Suivi post opératoire idéal

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Les différents cadres du suivi

- Après création
  - Contrôle post-op immédiat
  - Contrôle avant utilisation
- Suivi habituel d'un AVAV utilisé
- Suivi après réfection chirurgicale ou endovasculaire
- Suivi d'un AVAV non utilisé

Suivi péri opératoire

- **Dépister une complication immédiate**
  - Thrombose
  - Hémorragie
  - Ischémie
  - Neuropathie ischémique monomélique

- **Dépister une complication précoce**
  - Infection
  - Séroma
  - Retard de cicatrisation
  - Ischémie

Examen clinique
Chirurgien (Infirmière)

Les recommendations

- EJVES 2018

Recommendation 25	Class	Level
If after creation of a vascular access, there is no thrill or a bruit in the region of the anastomosis, further investigations should be considered.	IIa	C

Recommendation 73	Class	Level
Post-operative monitoring for signs of ischaemic neuropathy is recommended in patients with diabetes or pre-existing neuropathy undergoing an upper arm vascular access procedure.	I	C

- KDOQI 2019

Statements: AV Access Steal

18.2 KDOQI considers it reasonable that post AV access creation, patients should be monitored closely for signs and symptoms associated with AV access steal and managed appropriately with consideration of individual circumstances as follows: (Expert Opinion)

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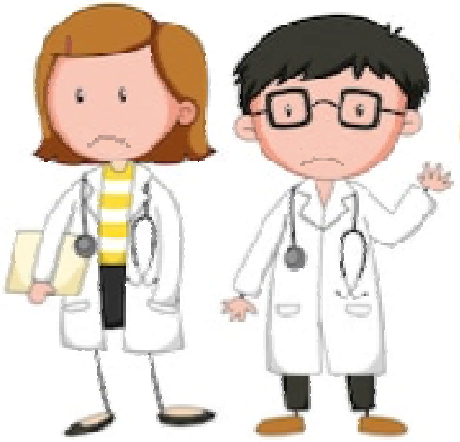
Contrôle avant utilisation:
Retard de maturation



- 4-6 semaines
- Néphrologue
- Médecin vasculaire (expertise écho-Doppler)

Retard de maturation

Recommendation 35
If an arteriovenous fistula fails to mature by 6 weeks, additional investigations (like duplex ultrasound) should be considered in order to achieve prompt diagnosis and treatment.

IIa	C

- **Confirmation**
  - Mesure du débit
  - Analyse de la veine drainage
- **Identifier la cause**
  - Sténose
    - Artérielle
    - Veineuse
    - Anastomotique
  - Artère donneuse de petit calibre
  - Veine de drainage pathologique
- **Déterminer la conduite à tenir**
  - Correction de la cause
  - Tentative d'utilisation

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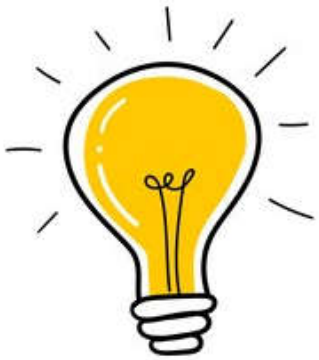
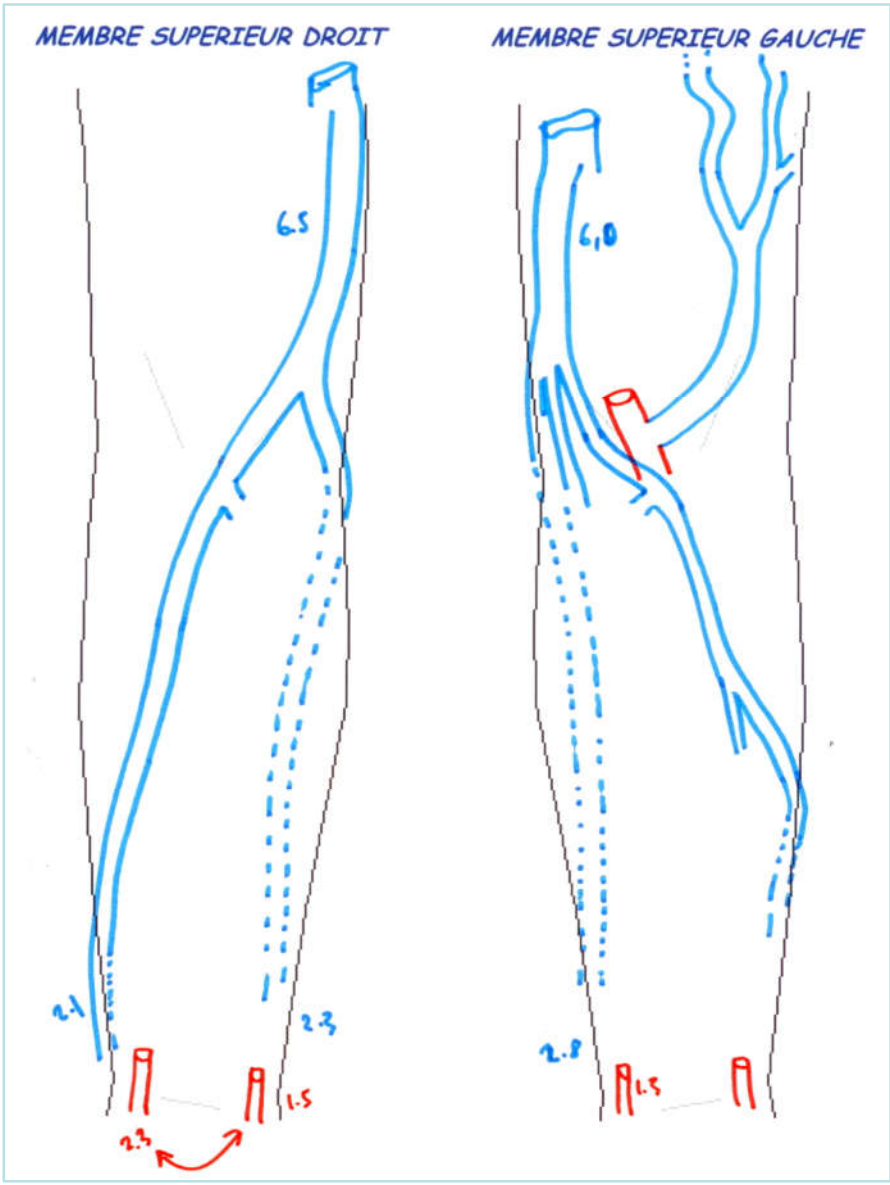
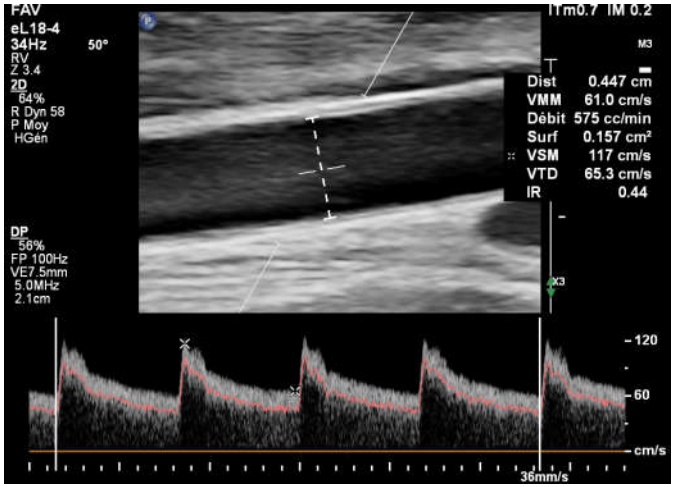


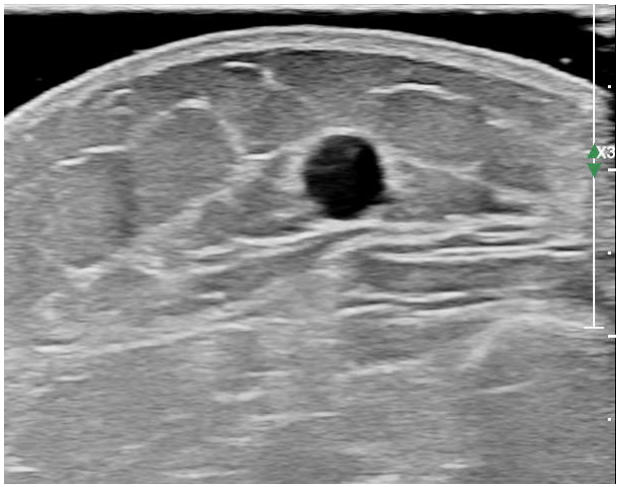
Prévention = Cartographie



Faux retard de maturation

- Débit suffisant
- Veine de drainage de bon calibre mais profonde
  - Non visible
  - Non ou difficilement palpable





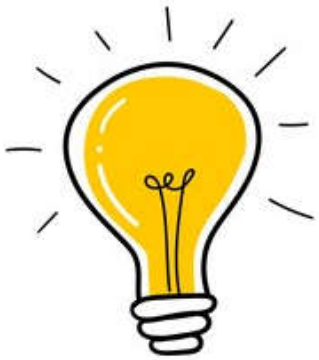
Faux retard de maturation

- Débit suffisant
- Veine de drainage de bon calibre mais profonde
  - Non visible
  - Non ou difficilement palpable

⇨ **Identifier les sites de ponction les plus appropriés**

⇨ **Proposer un échoguidage des ponctions**

⇨ **Poser l'indication d'une superficialisation**



Contrôle avant utilisation:
FAV fonctionnelle

- 4-6 semaines
- Néphrologue
- Expertise écho-Doppler ?

Recommendations

Statement: AV Access Early Postoperative Considerations (0-30 days)—Early AV Access Complications

10.1 **KDOQI considers it reasonable for AV access (AVF and AVG) to be evaluated by a surgeon/operator for postoperative complications within 2 weeks and for an appropriate member of the vascular access team to evaluate for AVF maturation by 4-6 weeks after AV access creation and refer for further investigation if not maturing as expected. (Expert Opinion)**

Note: Ideally, the surgeon/operator evaluating for complications would be the same individual who created the AV access.

Examen écho-Doppler?

6.1.2. Maturation of arteriovenous fistula

6.1.2.1. Physical examination and other diagnostic methods. Maturation can be established by physical examination of both the venous conduit and its flow.

Post-operative ultrasound examination between the first 6–8 weeks and 2–4 months[132] after fistula creation is helpful in confirming maturation.

Quels objectifs?

- **Mesurer le débit de l'AVAV**
  - Hypodébit - hyperdébit ?
  - Valeur de référence
- **Rechercher une sténose**
  - Réfection
  - Surveillance adaptée
- **Mesure des pressions digitales**
- **Conseils d'utilisation**
  - Délai d'utilisation
  - Choix des sites de ponction
- **Cartographie**

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Suivi d'un AVAV utilisé

Statement: Vascular Access General Monitoring

11.1 KDOQI considers it reasonable to assess or check the vascular access and surrounding area by physical exam prior to every cannulation (if AV access) or connection (if CVC) for potential complications. (Expert Opinion)

Statements: Appropriate Use of Monitoring/ Surveillance for AV Access Flow Dysfunction

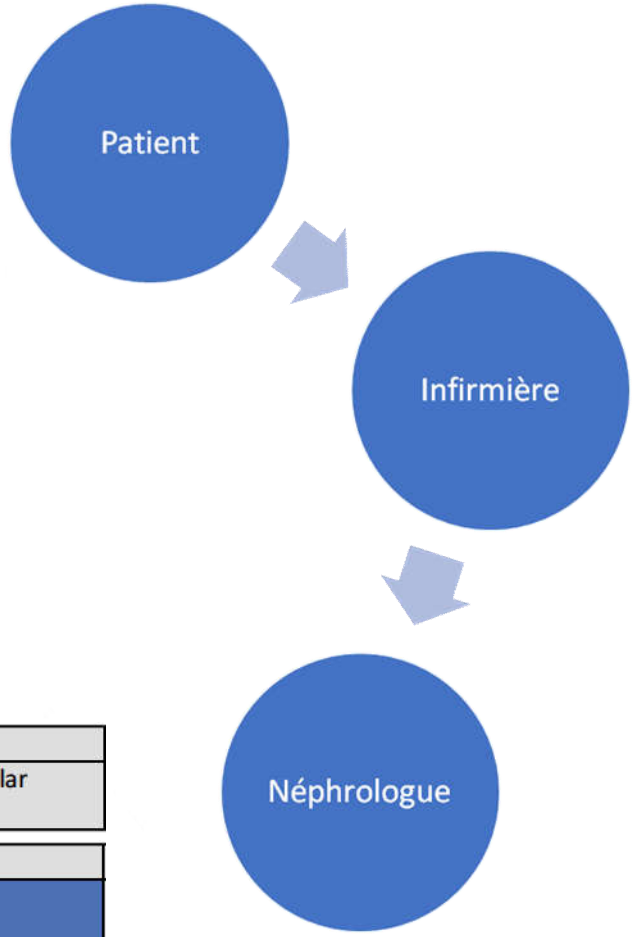
Physical Examination (Monitoring)

13.1 KDOQI recommends regular physical examination or check of the AVF, by a knowledgeable and experienced health practitioner, to detect clinical indicators of flow dysfunction of the AVF. (Conditional/Strong Recommendation, Moderate Quality of Evidence)

13.3 KDOQI considers it reasonable for nephrology trainees and health practitioners involved with clinical HD patient care to be properly trained in physical examination of the AV access to monitor for and detect AV access flow dysfunction. (Expert Opinion)

Recommendation 44
Routine physical examination is recommended for vascular access surveillance and monitoring.

Class	Level
I	B



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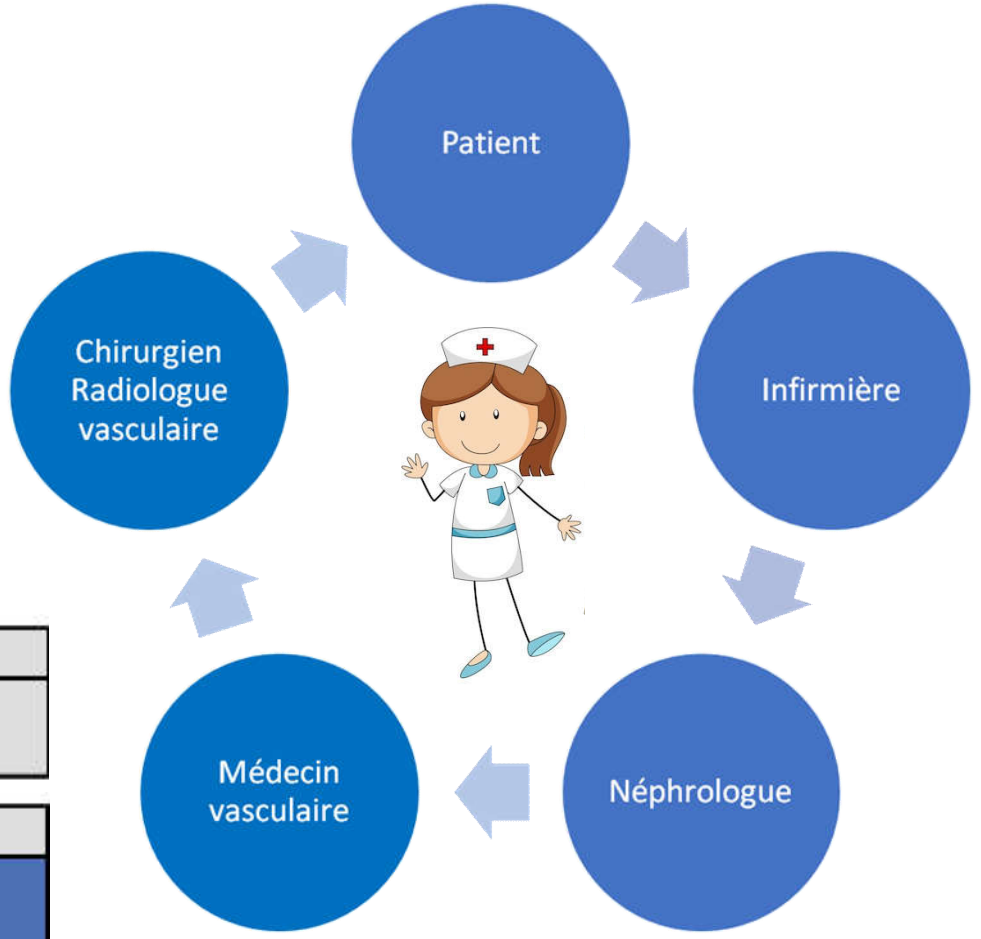
Suivi d'un AVAV utilisé

- Signes cliniques
- Dysfonction
- Altération des paramètres de dialyse



Recommendation 9	
Duplex ultrasound is recommended as the first line imaging modality in suspected vascular access dysfunction.	
Class	**Level**
I	B

Suivi d'un AVAV fonctionnel sans point d'appel clinique

Surveillance to Facilitate Patency

13.4 **There is inadequate evidence for KDOQI to make a recommendation on routine AVF surveillance by measuring access blood flow, pressure monitoring, or imaging for stenosis, that is additional to routine clinical monitoring, to improve access patency.**

Note: In other words, monitoring of vascular access is primary, while surveillance findings are supplementary, and action should not be based solely on surveillance findings.

13.5 **KDOQI does not suggest routine AVG surveillance by measuring access blood flow, pressure monitoring, or imaging for stenosis, that is additional to regular clinical monitoring, to improve AVG patency. (Conditional Recommendation, Low Quality of Evidence)**

Note: In other words, monitoring of vascular access is primary, while surveillance findings are supplementary, and action should not be based solely on surveillance findings.

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Suivi d'un AVAV fonctionnel sans point d'appel clinique

Recommendation 45	Class	Level
It is recommended that vascular access surveillance is performed by flow measurement of arteriovenous grafts monthly and arteriovenous fistulas every 3 months.	I	B

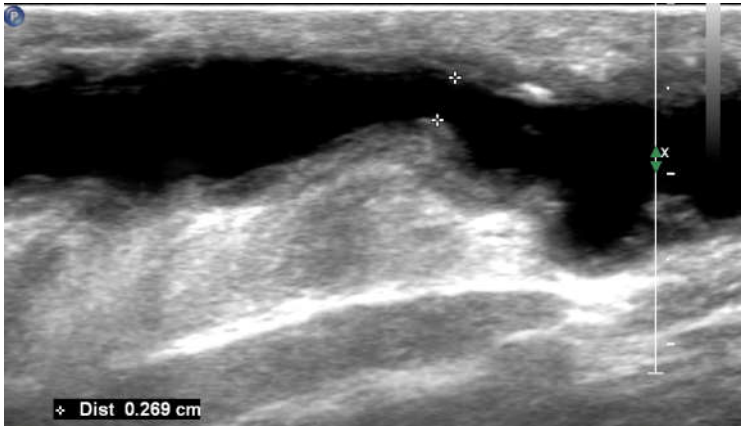
Recommendation 49	Class	Level
Surveillance of arteriovenous fistulas with duplex ultrasound at regular intervals and pre-emptive balloon angioplasty should be considered to reduce the risk of arteriovenous fistula thrombosis.	IIa	A
Recommendation 50		
Surveillance of arteriovenous grafts with duplex ultrasound at regular intervals and pre-emptive balloon angioplasty is not recommended to prevent thrombosis or improve arteriovenous graft functionality.	III	A

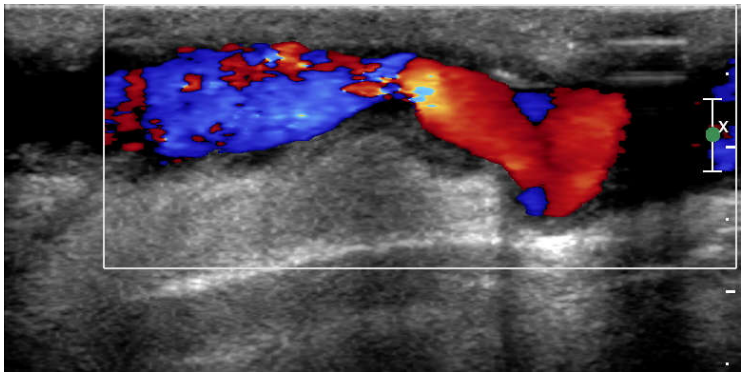
La part des choses…
Surveillance justifiée si:

- Patient en autodialyse
- Examen clinique non performant (obésité)
- ATCD de sténoses récidivantes
- FAV « précieuse »
- Sténose connue « limite »
  - Mesures rapprochées du débit Transonic
  - Echo-doppler

Après la réfection d'un AVAV

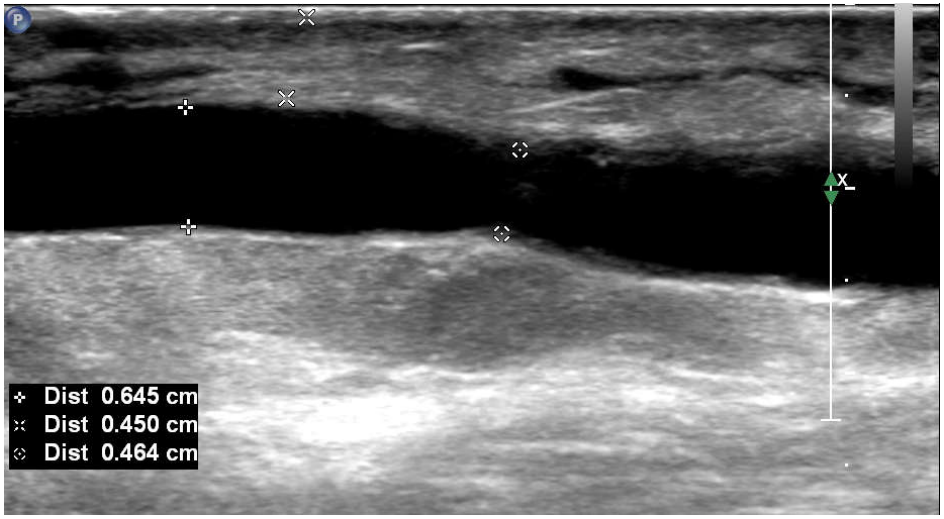
- **Sténose veineuse**
  - 1-4 semaines
  - Mesure du débit
  - Analyse du résultat local
    - Sténose résiduelle
    - Sténose récidivante
    - Examen exhaustif
  - Sténose à distance (site d'accès veineux)
  - Ischémie



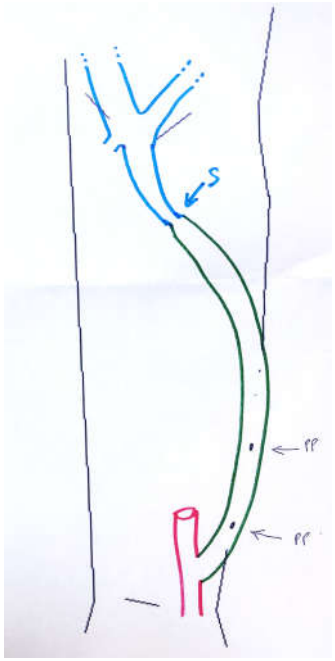


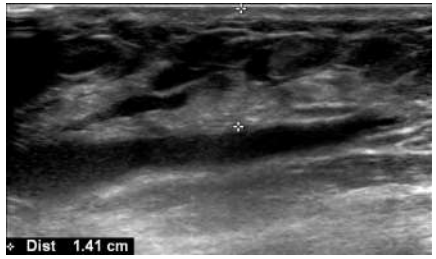
Après la réfection d'un AVAV

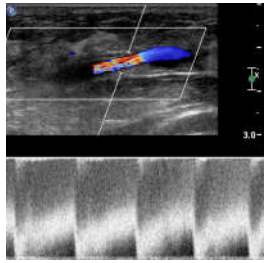
- **Angioplastie artère donneuse - anastomose**
  - Mesure du débit
- **Traitement de l'ischémie**
  - Mesure des pressions digitales
- **Traitement de l'hyperdébit**
  - Mesure du débit
- **Superficialisation**
  - Délai d'utilisation
  - Site de ponction

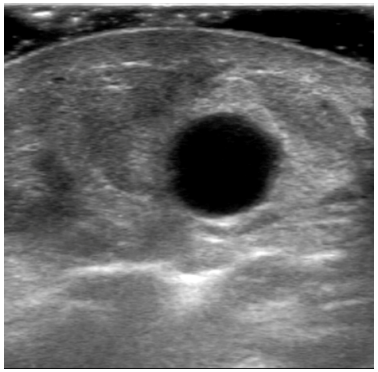


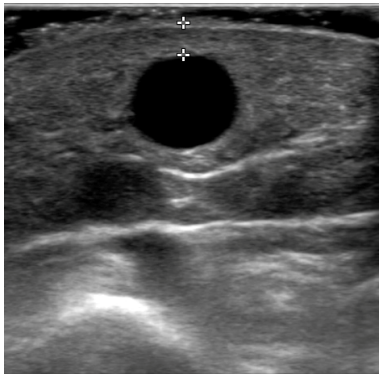
Après la réfection d'un AVAV



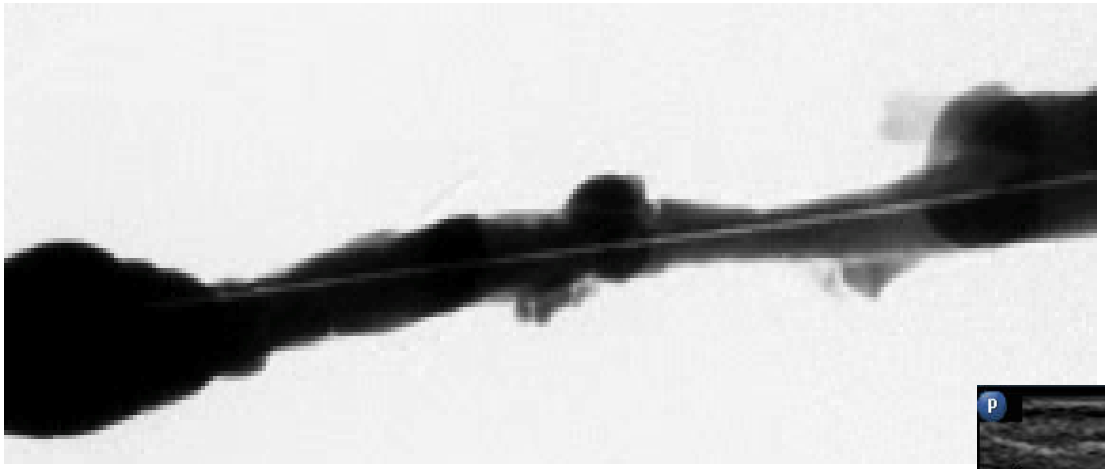


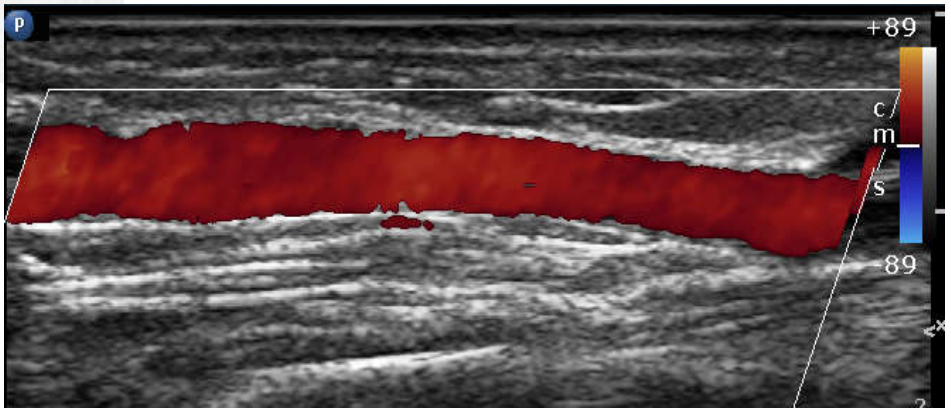






Angioplastie d’une sténose veineuse: Contrôle immédiat du résultat et critères de succès





Angioplastie d'une sténose veineuse: Contrôle immédiat du résultat et critères de succès

	Rx	Echo-Doppler
% de sténose (diamètre)	✓	✓
Mesure des vitesses	✗	✓
Mesure du débit	✗	✓
Etude de la collatéralité veineuse	✓	✗
Evaluation des pressions	✗	✓
Identification du recoil	✓ / ✗	✓
Identification des complications	✓	✓

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Le suivi post opératoire idéal…

- Affaire de tous, tout le temps
- Clinique & paramètres de dialyse +++
- Echo-Doppler
  - Si point d'appel clinique, dysfonction, …
  - Systématique
    - Avant utilisation
    - Après réfection
    - Chez des patients sélectionnés