Publication Brief

Assessment of Access Blood Flow After Preemptive Angioplasty

Objective
- To study the ability of access blood flow changes to assess the efficacy of radiological procedures.

Study
- A retrospective study evaluated the effect of single and repeated angioplasties on access blood flow and venous pressures in A-V grafts during a fifteen-month period.
- Seventy-three hemodialysis patients with functioning arteriovenous grafts received monthly access blood flow measurements using the Transonic® HD01 Monitor.
- All measurements were performed within the first two hours of dialysis before blood pressure decreases.
- If access blood flow was less than 600 mL/min or decreased 20% from baseline flow, angioplasty took place.
- Angiography also occurred if there was a venous pressure of more than 200 mmHg, swollen extremity, difficulty cannulating the graft, aspiration of clots, positive ultrasound screening, or as a follow-up to an initial procedure.

Reported Results
- Sixty diagnostic angiograms were performed in 37 patients, resulting in 47 angioplasties.
- A successful angioplasty resulted in an increase of access blood flow to above 600 mL/min for at least one month.
- Approximately 50% of the procedures were effective for longer than three months.
- Cumulative patency rate at six months was 78%.

Conclusions
- Post-intervention, IBF measurements correlate more strongly than fistulography with ABF rates performed during hemodialysis with Gold Standard flow/dilution measurements.
- More studies are needed to determine the optimum target flow value to be achieved by a percutaneous intervention.

Observation
- The Endovascular Flowmeter and ReoCath® Flow Catheters calculate real-time blood flow through access circuits.
- These measurements provide functional and therefore more physiologically relevant data in the interventional suite than qualitative fistulography measurements.

Reference