

# Malformations Artério-Veineuses Cérébrales

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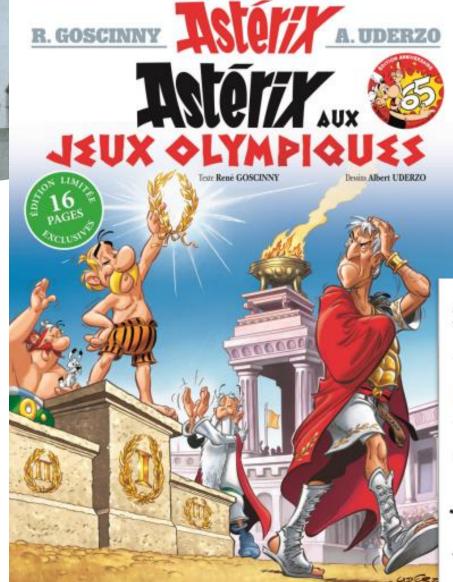


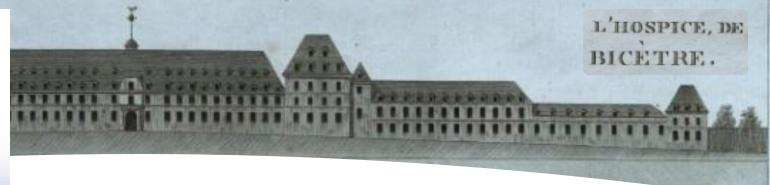














#### World Neurosurgery

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Historical Vignette

## Julius Caesar's Epilepsy: Was It Caused by A Brain Arteriovenous Malformation?

Nicola Montemurro ¹, Arnau Benet ¹, Michael T. Lawton ¹ ² 🌣 🖾

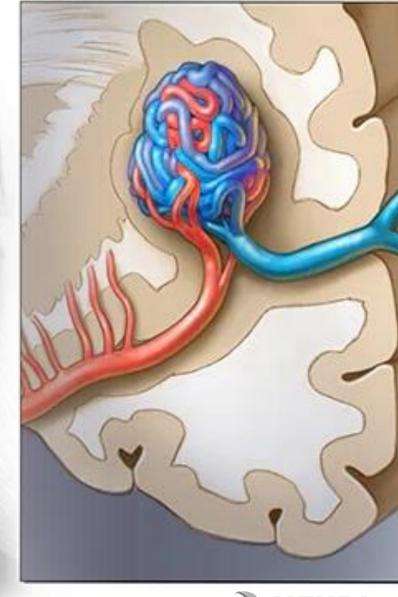
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Les malformations arterio-veineuses cérébrales (MAV) sont des **communications directes anormales** entre artères et veines au travers d'un nidus vasculaire

Les stratégies thérapeutiques sont variables et peu codifiées

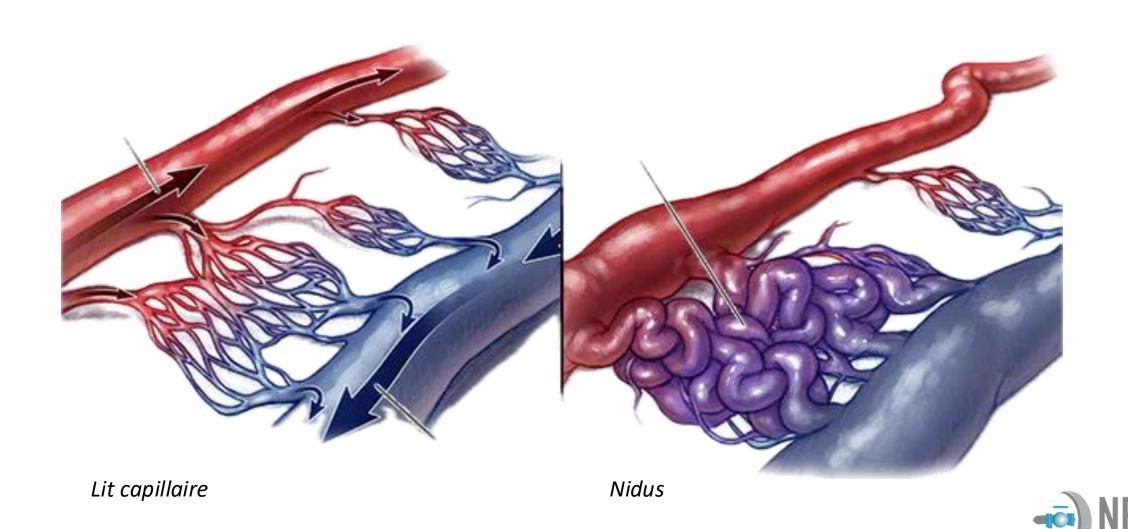
Les **hémorragies** cérébrales et **l'épilepsie** sont les modes de présentation les plus fréquents

Toutefois, les **découvertes fortuites** sont de plus en plus fréquentes en raison de de l'élargissement des indications de l'imagerie non-invasive





#### Malformation artério-veineuses



#### Malformation artério-veineuses

- Prévalence précise difficile à établir (rare et le + souvent asymptomatique)
- Environ 10 pour 100 000 habitants (0.01%)
- Age moyen au diagnostic : 30 40 ans

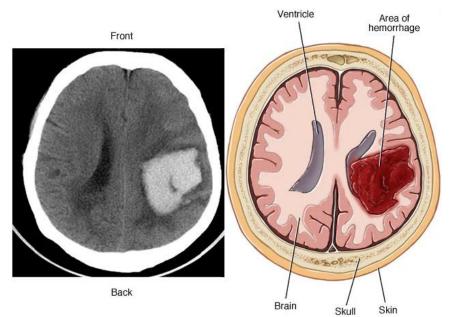


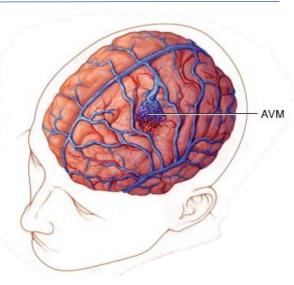
#### Mode de révélation

#### **Environ 20% asymptomatiques au diagnostic**

#### Sinon:

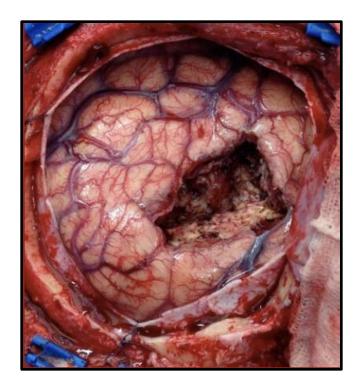
- Hémorragie intracrânienne (42%)
- Epilepsie (25%)
- Autres symptômes (6%)



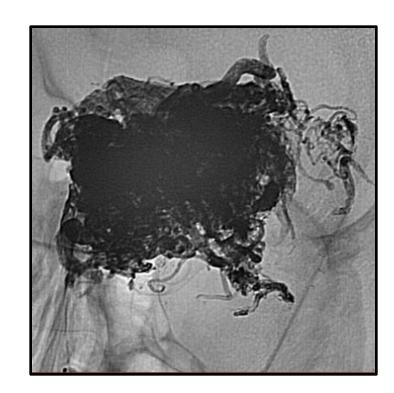




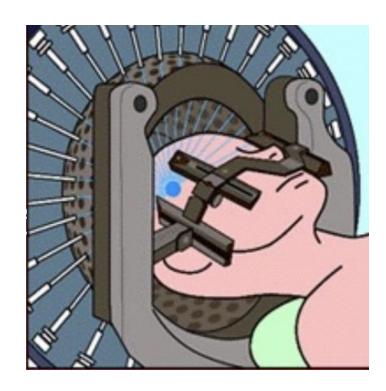
#### Traitements des MAV



Chirurgie



Embolisation

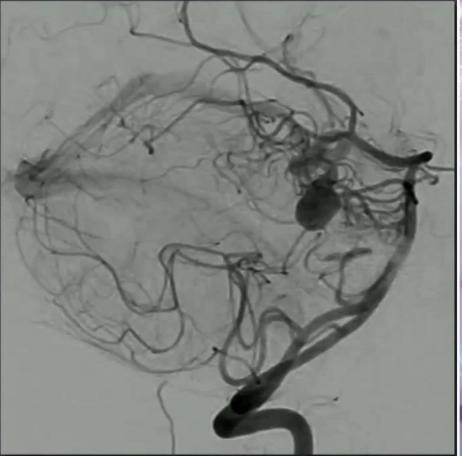


Radiochirurgie



### Initial angiogram









#### Traitements des MAV





#### → @ 🦒 📵 Medical management with or without interventional therapy for unruptured brain arteriovenous malformations (ARUBA): a multicentre, non-blinded, randomised trial

JP Mohr", Michael K Parides", Christian Stagf", Ellen Moquete, Claudia SMoy Jessica R Overbey, Rust om Al-Shahi Salman, Eric Vicaus,

Findings Randomisation was started on April 4, 2007, and was stopped on April 15, 2013, when a data and stafety monitoring board appointed by the National Institute of Neurological Disorders and Stroke of the National Institutes 

neurological deficies unrelated to stroke (14 to 1, p=0.0008) in patients allocated to interventional therapy cor interpretation The ARUBA trial showed that medical management alone is superior to medical management with interventional therapy for the prevention of death or stroke in pastents with turnspared brain arrerievenous milliormation followed up for 33 monders. The trial is continuing its observational phase so establish whether the

Funding National Institutes of Health, National Institute of Neurological Disorders and Stroke.

Summary

Lower 2014, 313-614-71 Background The clinical benefit of preventive eradication of unruptured brain aneriovenous malformations remains Authors Column uncervain. A Randomised erial of Unruprured Brain Arteriovenous malformations (ARURA) alms so compare the risk towners 27, 2011 of death and symptomatic seroles in patients with an unruprured brain arrefere Methods Adult patients (a IS years) with an unruptured brain arterior enous malformation were enrolled line that at 30 chitical sites in this consurties. Patients were randomised (by web-Sauded yatem, in a 11 ratio, with random permaned block design plock store 2.4, or 6, seration by chitical sites in modelar imanagement with inserventional

permissio docci design posoc sato 2, 4, or 6, serando dy clinical sus-jo monical management with materiesmonal therapy (fe, neumorapper, embolisation, or sustencealor, calubsterap, also no ir normbiatation) or midical management alone (fe, pharmacological therapy for neurological symptoms as needed). Parlens, cliniclans, and thewestiguests are aware of manument acadigment. The primary suscemes team to no composite endpoint of death or symptomatic seroke; the primary analysis is by insention to ureat. Talts trial is registered with ClinicalTrials.gov,

disparities will persist over an additional 5 years of follow-up.

ps, Porto outcomes, including those already having bled. More mortality.10

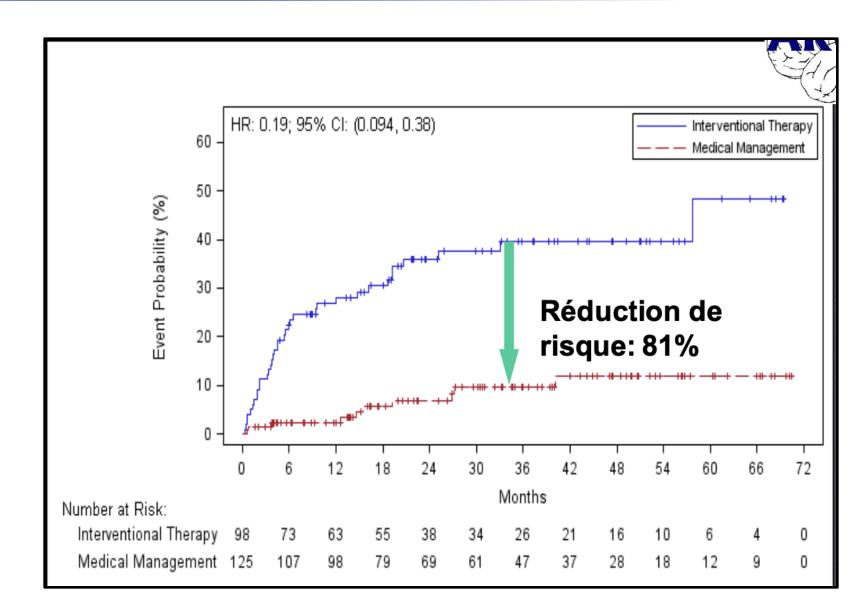
ing of Edinburgh,

Geleburgh, UK. Brain arseriovenous maliformacions are diagnosed most as 196 per year for chose discovered unrupeured der HAV-Dead-Lance HZP., Option In adults agod about 40 years. Hammorthage was Runhermore, fires hammorthage syndromes are obtained by a seal manner of discovery before non-travely bef the pass three decades such imaging has the pass three decades such imaging has been represented by the pass of th dest (industriably)

represent (Messages) and annual rupeure rase for brain arteriovenous radiothorapy) used alone or in combination with varying

Messages, Newholds malformations, but this risk was derived from combined degrees of treatment-associated morbidity and

Pas d'intervention pour les MAV non rompues!





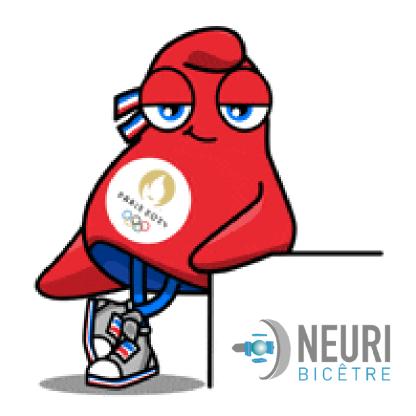
sport brain arteriovenous malformation

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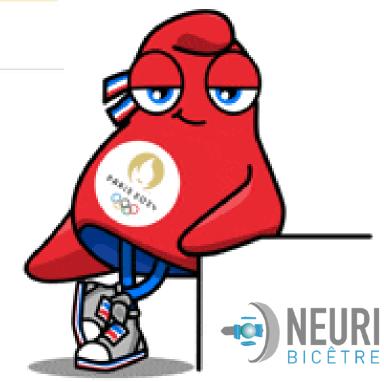




#### What you can do in the meantime

Avoid any activity that may raise your blood pressure and put stress on a brain AVM, such as heavy lifting or straining. Also avoid taking any blood-thinning medicines, such as warfarin (Jantovin).

By Mayo Clinic Staff





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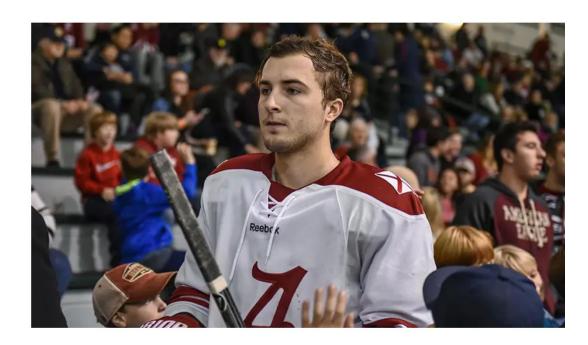
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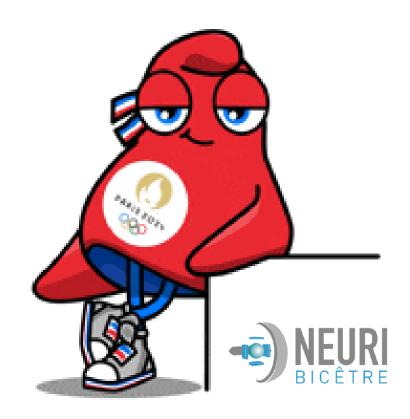
December 5, 2017

Written By Heather Linder

#### **Topics**

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#### Exercise/Running with a Brain AVM that has never bled

■ General ■ Blog



Sandra\_S Mar 2014

Just looking for advice as to whether it is safe to take up running/exercise after a long time being a couch potatoe! I have a brain AVM of 4 x 4 which has never bled, but did suffer some seizures last year. I am 49 years old!

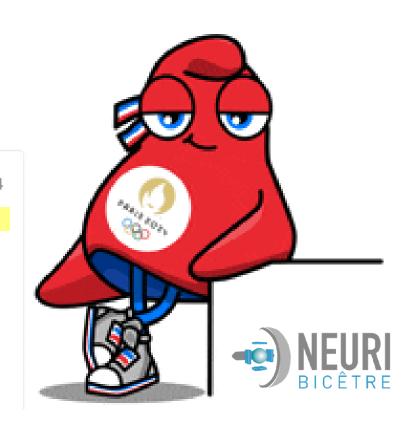
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Debbie\_mom

Mar 2014

Hi Sandra,my son Stefan,also have a Brain AVM,un-operatable,un-treatable,he's 19 years old,4cm in the left pariental side...He had to stop his cycling and so on, but we went to Prof.Le Fevreu(on the board for brain avm's) in Cape Town and he gave him the green light to excersize,but no heavy stuff,and excersises where you can bump your head or let your blood preasure rise. Most of the equipment in the gyms have monitors to monitor your heartbeart and blood-preasure....Its working for him,although he also still get convultions....He was diagnosed in 2012 and had 2. Hope you will be up and on the excersize soon. Kind regards.Debbie

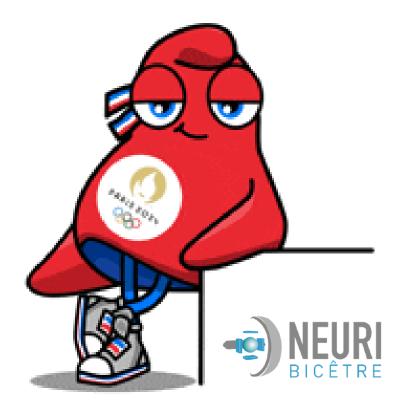




Steve1 Facial Member

Mar 2014

My doctors only allow me to walk now, they tell me that is as good if not better than running although I ran my entire life and miss it. However, part of my problem is that in addition to the AVM (Face / Head) I am taking Coumadin due to a blood clotting condition so cannot afford to fall and hit my head. Unfortunately like many have commented when you exercise the blood pressure rises which is not good for the AVM plus, depending on the location of your AVM and what vessels it is networking or connected too, it good block off blood flow to certain areas. I know when I try to push myself too hard, to walk faster or increase the elevation (if I am on a treadmill) I become really unstable, start to have pain in my face and head, get shaky, and my balance/vertigo is shot. Finally, some of us have had embolizations with surgical glue (in my case it was Onxy) and I have been informed that if you have had glue inserted into vessels like I've had that you cannot exert pressure, so I have been told no weight lifting or any exercise that would cause me to bear down hard or grimace. That is kind of scary advice when you think about it as, like someone mentioned, you do those things when you cough, sneeze, etc. Anyway, as you advisor suggests I would recommend walking and they have some cool things you can use now to enhance a wlaking workout like walking poles, hand weights, etc.



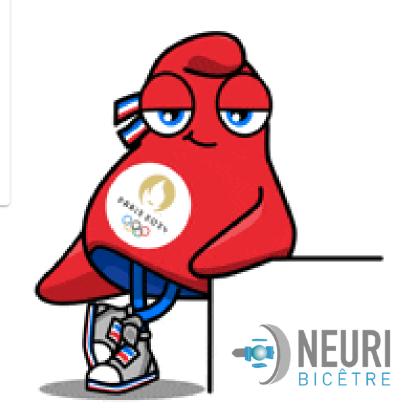


Kristy\_H Mar 2014

My AVM bled during a martial arts class where we were very active -- I was 15 yrs-old at the time. I had another bleed while vigourously roller skating -- I was 17 yrs-old at the time, I am currently 47 yrs-old and had a bleed 2 yrs ago. My neurologist ordered an angiogram which showed 2 new avm's, one of which was treatable with embolization and I've been fine since then;however, though I walk daily I have not resumed strenuous exercise. As stated by many of the members here, I suggest talking to your neurologist/surgeon before starting an exercise regime.





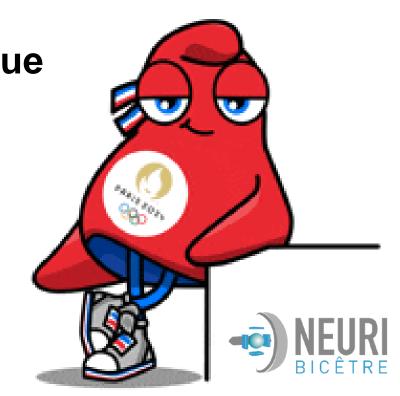


- Manque « evidence » pour guider nos patients
- Mais événements rapportés rares ++++

Activité sportive probablement >>> bénéfique

=> endurance (HTA...), autre?

=> Réponse personnalisée







Guidelines Committee





## Merci

☑ Jildaz.caroff@aphp.fr



