Embolisation des fibromes Utérins

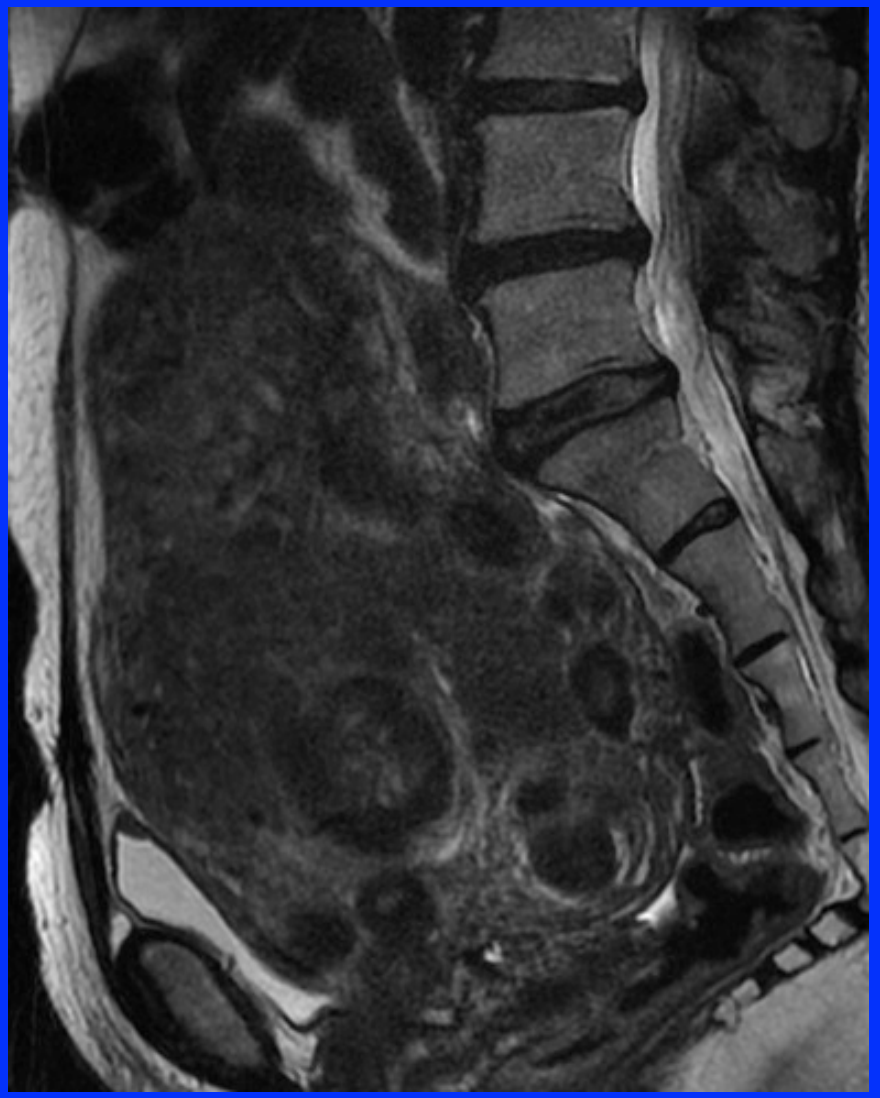
L.Viremouneix HFME / Bron
SFRA 13 06 2012

Léiomyome Utérin

- Tumeur pelvienne plus fréquente chez la femme
- 20 - 40% femmes > 35 ans
- Taille + nombre ↗ âge => ménopause
- Femmes noires
  - Prévalence > 30%
  - Croissance plus rapide
  - Spt plus précoces

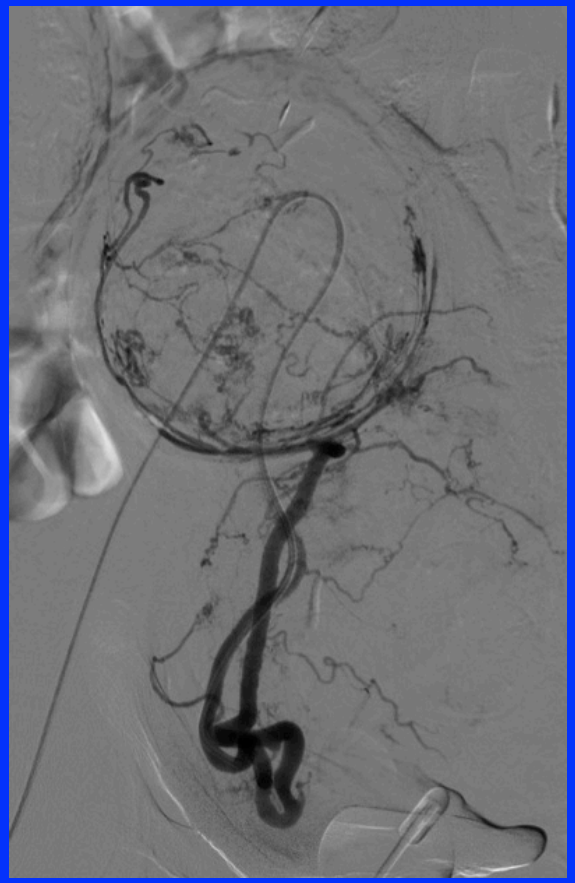
Symptomatologie

- Méno-métrorragies
- Douleurs pelviennes
- Pesanteur pelvienne
- Troubles urinaires
- Constipation
- Infertilité



Prise en charge : 1

- Abstention
- Médicale (progestatifs / acide tranexamique : Exacyl® / analogue LH-RH)
- Chirurgicale
  - Myomectomie
  - Hystérectomie
- Radiologique
  - Embolisation
- TTT combiné



MULTIDISCIPLINAIRE

Prise en charge : 2

- Consultation Gynécologique :
  - ATCD méd. / chir. / gyn. / obsté.
  - Examen clinique
  - Biopsie de l'endomètre (métrorragies / MNP ss THS)

- Consultation Radiologique :
  - Symptomatologie
  - Bénéfices attendus
  - CPK

- Imagerie : US / IRM +++
  - Indication / CI / Dg ≠iel

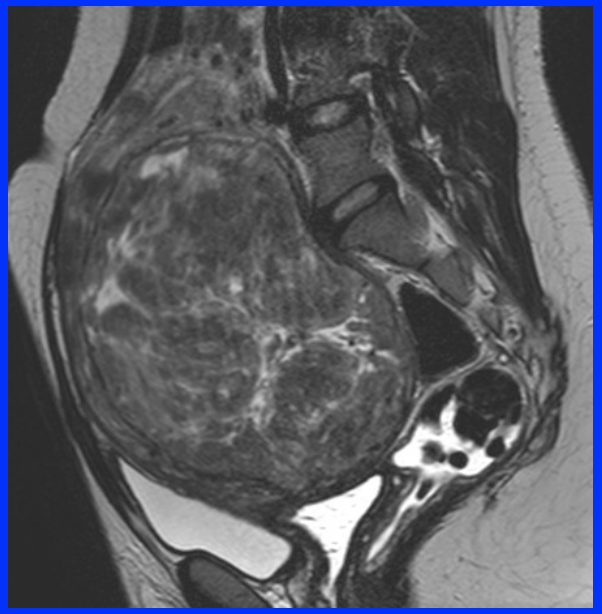
Indications idéales

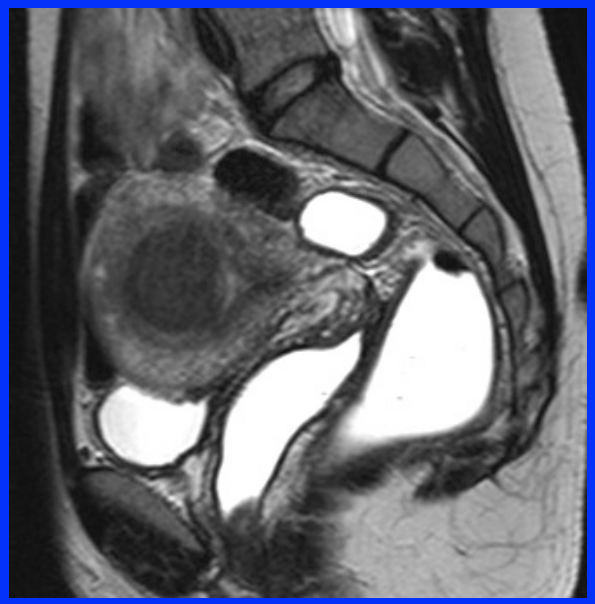
- Patientes symptomatiques +++
  - Ménorragies
  - compression pelvienne

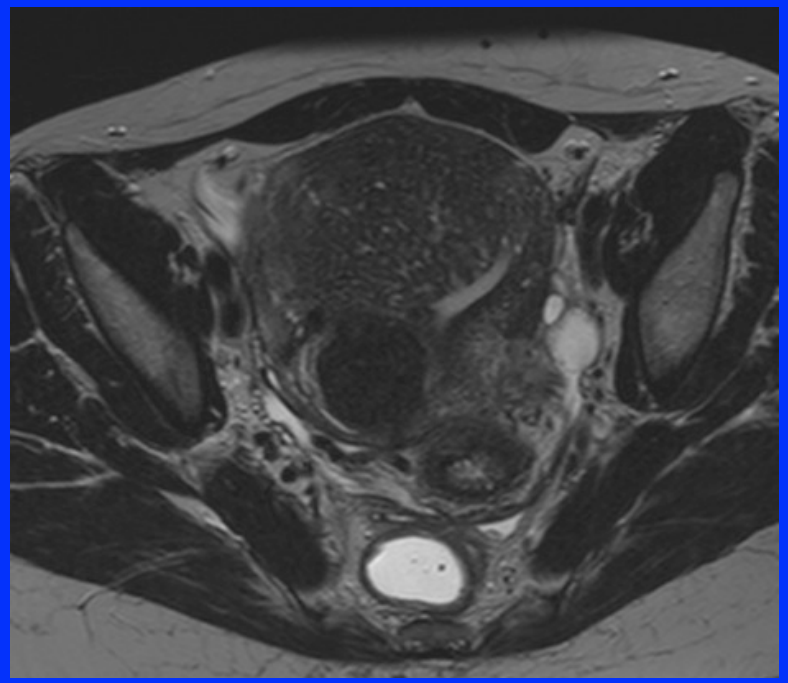
  } Inefficacité du ttt médical
- Pas d'indication chirurgicale pour une autre raison
- Confirmation par l'imagerie (écho / IRM)
- Unique ou multiple (myome dominant < 10 cm)
- Intramural ou large base d'implantation (ss séreux /muqueux)
- Femme > 38 ans sans désir de grossesse

Indications « élargies »

- Fibromes géants > 10 cm
- Sous muqueux > 5 cm
- Association avec adénomyose
- Désir de grossesse

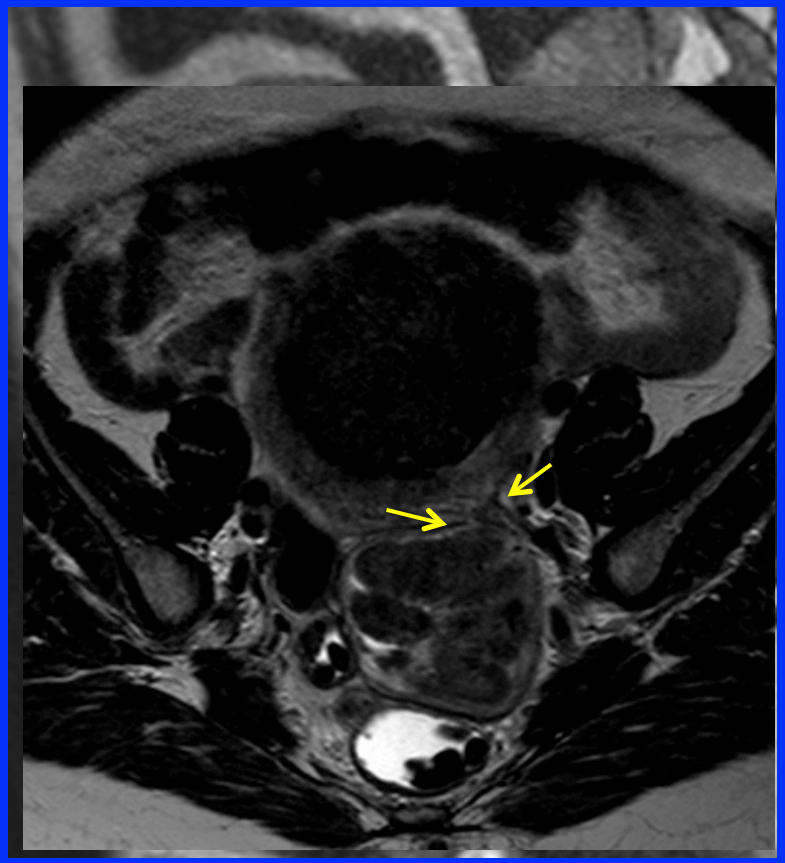






Contres Indications

- Patientes asymptomatiques
- Grossesse
- Infection génitale (endométrite, pyosalpinx)
- Lésion néoplasique OGI
- Vascularites en poussée
- Shunt artério-veineux
- IR
- ATCD de réaction au PC
- Myomes intra cavitaires



- Motivations esthétiques
- Chirurgie simple possible (myome unique)
- Myome sous séreux pédiculé

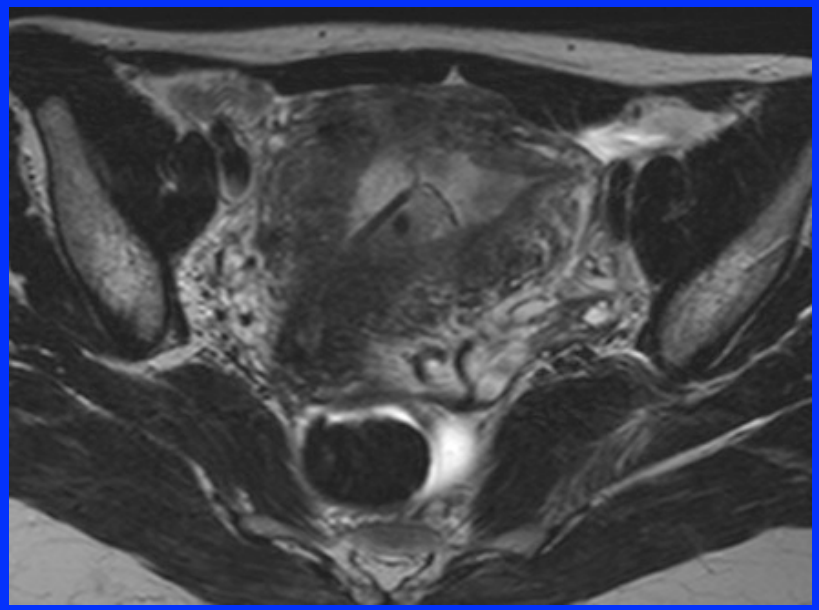
Smeets AJ et Coll. Safety and effectiveness of uterine artery embolization in patients with pedunculated fibroids. *J Vasc Interv Radiol*. 2009 Sep;20(9):1172-5.

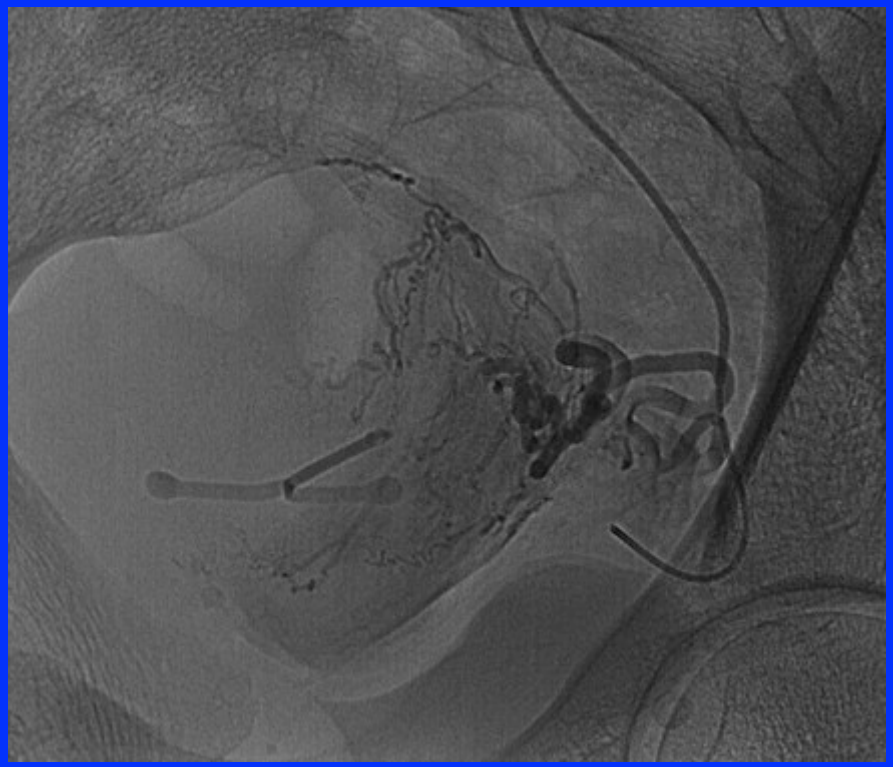
DIU ?

- Pas de contre indication à l'embolisation

Smeets AJ et col. Is an intrauterine device a contraindication for uterine artery embolization? A study of 20 patients. *J Vasc Interv Radiol*. 2010 Feb;21(2):272-4.

- Etude sur 20 patientes :
  - Pas de complications infectieuses



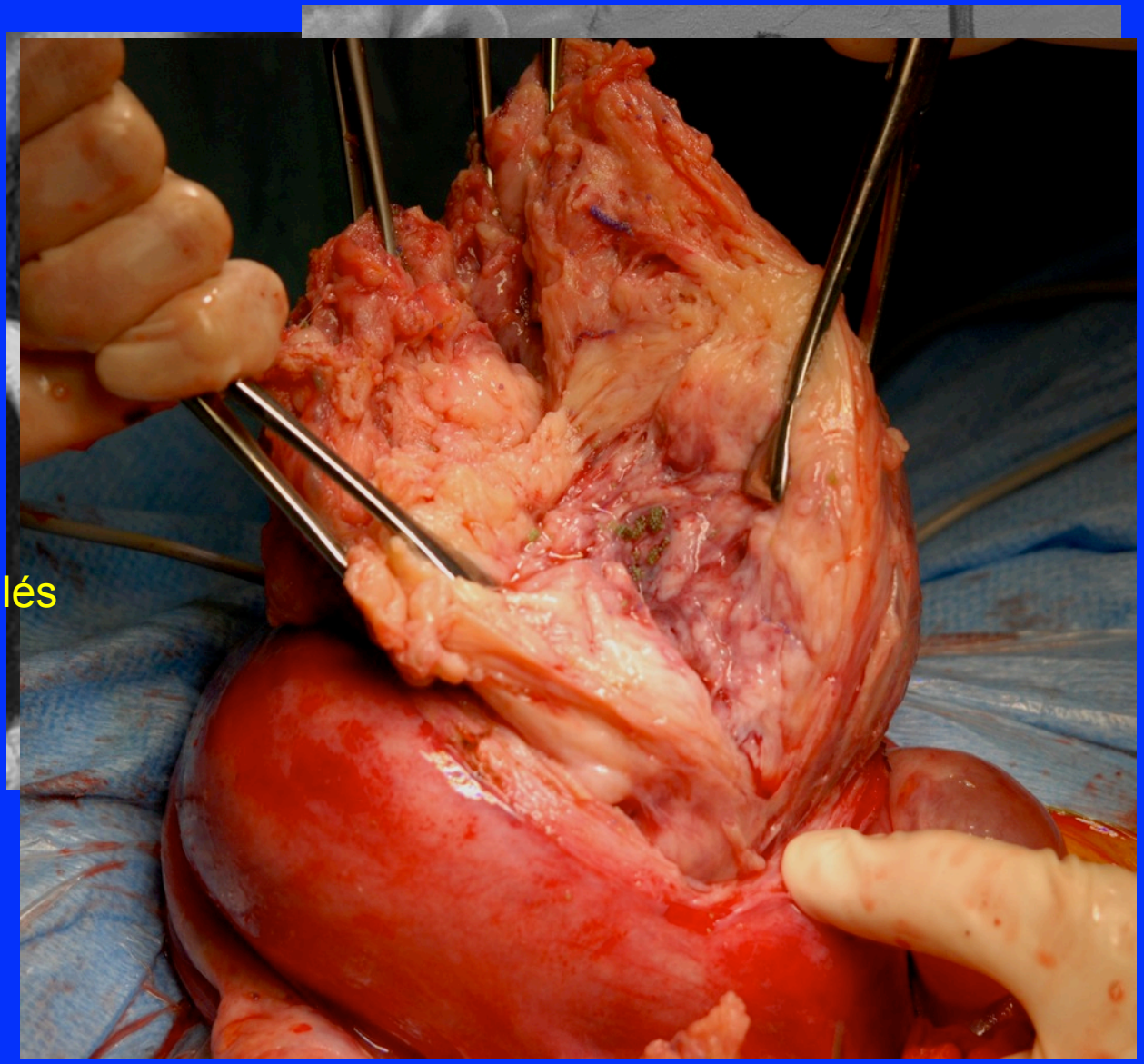


Geste combiné

- Embolisation -> Xie
  - Unique
  - Multiples (>4)

- Xie -> Embolisation
  - Ss séreux
  - Ss muqueux

} pédiculés



Justification : Technique

- Embolisation µ-particules (PVA non sphériques / µ sphères tris-acryl > 500 µm)

  – Efficace dans >90% des cas à court / moyen terme pour :
    - Ménorragies
    - Spt compression pelvienne
    - Douleurs pelviennes

    (Walker 2002, Pron 2003)

  – Efficace à 75% des cas à 7 ans pour :
    - Ménorragies
    - Spt compression pelvienne

    (Spies 2005, Walker 2006, Lohle 2008)

  – Efficacité à 6 mois :
    - Sur la diminution du volume utérin (30 - 60 %)
    - Sur le volume des fibromes (50 - 80%)

    (Walker 2002, Pron 2003, Spies 2005)

Justification : Embolisation vs chirurgie

- Pas plus de complications majeures (Pinto 2003, Katsumori 2006, Volkers 2007)
  - Plus de cpk mineures / rehospital. / reintervention (Embol.)
  - Hospitalisation / convalescence plus longue (Chir.)
  - Douleurs post TTT (24 h) : Chir. > Embol.
- Pas de ≠ qualité de vie (Van der Kooij 2010, 2001)
- Efficacité identique sur Spt (sgt, cprs, douleurs) (Mara 2008)
- Plus de grossesses après myomectomie (Mara 2008)
- Durée hospit. et AT de l'Embol. < Chir.
- Cout de l'embol. < Chir.

Analgésie

- Procédure :
  - AG
  - Sédation + PCA morphine
  - Péridurale

- Post procédure immédiat :
  - Morphine et dérivées : ischémie (2 – 4 H)

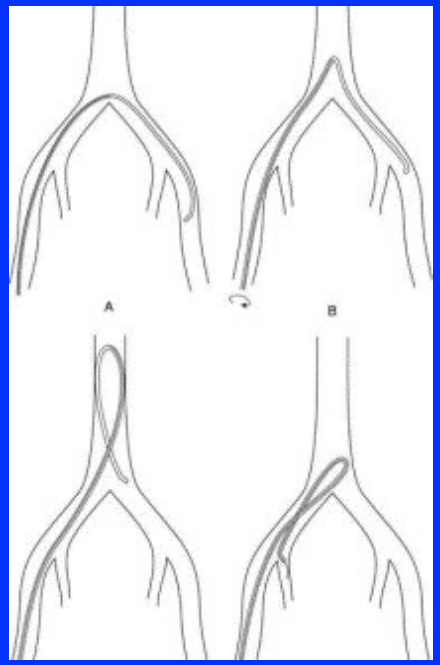
- Syndrome post embolisation :
  - AINS : réaction inflammatoire (24 – 48H)

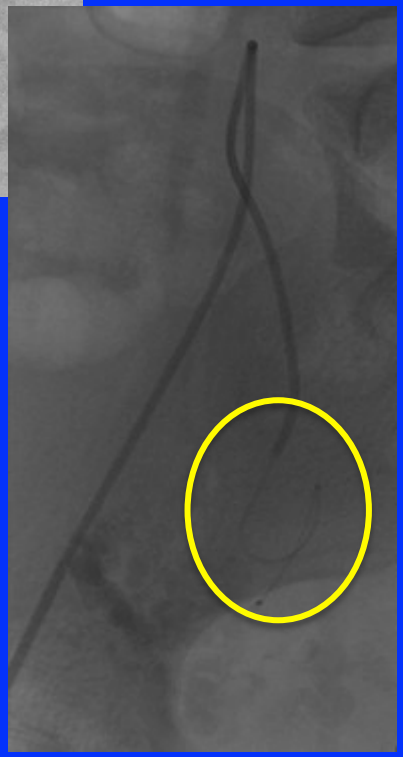
Lampmann LE et Coll. Pain management during uterine artery embolization for symptomatic uterine fibroids. *Cardiovasc Intervent Radiol.* 2007 Jul-Aug;30(4):809-11. , Siskin 2001

Technique : Matériel

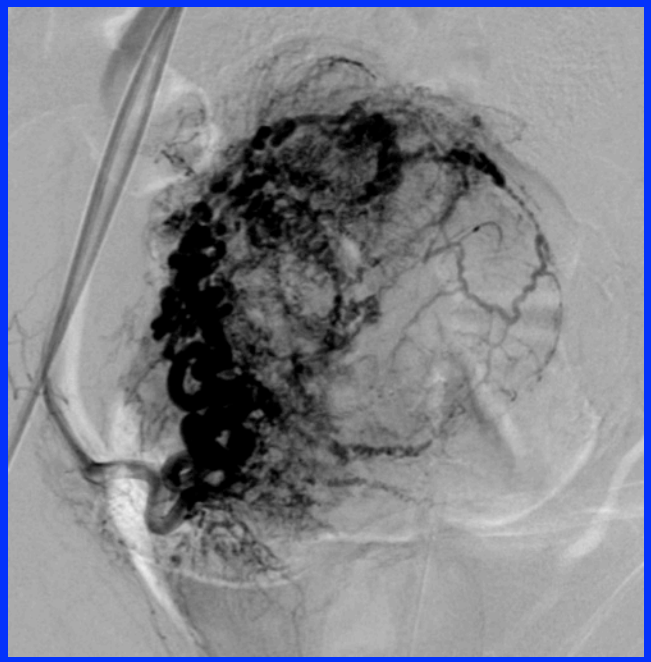
- Abord : Uni / Bilatéral
- Introducteur : 4 ou 5 Fr
- Cathéter : 4 ou 5 Fr
  - C2
  - Vert.

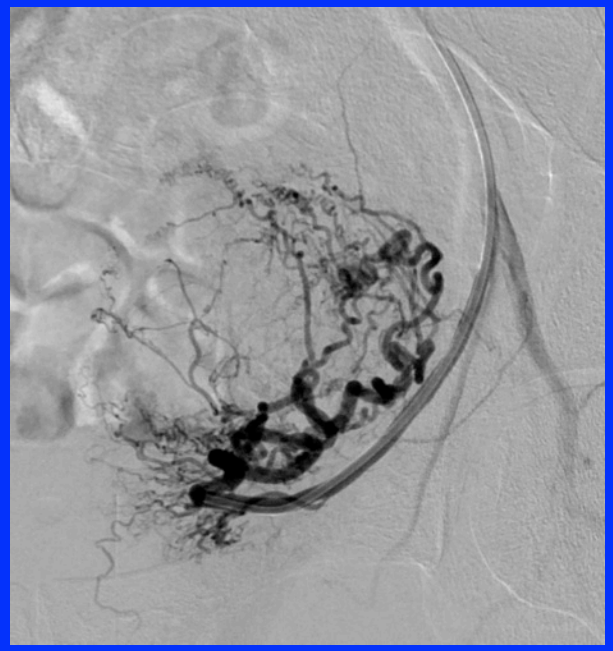
  } Boucle de Waltman
  - UAC
  - µ-cathéter (2,7 Fr) irrigué

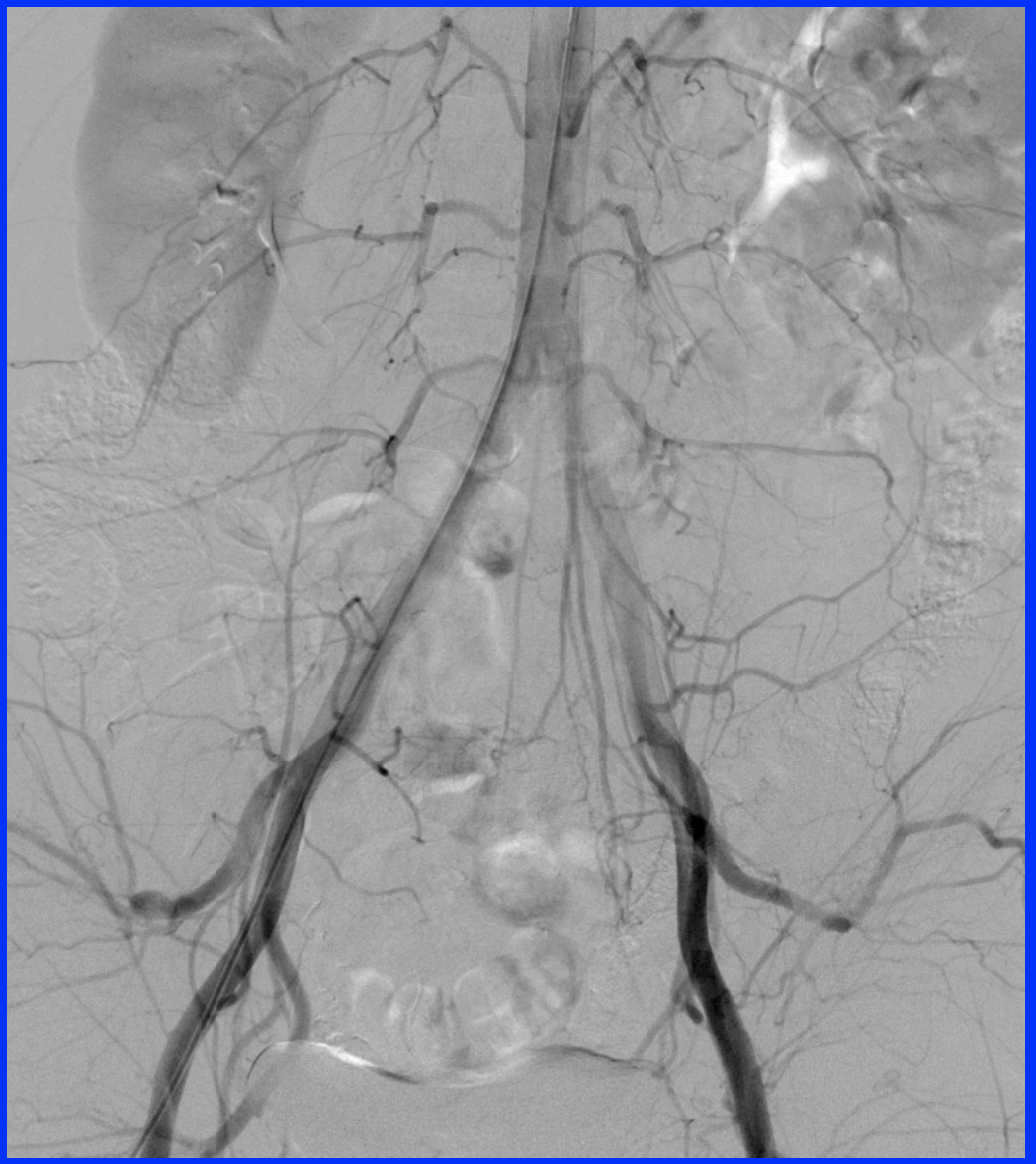




- Sondage urinaire

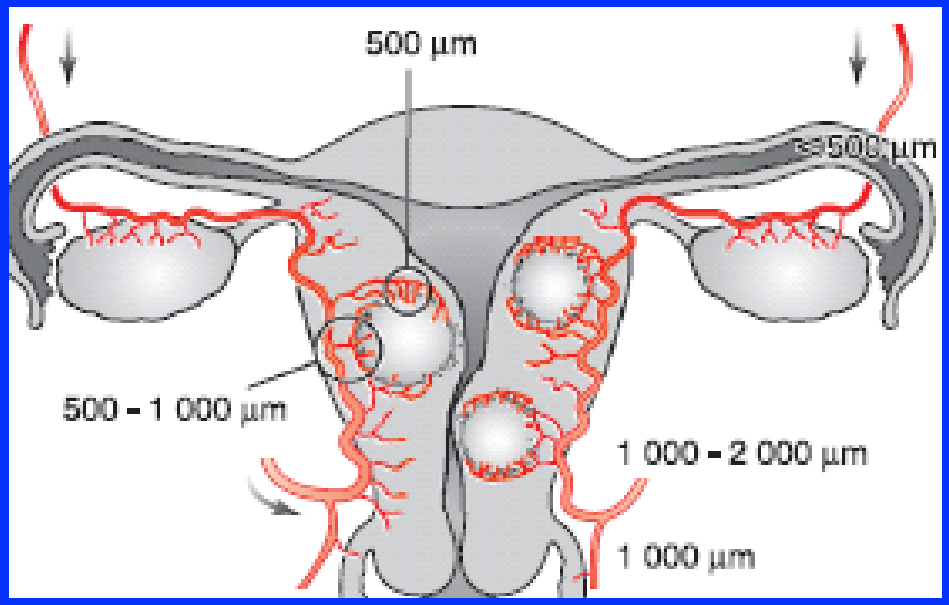






Technique : Matériel

- Cible : plexus artériel peri-myomateux (Ø > 500 µm)



- Particules :
  - Microsphères de tris-acryl : Embosphères® > 500 – 700 µm
  - Hydrogel monomère PVA : Bead block® > 700 – 900 µm
  - Microsphères : Embozène® 700 + 900 µm

Matériel : µ-particules

- Pas de ≠ entre PVA non sphériques et µ sphères de tris-acryl :
  - Douleurs post-embolisation / dose d'antalgiques
  - Réduction de taille du fibrome
  - Complications

- Efficacité clinique et dévascularisation
  - µ sphères de tris-acryl > PVA non sphériques

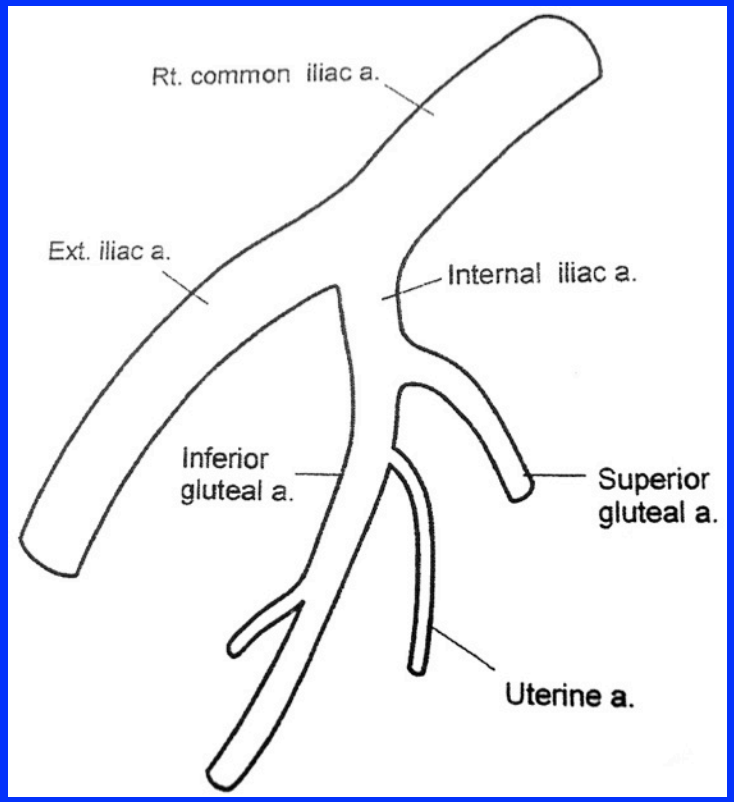
(Spies 2004 / 2005; Abramowitz 2009)

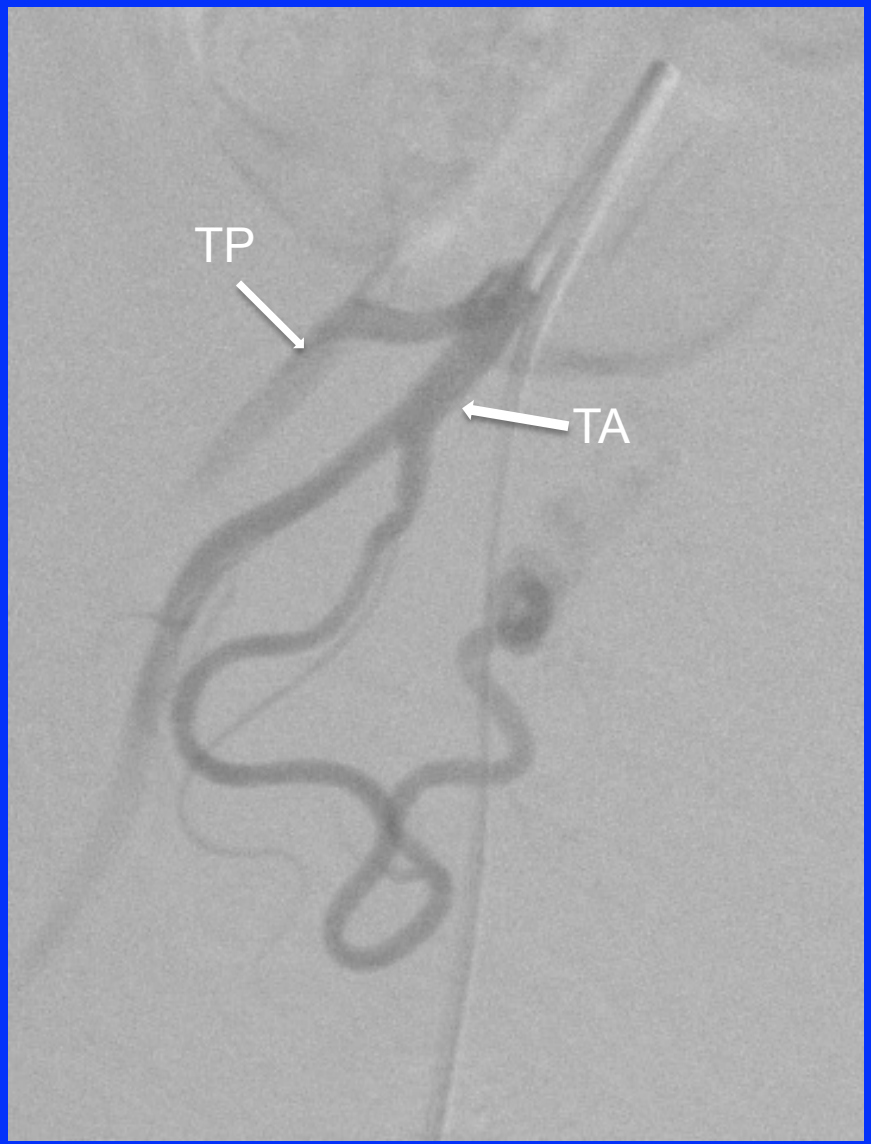
- Embozènes : particules calibrées
  - 40 / 75 / 100 / 250 / 400 / 500 / 700 / 900 / 1100 / 1300µm

(Smeets 2010)

Technique : Procédure

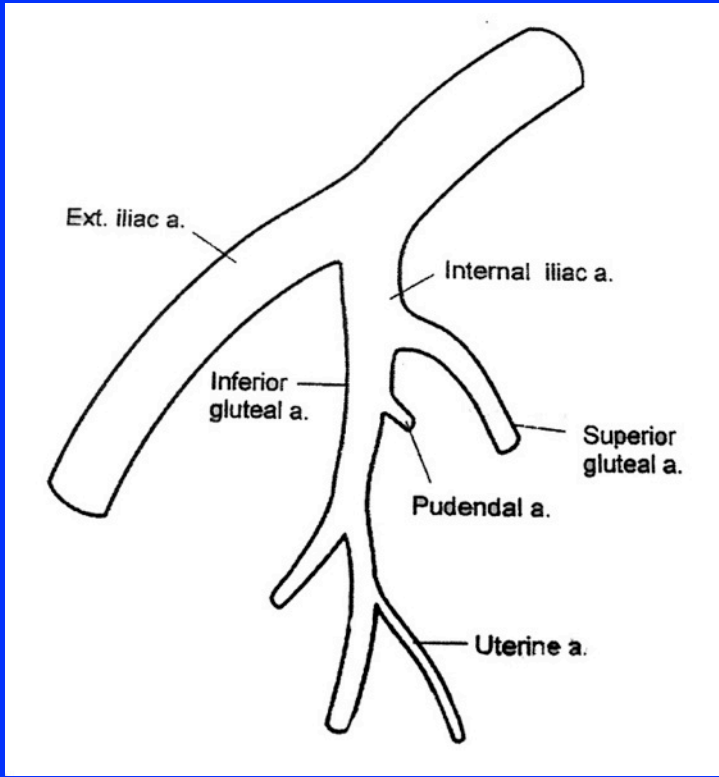
- Cathétérisme sélectif a. utérine
  - Variantes anatomiques : Type I 45%
  - 1ère branche du tronc antérieur

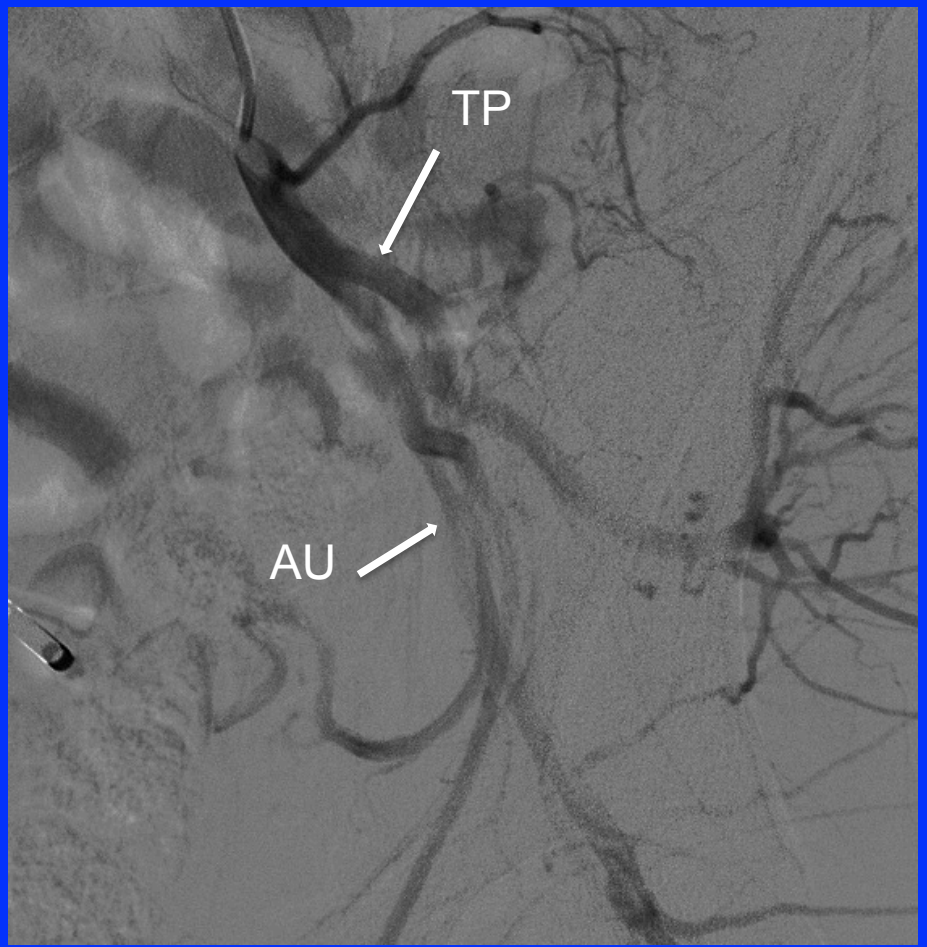




Technique : Procédure

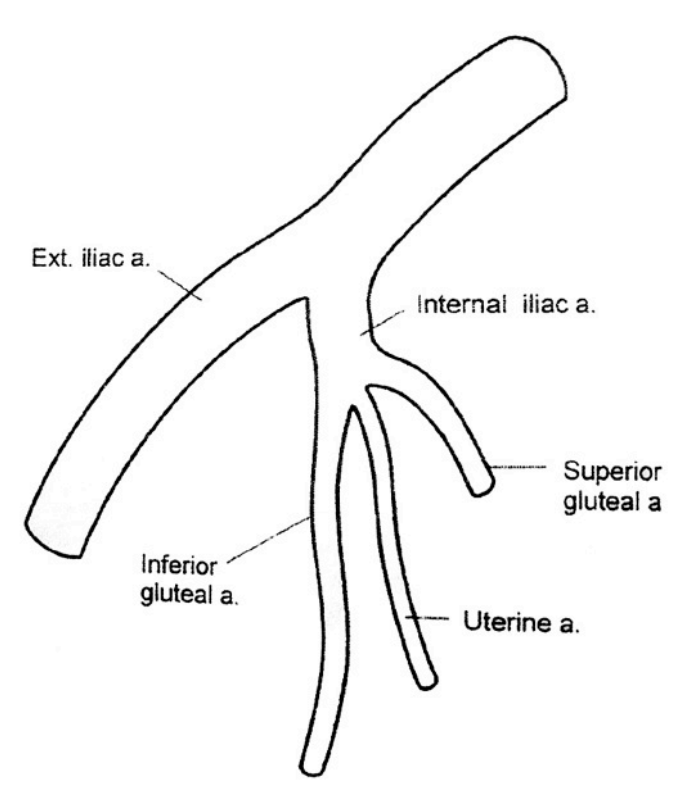
- Cathétérisme sélectif a. utérine
  - Variantes anatomiques : Type II 6%
  - 2-3ère branche du tronc antérieur





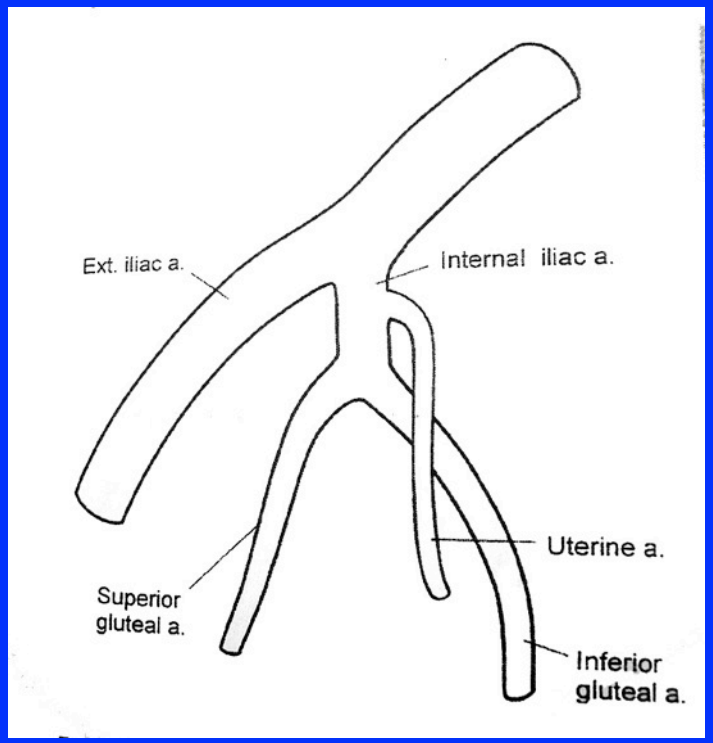
Technique : Procédure

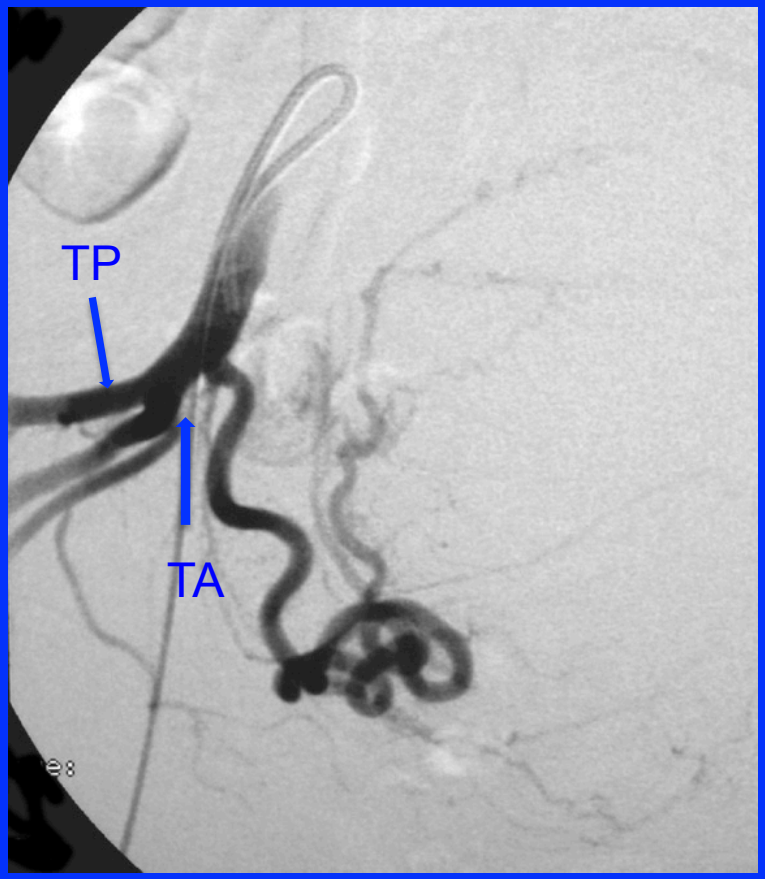
- Cathétérisme sélectif a. utérine
  - Variantes anatomiques : Type III 43%
  - Trifurcation



Technique : Procédure

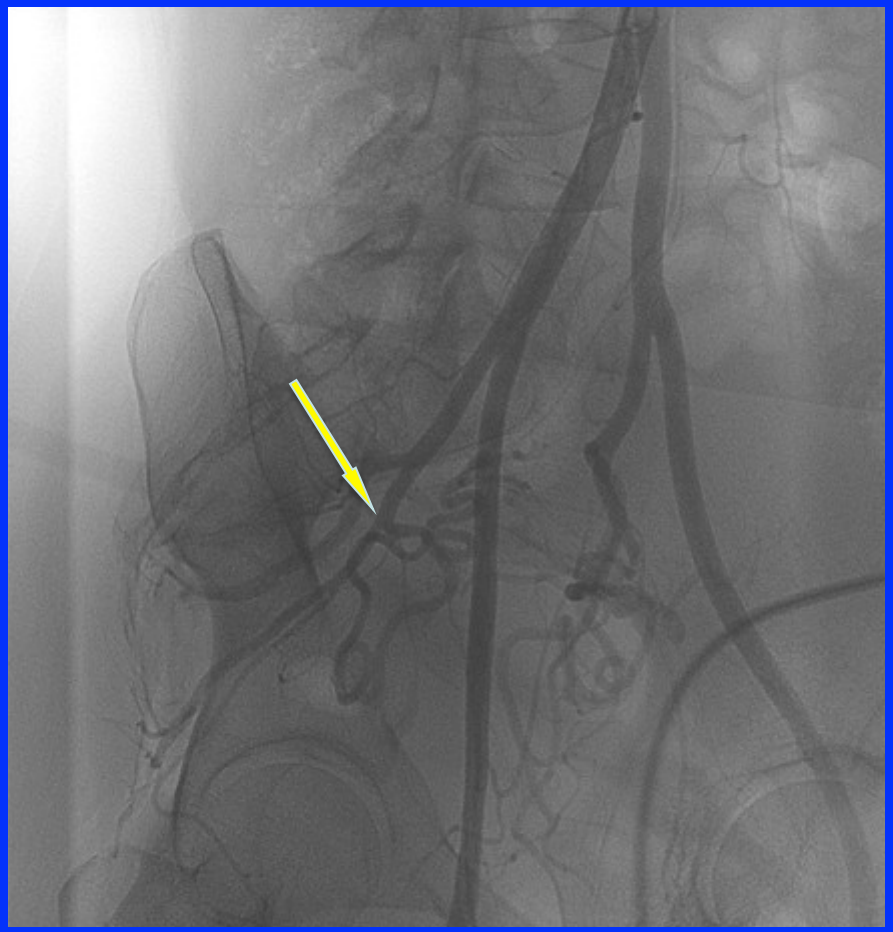
- Cathétérisme sélectif a. utérine
  - Variantes anatomiques : Type IV 6%
  - 1ère branche de l'iliaque interne

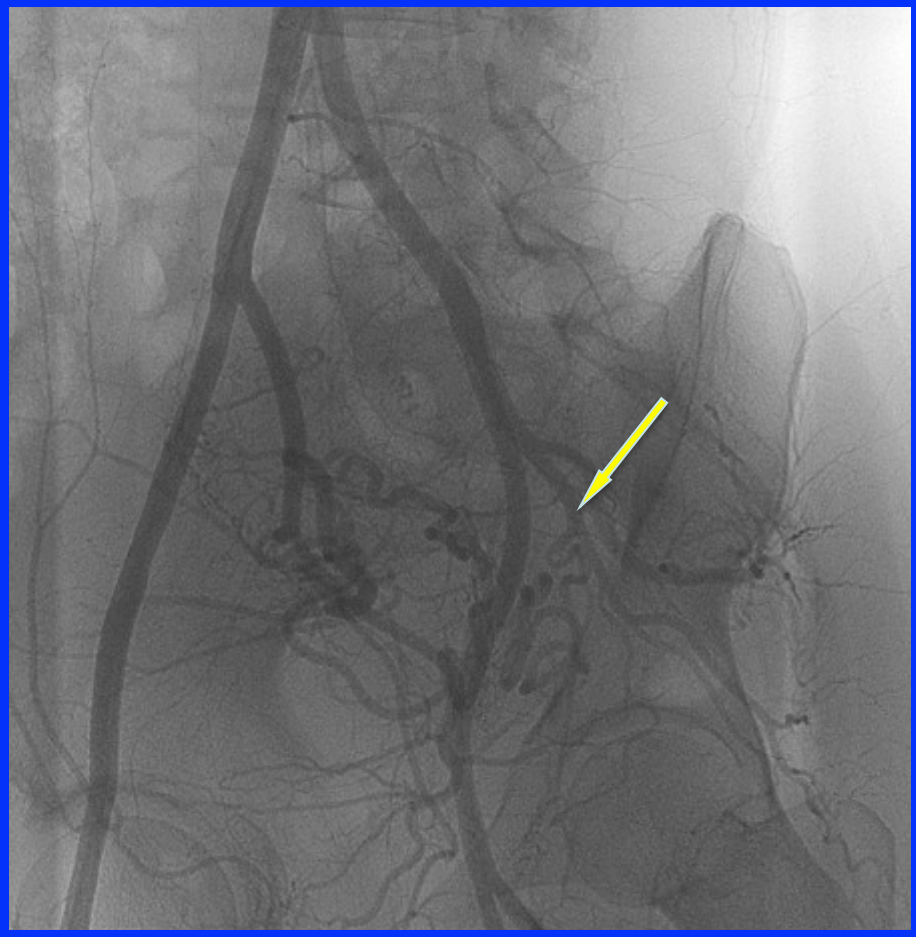




Technique : Procédure

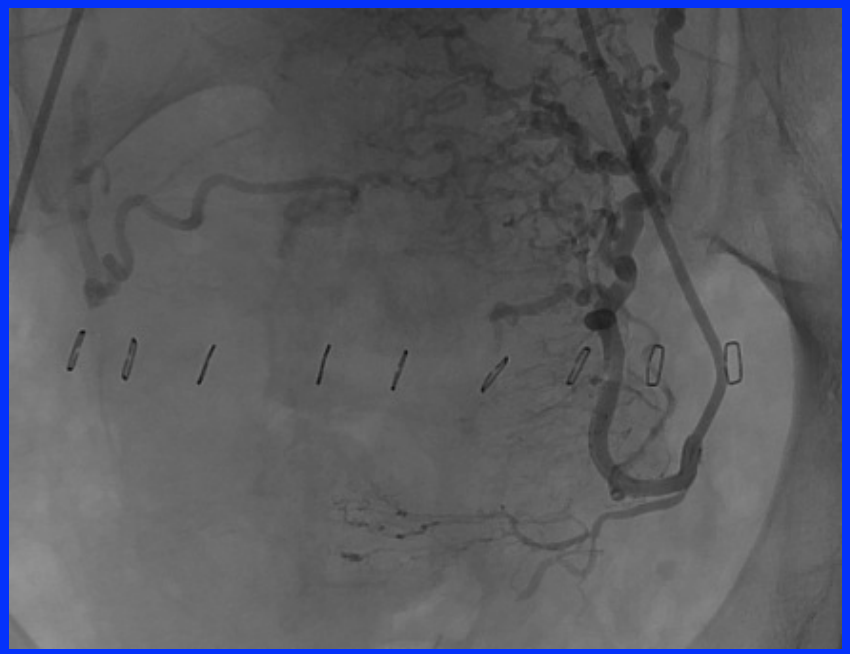
- Acquisition 3 D
  - Cathétérisme rapide
  - Diminution temps
  - Diminution Pc
  - Diminution dose

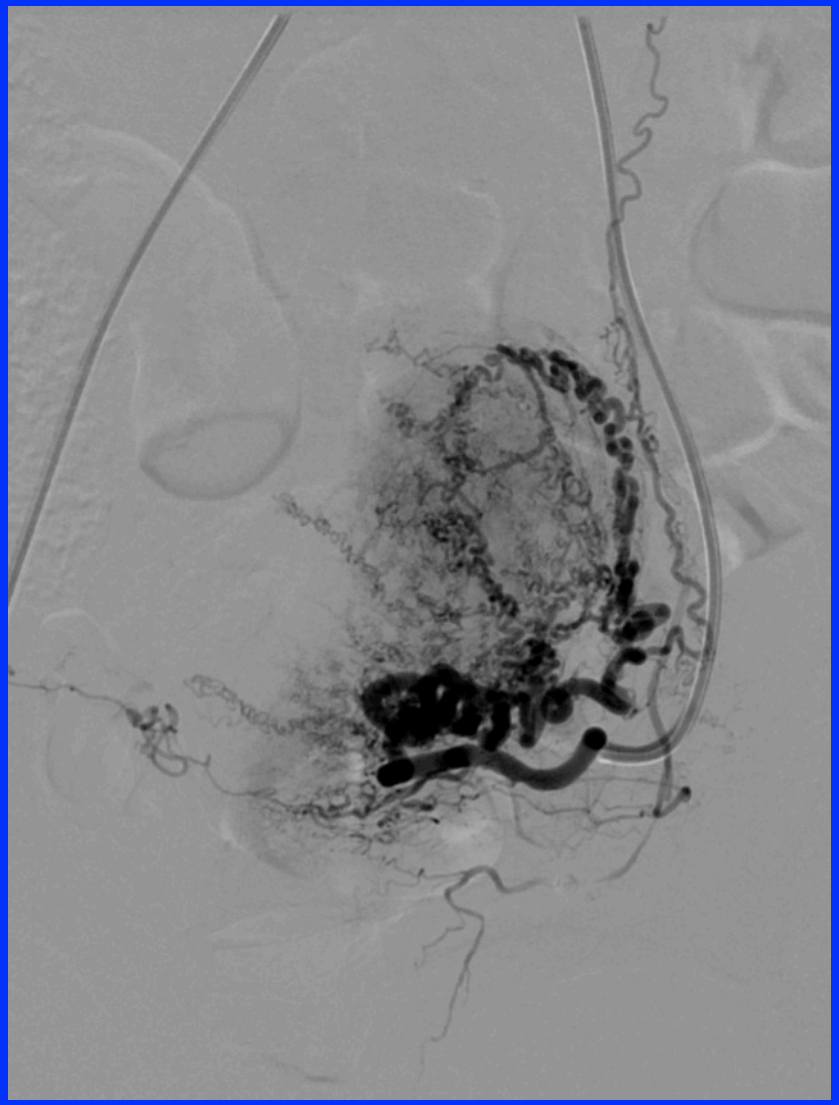




Technique : Procédure

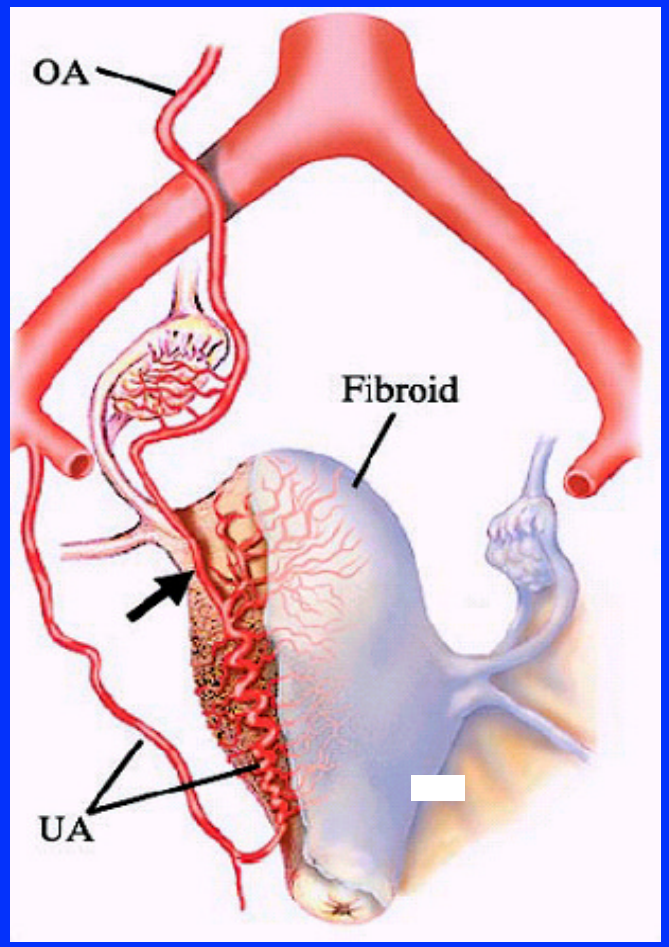
- Cathétérisme sélectif a. utérine
  - Variantes anatomiques
  - A. cervico – vaginale
  - Anastomoses tubo - ovariennes

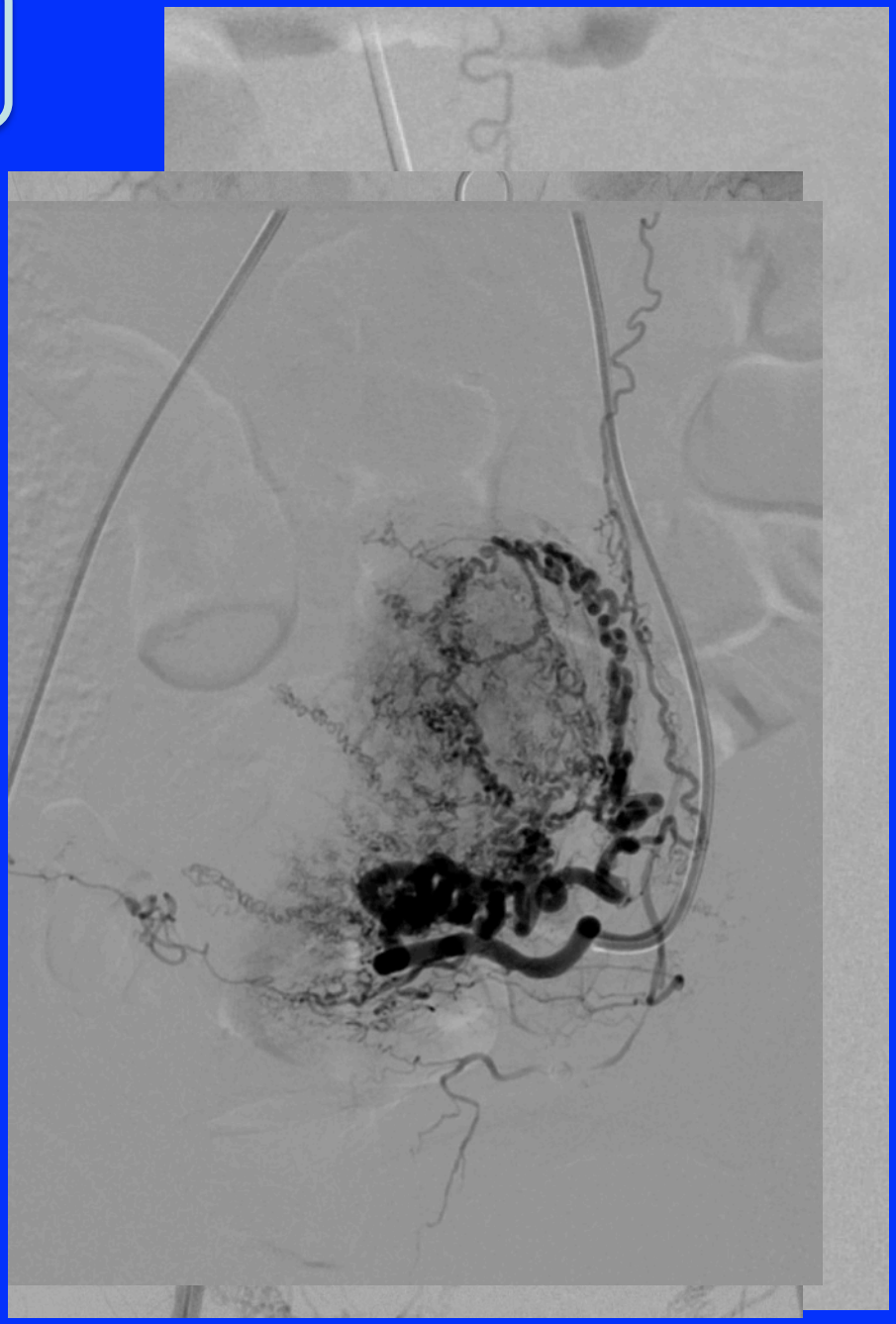




Technique : Procédure

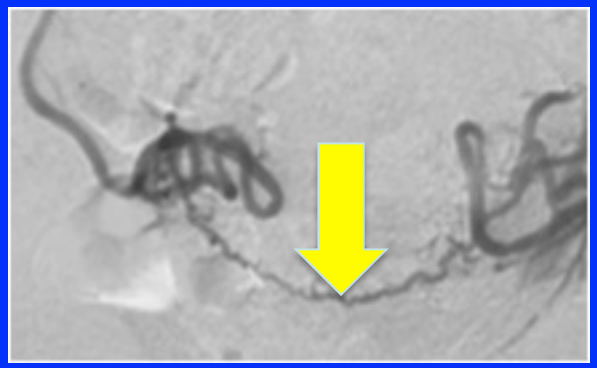
- Cathétérisme sélectif a. utérine
  - Anastomoses tubo – ovariennes
  - Présentes dans 25 – 35 %

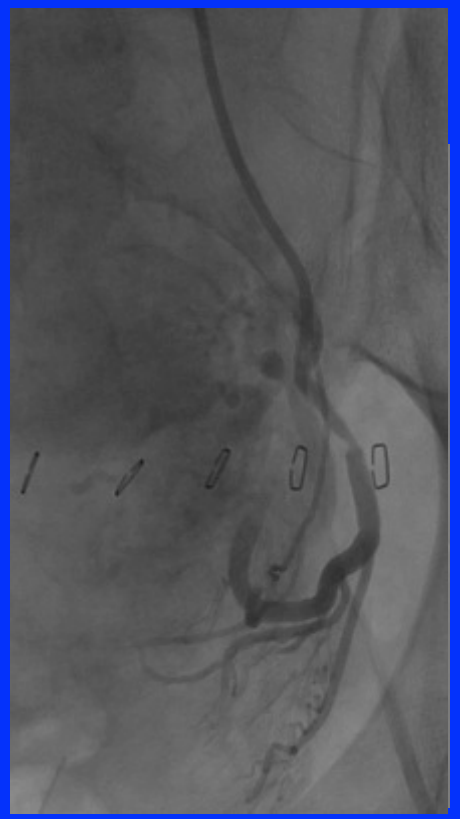




Technique : Procédure

- Embolisation bilatérale
  - Anastomoses trans-utérines
- Arrêt de l'embolisation
  - Disparition plexus péri-myomateux
  - Opacification maintenue tronc a. U.
  - Visualisation de la progression d'une colonne battante de pc
  - Pas d'image d'arrêt (vs HPP)





Complications

Mineures : (hosp. < 48 H) 7%
Majeures : (hosp. > 48 H) 1%

PRECOCES : 30 j

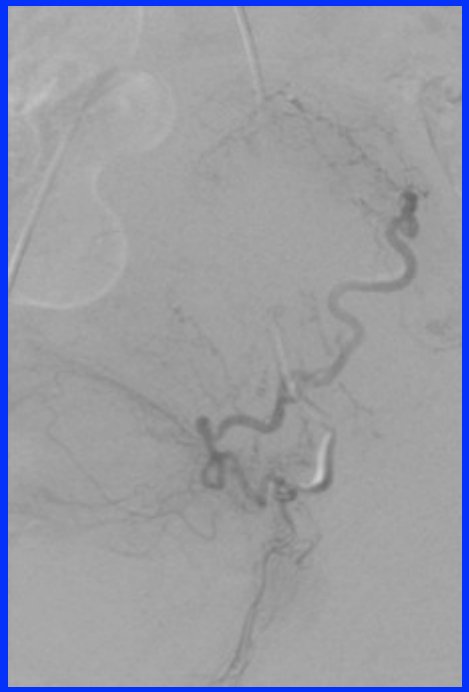
- Syndrome post embolisation 40/50 %
  - Nausées / vomissements
  - Douleur pelvienne
  - Fébricule
  - Hyperleucocytose

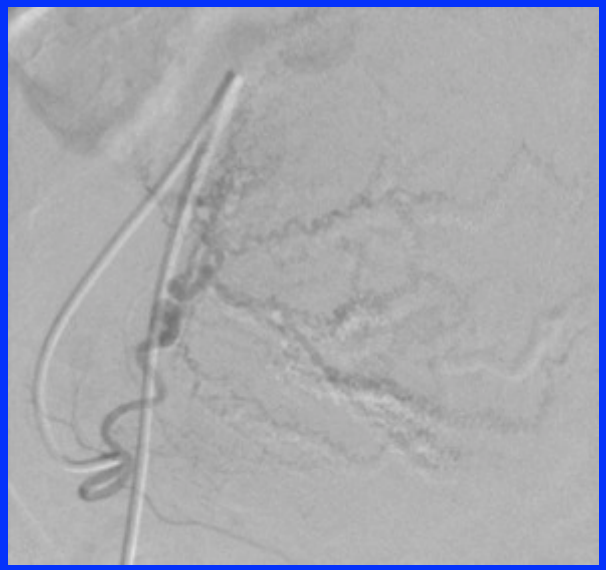
  (<2J)
- Infection (1%) / rétention urinaire
- Nécrose utérine
- TVP (0,25%) / EP (0,25%)
- Cpk thrombo-embol a. (0,5%)
- Hématomes pt pct
- Dissection artérielle
- Réaction au PC

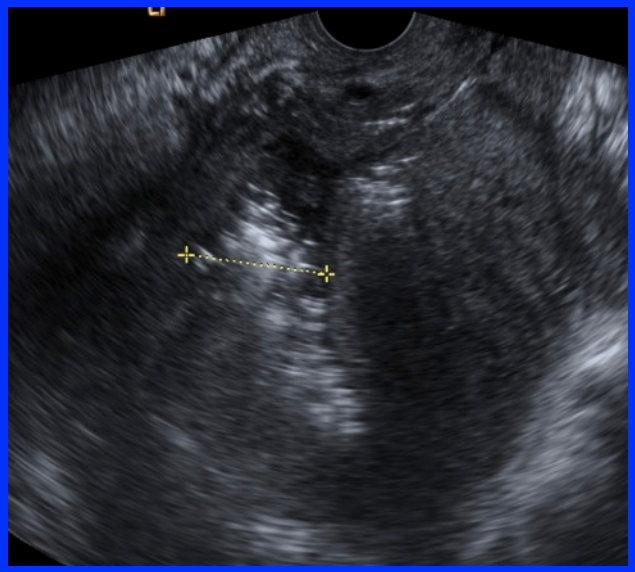
TARDIVES : > 30J

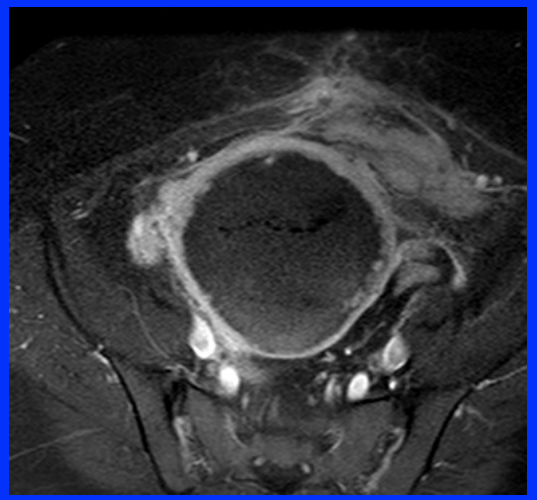
- Récidive
- Endométrite (0,125%)
- Expulsion de myome (2,5%)
- Insuffisance ovarienne

Spies JB et coll. Complications after uterine artery embolization for leiomyomas. Obstet Gynecol. 2002 Nov;100(5 Pt 1):873-80

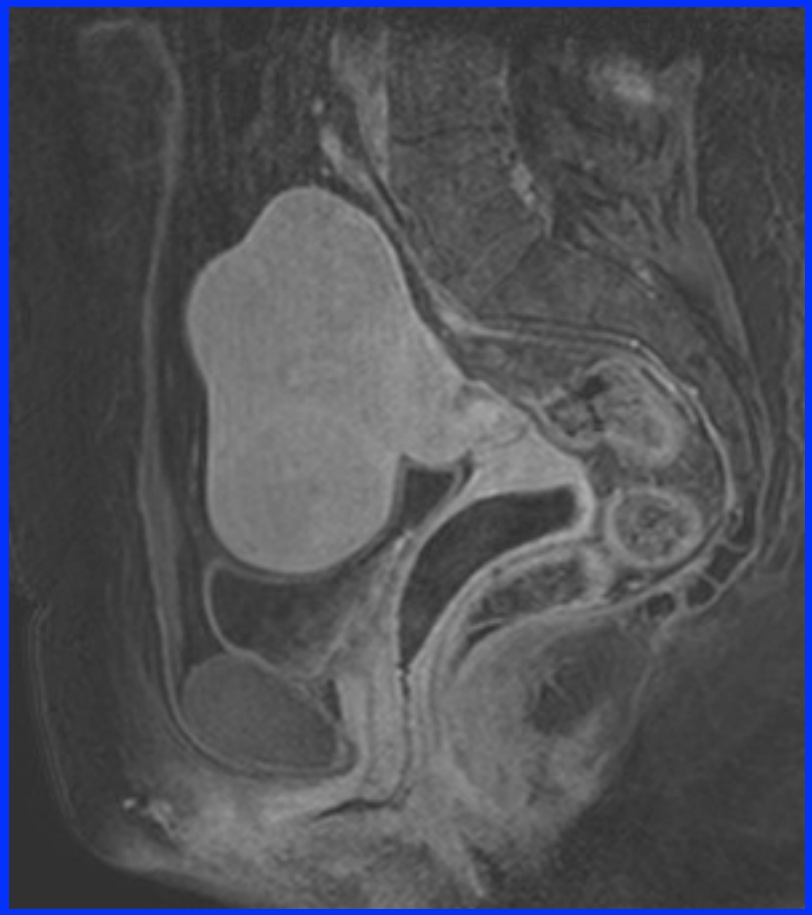


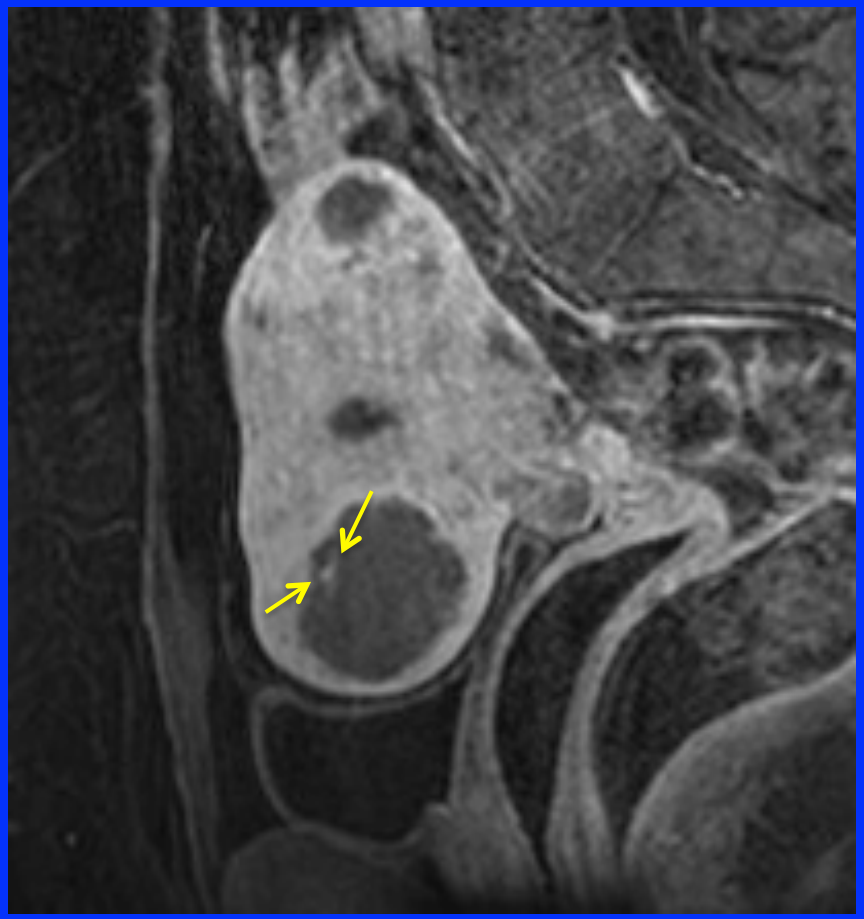






Récidive





Complications

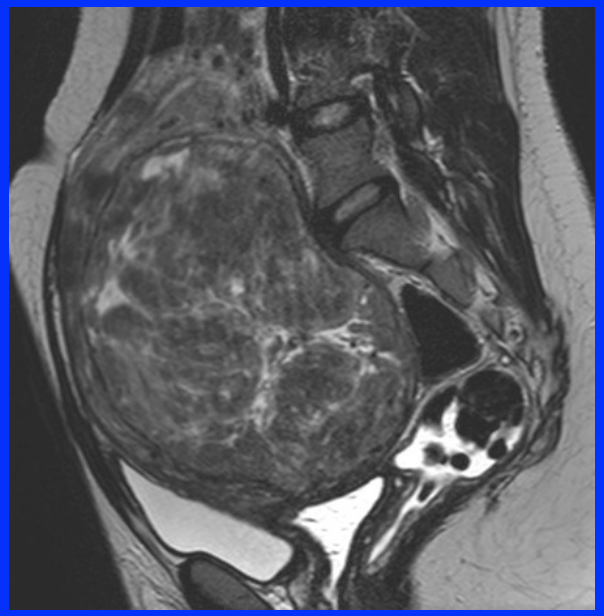
- Hystérectomie pour cpk post embolisation (nécrose / infection) :
  - < 2 % à 3 mois 16% à 5 ans
- Hystérectomie pour échec / récidive :
  - 14 – 18 % à 5 ans
- Aménorrhées définitives : < 5 % femmes < 45 ans
- Pas d'impact sur la fonction hormonale (si fonction Nle au préalable)

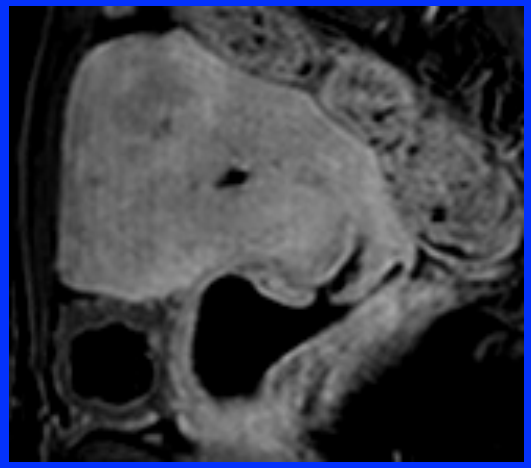
(Walker 2002, Pron 2003, Spies 2005, Rashid 2010)

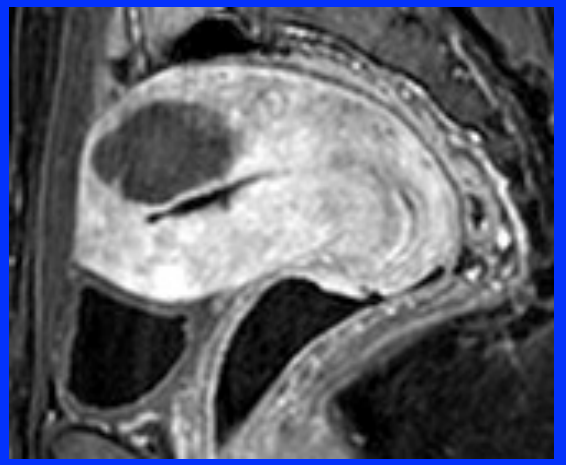
Complications

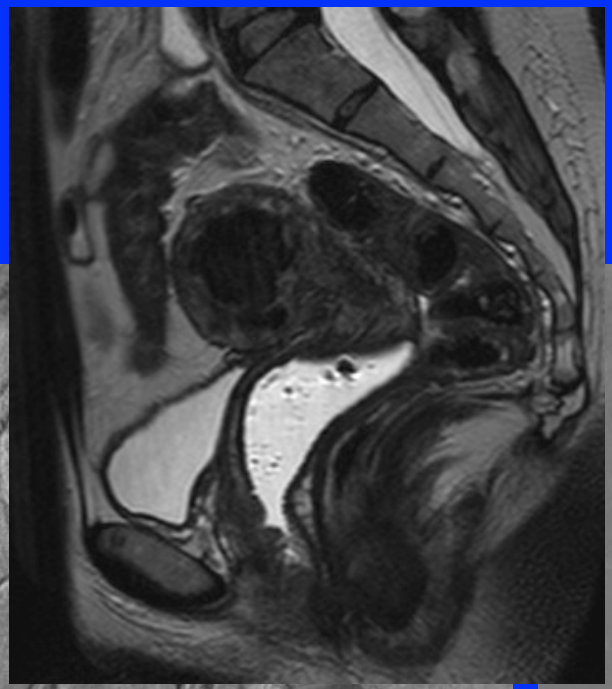
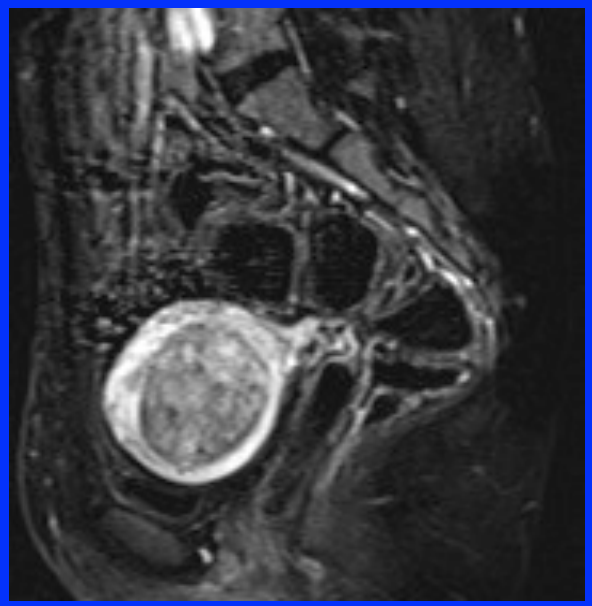
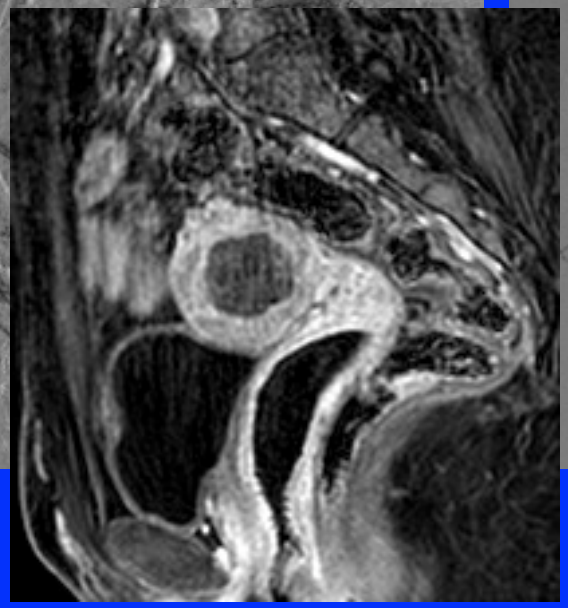
- Echec possible à long terme plus fréquent :
  - Absence d'amélioration clinique à 1 an
  - Fibrome volumineux
  - Réduction insuffisante de taille (<30%)

(Spies 2005 : 200 patientes)








Fertilité

- Taux de grossesse post EFU
  - 19 – 61 %

  (Walker 2006, Pron 2005, Firouznia 2008)

- EFU vs Myomectomie:
  - Taux de FSH > post EFU
  - Plus de grossesses post myomectomie
  - Plus de FCS post EFU

  (Mara 2008, Holub 2008, Pisco 2011)

Conclusion

- EFU alternative à la chirurgie
- Indications ciblées
- Prise en charge multidisciplinaire
- Complications

Bibilographie

1 : Smeets AJ et Coll. Safety and effectiveness of uterine artery embolization in patients with pedunculated fibroids. *J Vasc Interv Radiol*. 2009 Sep;20(9):1172-5.

2 : Smeets AJ et col. Is an intrauterine device a contraindication for uterine artery embolization? A study of 20 patients. *J Vasc Interv Radiol*. 2010 Feb;21(2):272-4.

3: Pinto I, Chimeno P, Romo A, Pa√∫l L, Haya J, de la Cal MA, Bajo J. Uterine fibroids: uterine artery embolization versus abdominal hysterectomy for treatment--a prospective, randomized, and controlled clinical trial. Radiology. 2003 Feb;226(2):425-31.

4 : Pron G, Mocarski E, Cohen M, Colgan T, Bennett J, Common A, Vilos G, Kung R. Hysterectomy for complications after uterine artery embolization for leiomyoma: results of a Canadian multicenter clinical trial. J Am Assoc Gynecol Laparosc. 2003 Feb;10(1):99-106.

5 : Pron G, Bennett J, Common A, Wall J, Asch M, Sniderman K; Ontario Uterine Fibroid Embolization Collaboration Group. The Ontario Uterine Fibroid Embolization Trial. Part 2. Uterine fibroid reduction and symptom relief after uterine artery embolization for fibroids. Fertil Steril. 2003 Jan;79(1):120-7.

6 : Pron G, Cohen M, Soucie J, Garvin G, Vanderburgh L, Bell S; Ontario Uterine Fibroid Embolization Collaboration Group. The Ontario Uterine Fibroid Embolization Trial. Part 1. Baseline patient characteristics, fibroid burden, and impact on life. Fertil Steril. 2003 Jan;79(1):112-9.

7: Walker WJ, Barton-Smith P. Long-term follow up of uterine artery embolisation--an effective alternative in the treatment of fibroids. BJOG. 2006 Apr;113(4):464-8.

8 : Lohle PN, Voogt MJ, De Vries J, Smeets AJ, Vervest HA, Lampmann LE, Boekkooi PF. Long-term outcome of uterine artery embolization for symptomatic uterine leiomyomas. J Vasc Interv Radiol. 2008 Mar; 19(3):319-26.

9 : Volkers NA, Hehenkamp WJ, Birnie E, Ankum WM, Reekers JA. Uterine artery embolization versus hysterectomy in the treatment of symptomatic uterine fibroids: 2 years' outcome from the randomized EMMY trial. Am J Obstet Gynecol. 2007 Jun;196(6):519.e1-11.

10 : Pinto I, Chimeno P, Romo A, Pa√∫l L, Haya J, de la Cal MA, Bajo J. Uterine fibroids: uterine artery embolization versus abdominal hysterectomy for treatment--a prospective, randomized, and controlled clinical trial. Radiology. 2003 Feb;226(2):425-31.

11: Katsumori T, Kasahara T. Uterine artery embolization versus hysterectomy in the treatment of symptomatic uterine fibroids (EMMY trial). Am J Obstet Gynecol. 2006 Oct;195(4):1190.

12 : van der Kooij SM, Bipat S, Hehenkamp WJ, Ankum WM, Reekers JA. Uterine artery embolization versus surgery in the treatment of symptomatic fibroids: a systematic review and metaanalysis. Am J Obstet Gynecol. 2011 Oct;205(4):317.e1-18.

13 : van der Kooij SM, Hehenkamp WJ, Volkers NA, Birnie E, Ankum WM, Reekers JA. Uterine artery embolization vs hysterectomy in the treatment of symptomatic uterine fibroids: 5-year outcome from the randomized EMMY trial. Am J Obstet Gynecol. 2010 Aug;203(2):105.e1-13.

14 : Mara M, Maskova J, Fucikova Z, Kuzel D, Belsan T, Sosna O. Midterm clinical and first reproductive results of a randomized controlled trial comparing uterine fibroid embolization and myomectomy. Cardiovasc Intervent Radiol. 2008 Jan-Feb;31(1):73-85.

15 : Lampmann LE, Lohle PN, Smeets A, Boekkooi PF, Vervest H, van Oirschot CM, Bremer RC. Pain management during uterine artery embolization for symptomatic uterine fibroids. Cardiovasc Intervent Radiol. 2007 Jul-Aug;30(4):809-11.

16: Siskin GP, Bonn J, Worthington-Kirsch RL, Smith SJ, Shlansky-Goldberg R, Machan LS, Andrews RT, Goodwin SC, Hovsepian DM. III. Uterine fibroid embolization: pain management. Tech Vasc Interv Radiol. 2002 Mar;5(1):35-43.

17 : Spies JB, Allison S, Flick P, McCullough M, Sterbis K, Cramp M, Bruno J, Jha R. Polyvinyl alcohol particles and tris-acryl gelatin microspheres for uterine artery embolization for leiomyomas: results of a randomized comparative study. J Vasc Interv Radiol. 2004 Aug;15(8):793-800.

18 : Spies JB, Allison S, Flick P, Cramp M, Bruno J, Jha RC, Ascher SA. Spherical polyvinyl alcohol versus tris-acryl gelatin microspheres for uterine artery embolization for leiomyomas: results of a limited randomized comparative study. J Vasc Interv Radiol. 2005 Nov;16(11):1431-7.

19 : Abramowitz SD, Israel GM, McCarthy SM, Pollak JS, White RI Jr, Tal MG. Comparison of four embolic materials at uterine artery embolization by using postprocedural MR imaging enhancement. Radiology. 2009 Feb;250(2):482-7

20 : Spies JB, Spector A, Roth AR, Baker CM, Mauro L, Murphy-Skrynarz K. Complications after uterine artery embolization for leiomyomas. Obstet Gynecol. 2002 Nov;100(5 Pt 1):873-80.

21 : Walker WJ, Pelage JP. Uterine artery embolisation for symptomatic fibroids: clinical results in 400 women with imaging follow up. BJOG. 2002 Nov;109(11):1262-72.

22 : Pron G, Bennett J, Common A, Wall J, Asch M, Sniderman K; Ontario Uterine Fibroid Embolization Collaboration Group. The Ontario Uterine Fibroid Embolization Trial. Part 2. Uterine fibroid reduction and symptom relief after uterine artery embolization for fibroids. Fertil Steril. 2003 Jan;79(1):120-7.

23: Pron G, Cohen M, Soucie J, Garvin G, Vanderburgh L, Bell S; Ontario Uterine Fibroid Embolization Collaboration Group. The Ontario Uterine Fibroid Embolization Trial. Part 1. Baseline patient characteristics, fibroid burden, and impact on life. Fertil Steril. 2003 Jan;79(1):112-9.

24: Spies JB, Bruno J, Czeyda-Pommersheim F, Magee ST, Ascher SA, Jha RC. Long-term outcome of uterine artery embolization of leiomyomata. Obstet Gynecol. 2005 Nov;106(5 Pt 1):933-9.

25: Rashid S, Khaund A, Murray LS, Moss JG, Cooper K, Lyons D, Murray GD, Lumsden MA. The effects of uterine artery embolisation and surgical treatment on ovarian function in women with uterine fibroids. BJOG. 2010 Jul;117(8):985-9.

26 : Holub Z, Mara M, Kuzel D, Jabor A, Maskova J, Eim J. Pregnancy outcomes after uterine artery occlusion: prospective multicentric study. *Fertil Steril*. 2008 Nov;90(5):1886-91.

27 : Mara M, Maskova J, Fucikova Z, Kuzel D, Belsan T, Sosna O. Midterm clinical and first reproductive results of a randomized controlled trial comparing uterine fibroid embolization and myomectomy. *Cardiovasc Intervent Radiol*. 2008 Jan-Feb;31(1):73-85.

28 : Pisco JM, Duarte M, Bilhim T, Cirurgi F, Oliveira AG. Pregnancy after uterine fibroid embolization. Fertil Steril. 2011 Mar 1;95(3):1121.e5-8.

29: Walker WJ, McDowell SJ. Pregnancy after uterine artery embolization for leiomyomata: a series of 56 completed pregnancies. *Am J Obstet Gynecol*. 2006 Nov;195(5):1266-71.

30: Pron G, Mocarski E, Bennett J, Vilos G, Common A, Vanderburgh L; Ontario UFE Collaborative Group. Pregnancy after uterine artery embolization for leiomyomata: the Ontario multicenter trial. *Obstet Gynecol*. 2005 Jan;105(1):67-76

31 : Firouznia K, Ghanaati H, Sanaati M, Jalali AH, Shakiba M. Pregnancy after uterine artery embolization for symptomatic fibroids: a series of 15 pregnancies. *AJR Am J Roentgenol*. 2009 Jun;192(6):1588-92.