

Management Of Peripheral Pseudoaneurysms Occurring After Arterial Injury: Experience Of A Vascular Surgery Centre In Morocco.



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Background

Traumatic pseudoaneurysms are not uncommon in civil practice but their management remains a clinical challenge. In this study, we aim to document and analyze the epidemiology, presentation and treatment modalities of traumatic pseudoaneurysms in our experience.

Materials and Methods

- ❑ Study type: Retrospective observational
- ❑ Time frame: 2010 to 2017
- ❑ Inclusion criteria: Traumatic PA in the limbs
- ❑ Exclusion criteria: Traumatic carotid PA (n=2), Traumatic venous PA (n=1), anastomotic PA (n=2)
- ❑ Data analysis: Excel, Epi-info 4.0

Results

Our study included 35 patients, with a sex ratio of 3:1 and a mean age of 35.6 ± 17 , but patients with iatrogenic trauma were relatively older (mean age = 56 years ; $p < 0,001$). There was associated arteriovenous fistula (AVF) in 11 patients (31%) with lower extremity PAs being associated with a higher risk of AVF formation ($RR=3.13$, $p < 0.03$). Patients characteristics and presentations are illustrated on the tables and graphics below.

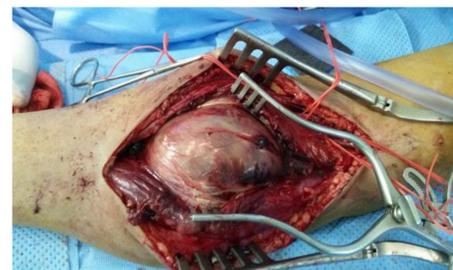
Characteristics	Upper extremity n= 19	Lower extremity n=16	Total n=35
Age	36 ± 18	35 ± 22	35.6 ± 20
Gender			
M	15	11	26 (74.3%)
F	4	5	9 (25.7%)
Mechanism			
Penetrating	15	8	23 (65.7%)
Blunt	2	3	5 (14.3%)
Iatrogenic	2	5	7 (20%)
Delay to diagnosis (days)	20	20	20 [1-1000]
Size of PA (mm)	30	45	37.4 ± 22
AVF	3	8	11 (31%)
Hospital stay (days)	5	9	7 ± 4



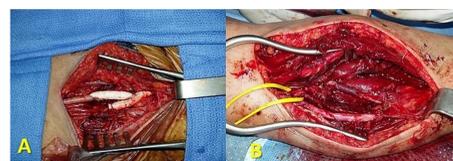
Ruptured brachial artery PA



Radiological aspect of PA

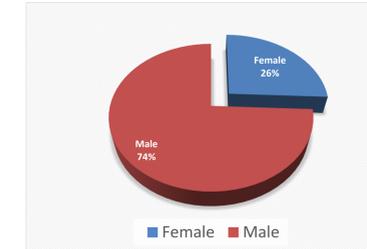


Intraoperative aspect of a cubital PA

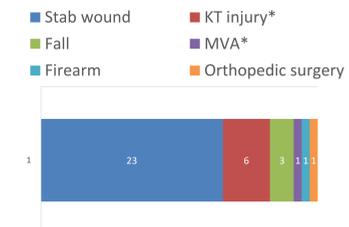


Surgical repair. A: Prosthetic, B: Vein graft

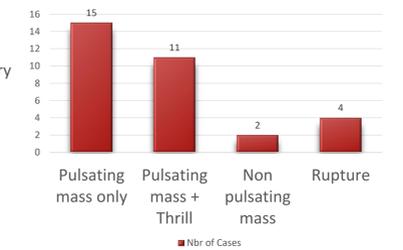
Gender Distribution



Mode of Injury



Clinical Presentation



Anatomical distribution and treatment modalities

Artery	Frequency	Percentage	Management					
			End-end Anastomosis	Lateral suture ± patch	Venous Graft	Prosthetic Graft	Ligation	Embolization
Subclavian	2	5,7	0	2	0	0	0	0
Axillary	1	2,9	-	-	1	-	-	-
Brachial	7	20	1	3	2	0	1	0
Radial	6	17,1	4	1	1	0	0	0
Cubital	3	8,6	0	2	1	0	0	0
Int. Iliac*	1	2,9	-	-	-	-	-	1
Femoral**	9	25,7	1	1	1	2	2	1
Popliteal	6	17,1	2	1	3	0	0	0
Total	35	100	8 (23%)	10 (29%)	9 (26%)	2 (6%)	3 (9%)	2 (6%)

* A gluteal branch of internal iliac artery
** One patient was treated by ultrasound-guided compression therapy

Outcomes after treatment:

The mean hospital stay was 7 ± 4 days and mean follow-up period was 6 months. The postoperative complication and mortality rates were 8.6% (n=3) and 2.8% respectively. We recorded no case of limb ischemia or secondary amputation, and reintervention was required in one patient for surgical evacuation of compressive hematoma.

Conclusion

- ✓ Late presentations of vascular injury of both upper and lower extremity occurring mostly after penetrating trauma.
- ✓ Higher risk among young male adults
- ✓ Frequent association with arterio-venous fistulae in the lower limbs.
- ✓ Open surgical repair remains the preferred treatment, with satisfactory results and acceptable morbimortality rates