event/ no pain/ no discomfort
- Mean flow before: 458 ± 251 ml/min
  after: 828 ± 258 ml/min
- PSV of the most severe stenosis:
  before: 6.1 m/s
  after: 3.2 m/s
- Survival without any intervention:
  median 12 months
  mean 15 months
- Next intervention: US-guided in 86%

Conclusions:
- US-Guided fistula interventions are:
  Feasible, safe and efficient
  Much more simple and comfortable

Limitations:
- Interventionists must be trained with US
- Patients with central venous stenosis must be excluded

Standard practice:
- Cathlab
- Fluoroscopy
- Contrast medium
- Personal (3 to 4)
- Ambulatory bed

Rational for ultrasound guidance:
- Image resolution
- Measure of flow and vessel size
  - No irradiation, No contrast
  - Simple examination room
  - Reduced personal (2)

PTA after Rotarex thrombectomy

Vol flow during/after procedure