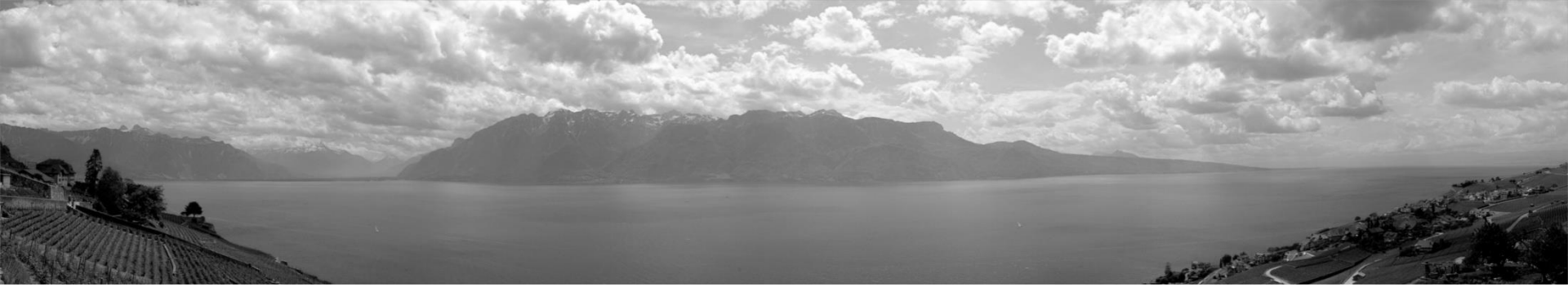


Hybrid approach for lower limbs ischemia

CACVS/2014/PARIS

Disclosure

No disclosure

Hybrid

Hybrid procedures are reported to consist of 5-21% of the total vascular reconstructions

Elbaugh et al; Am J Surg 2008; 196:634-640

Litterature

Heterogeneity of the data in the litterature

No specific endpoints

No clear definition

Critical Limb Ischemia

1-year mortality 20-30%

Multilevel arterial occlusive disease

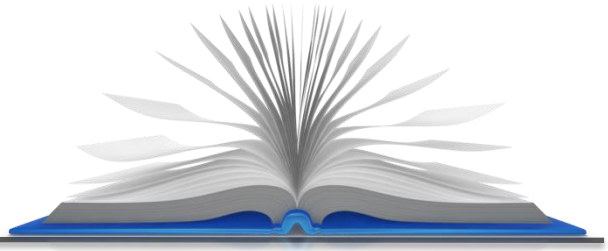
Conservative treatment lead to 40% limb amputation

« One fit all solution »

All by Open	All by Endo
Increased risk of graft occlusion	Increased vascular access complications
Limited vein length	Long stenting
Substantial wound complications	« Off label » endo procedures
Reintervention up to 25%	Increased radiation time
Extensive follow-up	Increased contrast
Increased cardiac risk	

Definition

Multilevel reconstructions using both endovascular and open revascularization in a simultaneous fashion



Aim

Evaluate the performance of hybrid procedures for multilevel arterial occlusive disease

Design

Post Hoc analysis of data derived from a prospectively maintained database

Consecutive patients treated with one-stage hybrid approach for lower limbs revascularization

Monocentric study in a tertiary center

Inclusion from December 2008 to 2011

Settings

Operating room

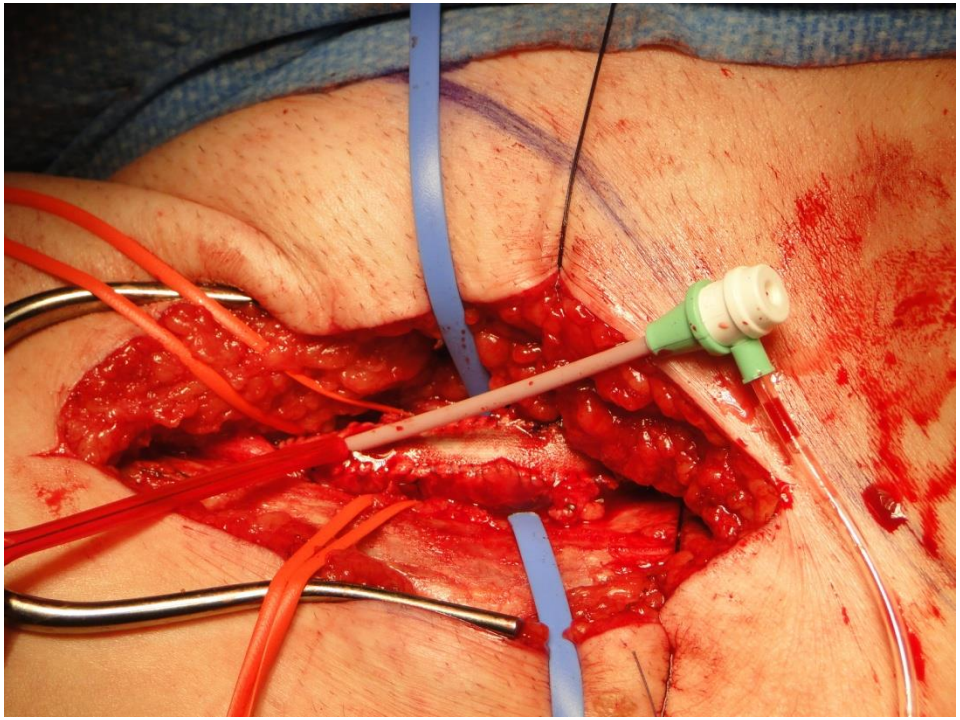
C-Arm Fluoroscopy

Endo/Vascular tools

Radioprotection

Endo/Vascular skills

Technical aspect



Open first

Suture the stent if needed

Correct the inflow first

Outcomes

Primary Outcome

Patency rates (PP, PAP, SP)

Secondary Outcomes

Limb salvage

Inhospital complications

Quality of life

Quality of life

VascQol questionnaire

Telephone call

Items

- Pain
- Walking capacity
- Social behavior
- Mood

Forbes, J Vasc Surg 2010; 51:43S-51S

Demographic data

Variables (N=64pts)	Mean (percentage) (SD;[range])
Age	71.6 (12;[41-95])
Male gender	41 (64)
HTA	50 (78.8)
Diabetes mellitus	27 (42.2)
Coronary heart disease	24 (37.5)
Dyslipidemia	31 (48.4)
Tobacco use	18 (28.1)
CKD*	11 (17.2)

** Chronic kidney disease*

Preoperative data

Variables (N=64pts)	Mean (percentage) (Median;[p25-p75])
Fontaine stage	
IIb	34 (53.4)
III	14 (21.8)
IV	16 (25)
Medications	
Anticoagulation	22 (34.9)
Antiaggregation	65 (95.5)
Statin	52 (76.4)
ASA (2,3)	57 (89)
ASA (4,5)	7 (11)

Operative data

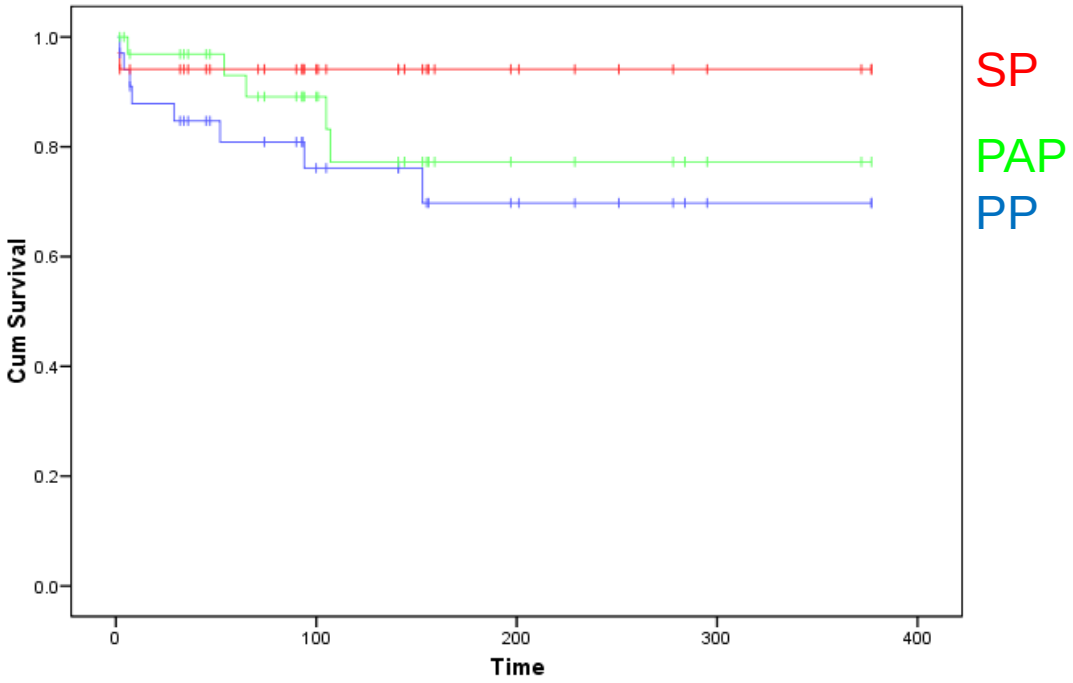
Open Surgery (n=64)	N (%)
Iliofemoral byp	6 (9%)
ATK fem-pop byp	9 (14%)
BTK fem-pop byp	6 (9%)
Fem distal byp	5 (7%)
TEA with patch	38 (59%)

Operative data

Endo procedures (N=69)	N (%)
Inflow correction	20 (28.9)
Outflow correction	47 (68.1)
Inflow and outflow	2 (2.8)
PTA	35
PTA with stent	47
Localisation (N=82)	
Iliac	20 (24)
SFA	29(35)
Popliteal artery	6 (7.3)
Tibial artery	8 (9.7)
Intra previous bypass	19 (23.1)

Technical success: 100%

Patency rates



	@1y
Primary patency	68
Primary assisted patency	80
Secondary patency	92

In hospital complications

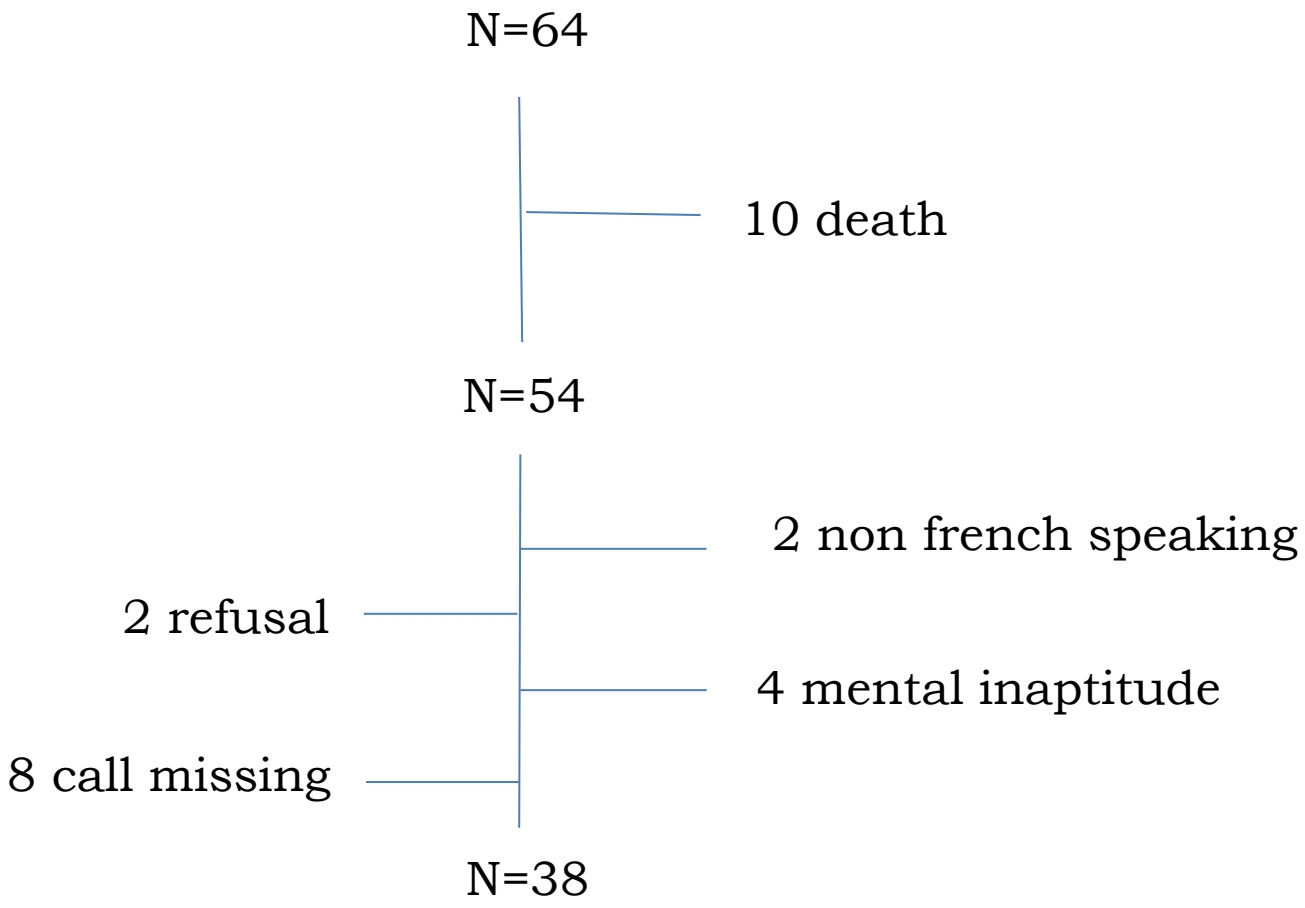
Variables (N=69)	N (%)
Local complications	
Hematoma	4 (5.7)
Seroma	2 (2.8)
Superficial infection	7 (10.1)
Deep infection	2 (2.8)
General complications	
Cardiac (IM, AF, HF)	5 (7.2)
Acute renal insufficiency	2 (2.8)
MOF	1 (1.4)

In hospital complications: 35%

Clinical outcomes

Variables (N=69)	N (%)
Fontaines stages	
Improvement	42 (60.8)
Deterioration	8 (11.5)
Stagnation	19 (27.5%)

VascQoL


N=64
10 death
N=54
2 non french speaking
2 refusal
4 mental inaptitude
8 call missing
N=38

VascQoL

Variables (N=38)	N (%)
Improvement of walking distance	18 (47.5)
Decrease in leg pain during walking	23 (61)
No pain at rest during the night	25 (66)
Ulcers or wounds	34 (89.5)
Absence of social restriction	31 (81.5)
Sadness or depression caused by the disease	26 (68.5)
Good- Very good health state	18 (47.5)

Increased physical activity: 22 (58%)

Improvement of wellbeing: 33 (89%)

Conclusion

One-stage hybrid approach for multilevel arterial disease have the following benefits:

1. No delay in complete revascularization of the ischemic limb
2. Possible extended revascularization even when veins are limited
3. Angiography control after complete revascularization
4. Limited local complications with smaller incision
5. Satisfactory patency rates
6. High technical success when open and endo skills are trained
7. Improvement in quality of life

Francois.saucy@chuv.ch