

Single center registry for the treatment of acute deep venous thrombosis by Angiojet[®]

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Disclosures

Y. Gouëffic reports:

- **Research funding** from Bard, Medtronic, Terumo, WL Gore
- **Personal fees and grants** from Abbott, Bard, Biotronik, Boston Scientific, Medtronic, Terumo, Vygon, WL Gore (medical advisory board, educational course, speaking)

ORIGINAL ARTICLE

Pharmacomechanical Catheter-Directed
Thrombolysis for Deep-Vein Thrombosis

CONCLUSIONS

Among patients with acute proximal deep-vein thrombosis, the addition of pharmacomechanical catheter-directed thrombolysis to anticoagulation did not result in a lower risk of the post-thrombotic syndrome but did result in a higher risk of major bleeding. (Funded by the National Heart, Lung, and Blood Institute and others; ATTRACT ClinicalTrials.gov number, NCT00790335.)

Attract biais: half of the patients had DVT wo involvement of the iliac veins; heterogeneity of the procedures and devices; only 30% of the patients had stent implantation

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(inclusions from may 2017 to october 2018)



Departments of vascular surgery and
médicine- University hospital of
Nantes, France

- Prospective registry
- Objective: patency rates and early clinical outcomes of patients with acute iliofemoral DVT treated with the Angiojet ZelanteDVT[®] system.
- Management by a vascular surgery and medicine departments

In./Ex. criteria

Main inclusion criteria

- Native-vessel iliofemoral DVT
 - Proximal ilio-femoral DVT
 - Upper and lower limbs DVT
- Symptoms for less than 14 days
- Severe symptomatology (pain, oedema, claudication)
- Failure of the anti-coagulation treatment

Main exclusion criteria

- Pregnant women
- Life expectancy < 1-year
- Patient with at bleeding risk
 - Evolutive cancer

Endpoints

Primary patency @ 3 months

Post thrombotic syndrom (Villalta scores >5)

Primary treatment success

FU: clinical and duplex scan control at 24h, M1 and M3

Angiojet[®] thrombectomy system

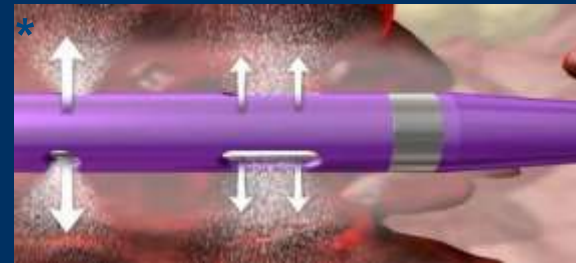
(Boston Scientific)

Console



ZelanteDVT catheter

(8F – 0.35 – OTW)



- High-pressure thrombolysis spray (PowerPuls[®]) for infusion of thrombotic agents
 - Active aspiration
- Torqueable and directional tip for pulse and thrombectomy

Approach



Duplex scan
femoral/popliteal veins
punctures

Systematic cava filter for lower limbs



Venography



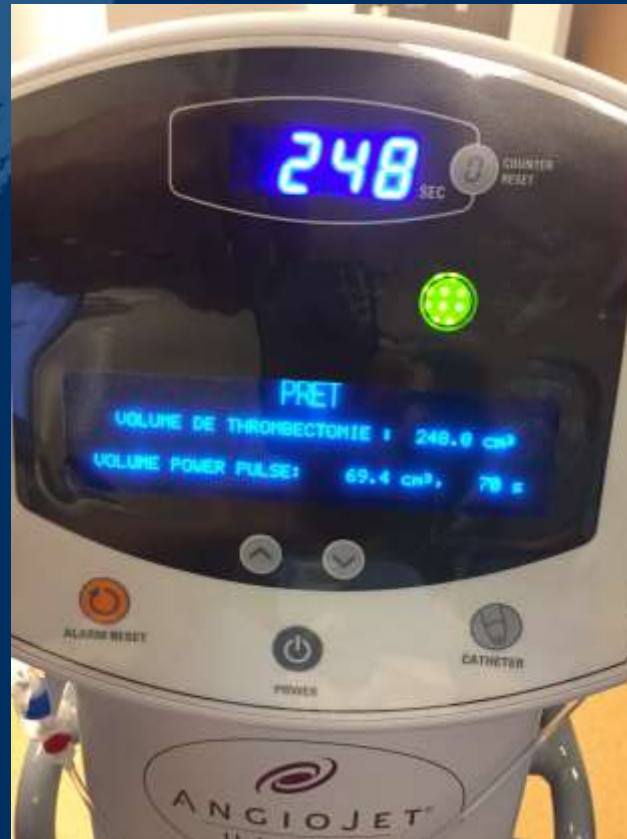
Local fibrinolysis

(1 passage of a pulse-spray thrombolysis – Actilyse 20 mg/procedure)



30-mn later...

Endovascular thrombectomy



- 2 passages of the thrombotic occlusion by advancing the catheter by 2–3 millimetre per second
- Volume max: 400ml

Control venography



Iliac vein stenting



Systematic for ilio-femoral DVT

14–16 mm for the iliac veins, 14 mm for the common femoral vein, and 12 mm for the deep femoral vein

Wallstent® (Boston Sc)

Perioperative treatment

- Walking at D0
- Intermittent pneumatic compression
- Oral anticoagulation vitamin K antagonists or direct oral anticoagulants (duration according the etiology)
- Antiplatelet treatment (1 month)



Demographic data

17 patients – 17 limbs

	17 patients
Age (mean, y)	44 (15-82)
BMI (kg/m ²)(mean)	27 (23.8-28.6)
Female, n (%)	10 (58.8)
Previous DVT, n (%)	4 (23.5)
Active smoking, n (%)	6 (35.5)
Hormonal therapy, n (%)	4 (23.5)
Post partum period, n (%)	2 (11.8)
Active neoplasia, n (%)	2 (11.8)
Thrombophilia, n (%)	6 (35.3)

Clinical symptoms and thrombus extension

Clinical symptoms	17 patients
Pain, n(%)	17 (100)
Oedema, n (%)	17 (100)
Phlegmatia cerulea, n (%)	2 (11.8)

Thrombus extension	17 limbs
Ilio-femoral, n(%)	14 (82.4)
Bilateral, n(%)	1 (5.9)
Inferior vena cava, n(%)	3 (17.6)
Upper limb, n(%)	3 (17.6)
Concomitant pulmonary embolism, n(%)	7 (41.2)

Procedural data

	17 limbs
Delay between symptoms and procedure, (days)	10.7 (7-13)
Cava filter, n(%)	14 (82.3)
Technical success, n (%)	16 (94.1)
Stenting/patient, (mean)	2
Stenting length/patient, (mm, mean)	154 (90-180)
Duration of hospitalization (day, mean)	3.2

Perioperative complications

	3 patients
Common femoral artery false aneurysm, n	1
Arterio-venous fistula, n	1
Perioperative renal failure, n	1
Perioperative pulmonary embolism, n	1
Reintervention, n	2
Intensive care unit hospitalization, n	1
Bleeding, n	0

Outcomes

Primary patency @ 3 months, n(%)	10 (66.7)
Villalta score <5 @ 3 months, n (DVT)	8 (61.5)

Take home message

- Low number of patients and short FU
- Undergoing registry
- Similar to Pearl registry but inferior to Bern registry (primary patency @ 6 months: 92%)
- Unresolved questions:
 - timing of first rib resection ?
 - systematic cava filter ?
 - Deep femoral /popliteal veins thrombosis as a exclusion criteria ?

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