Isolated Iliac Arterial Aneurysm: What We Need to Consider and How We Treat It.

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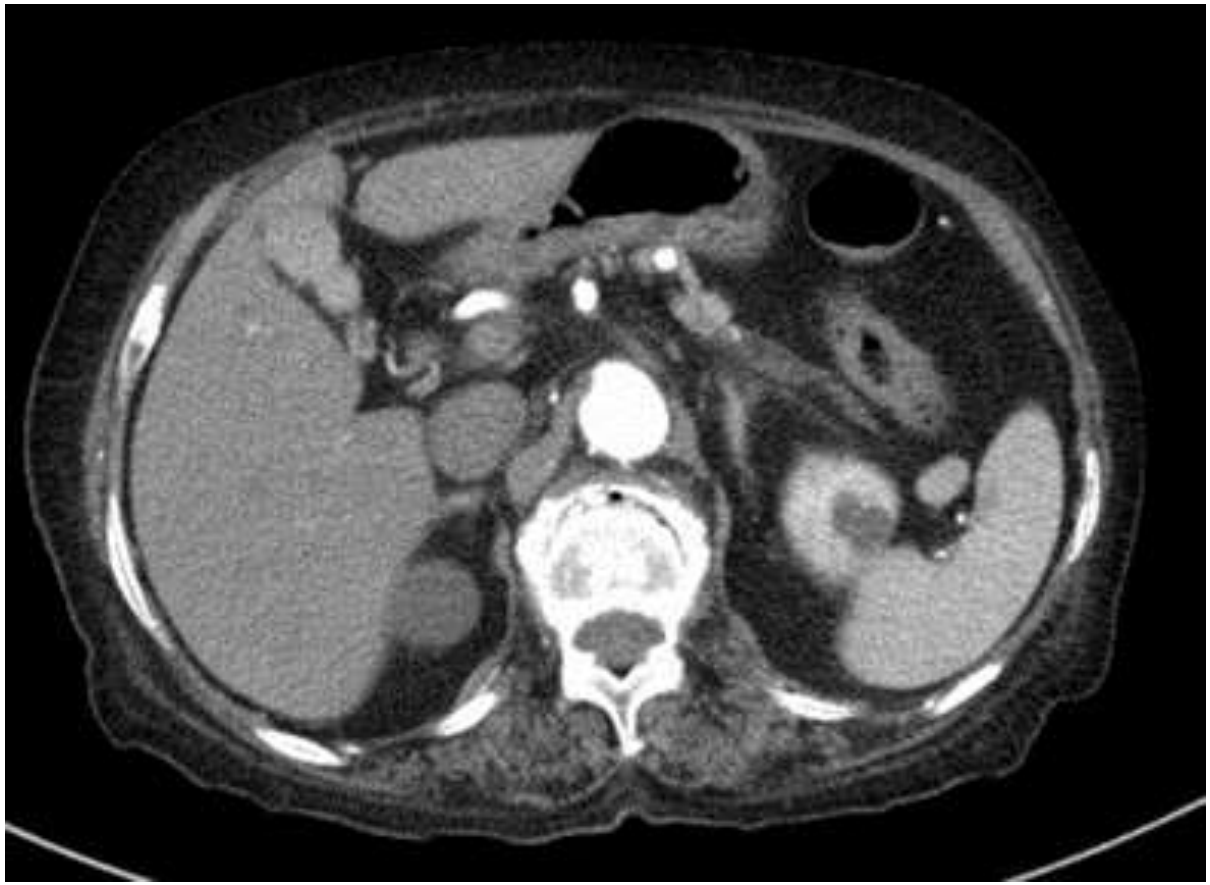
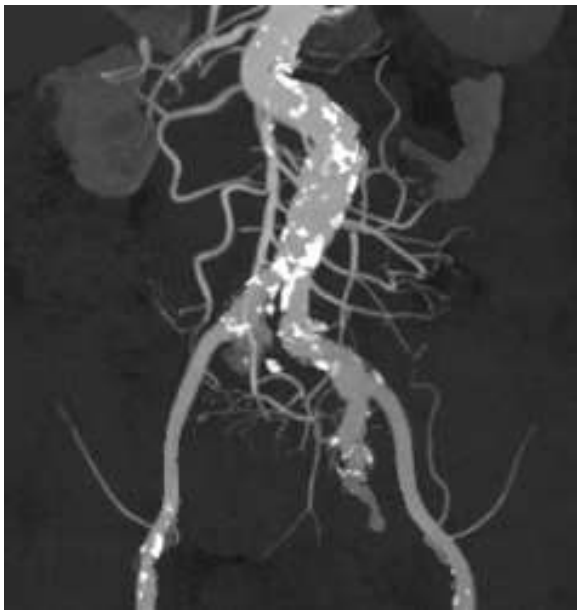
F/82

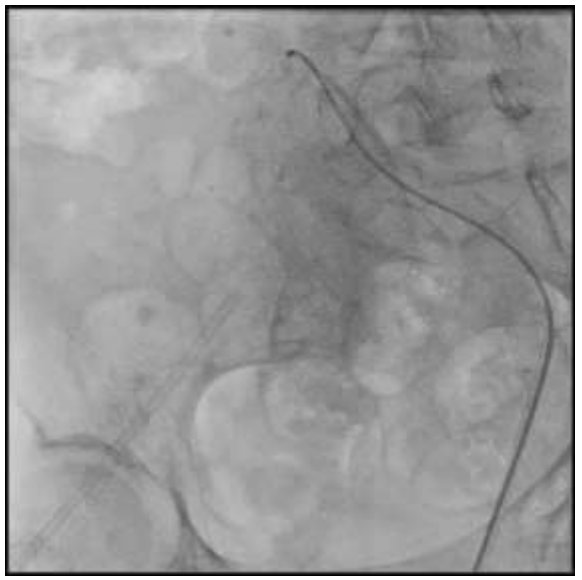
HIS 18774173

Abdominal pain, Hypertension (+), DM (-)



43 mm





Epidemiology

- **Most IAAs** are associated with **AAAs (10–20%)**.
- Incidence of **Isolated IAA**s is much lower (**only 0.9–2%** of all abdominal aneurysmal disease).
- **Large IIAAs** have a significant risk of **rupture**, which is associated with **high morbidity**

Natural History and Progression

- Expansion rates are slow for **IIAA<3 cm (1.1 mm/year)** but are significantly greater for **IIAAs 3–5 cm in diameter (2.6 mm/year)**, similar to AAAs.
- It is recommended that **aneurysms 3–3.5 cm in diameter** should be carefully followed-up with imaging modality **at 6-month intervals.**

Treatment

- Despite advances in surgical technique, **elective OSR of IIAAs** still carries a **mortality rate 11%** (mortality rate for emergency OSR:40–60%).
- **Endovascular repair** of IIAAs has emerged as an **attractive alternative to OSR** and is particularly advantageous for elderly patients with multiple comorbidities.

When to intervene?

- Clearly, as with AAA, the risk of rupture is related to **size**.
- **Any symptomatic iliac aneurysm** will require intervention if the patient is fit enough.
- **Asymptomatic CIA aneurysms** is not considered for intervention below **3.5 cm in diameter**.
- Elective repair is advised for **internal IA aneurysms** greater than **3 cm** where the risk of rupture is 14-31%.
- With increasing use of **endovascular repair**, many operators would now regard an aneurysm **diameter > 3 cm** as the threshold for elective aneurysm repair for IIA.

J Vasc Surg 2000;31:114-21, Eur J Vasc Endovasc Surg 2005;30:119-29

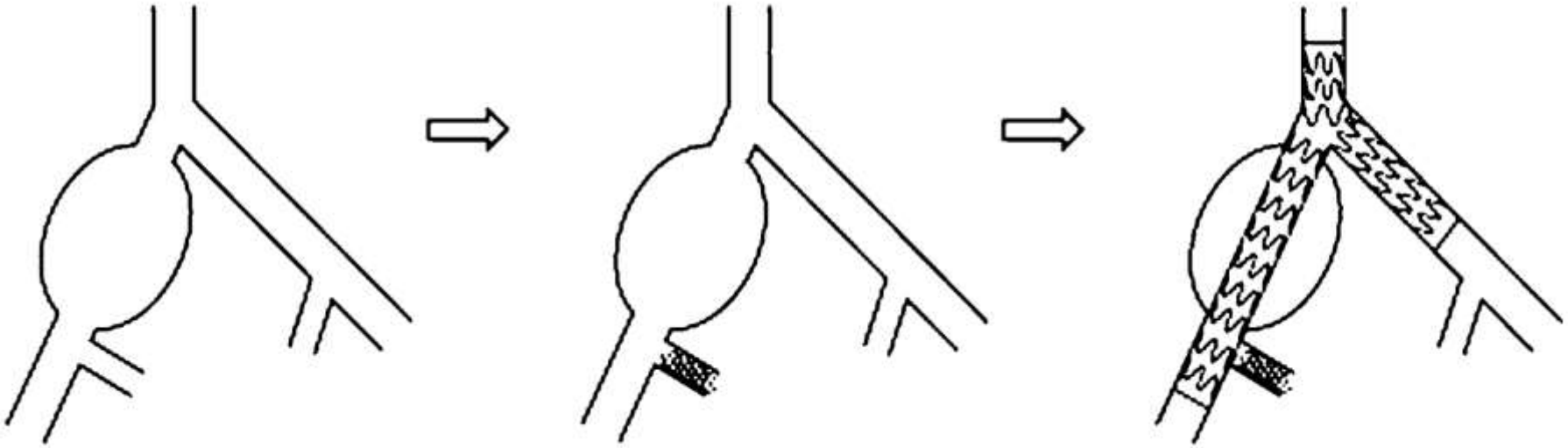
How to treat it?

Anatomic factors

- Length of the proximal and distal landing zones
- Concomitant involvement of the internal iliac artery
- Presence of bilateral/unilateral aneurysmal disease
- Presence or absence of a concomitant aortic aneurysm.
- The length of the proximal neck and distal landing zone is crucial: **At least 15 mm of nonaneurysmal artery is required** proximal and distal to the artery to achieve an adequate seal to prevent an endoleak.

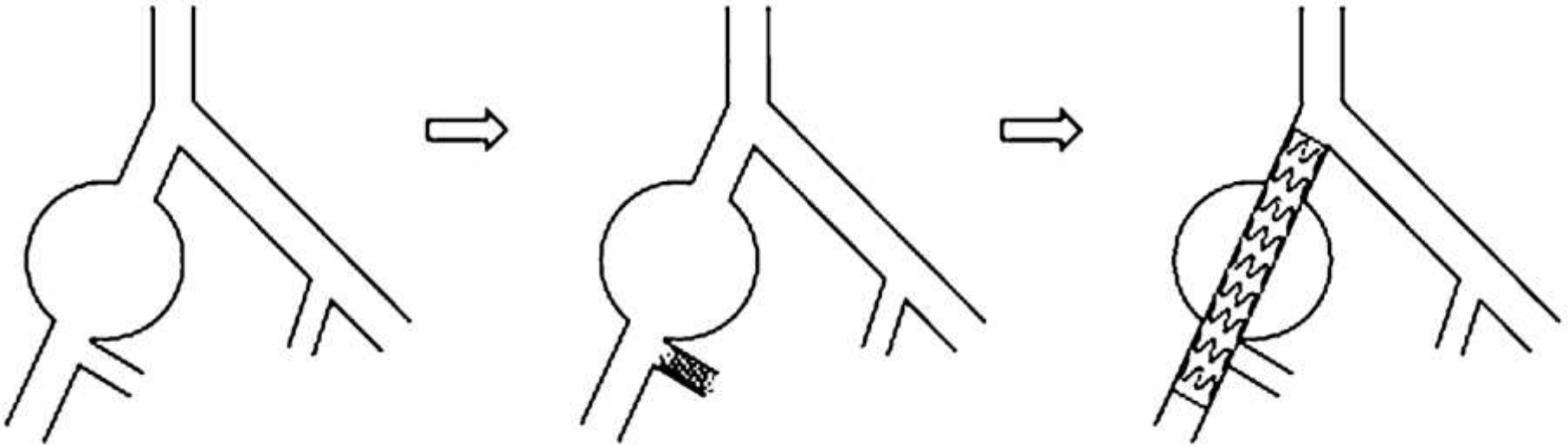
Type A anatomy

- There is no proximal and distal landing zone of 1.5 cm in the common iliac artery



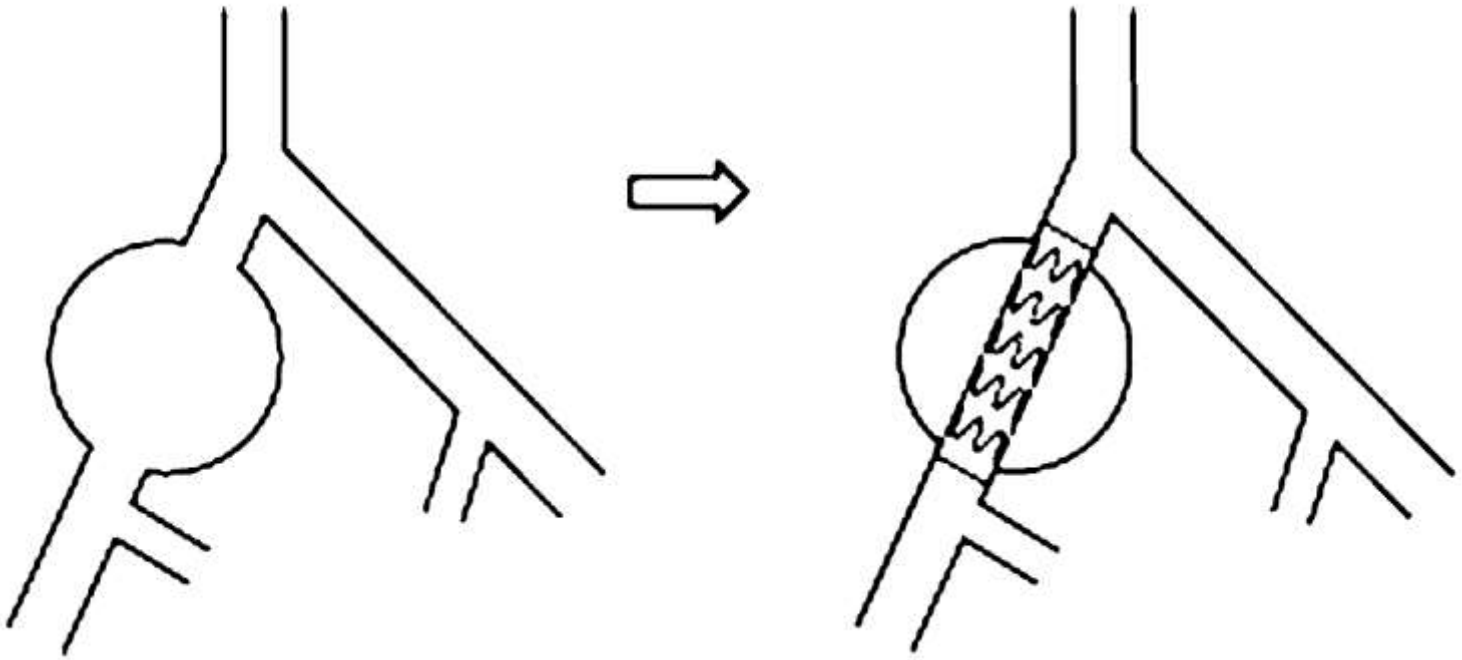
Type B anatomy

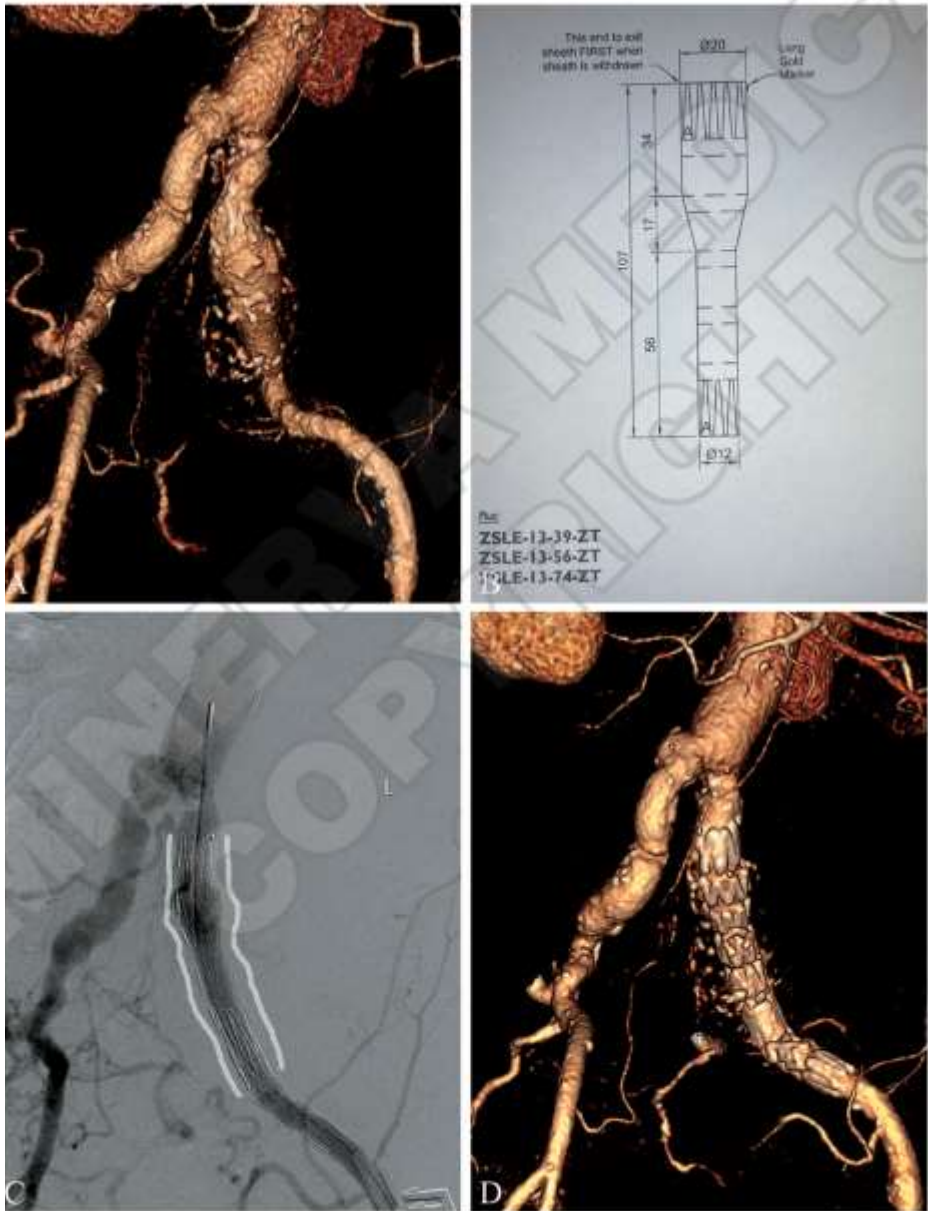
- The CIA aneurysm has sufficient proximal neck, but there is no distal landing zone (of 1.5 cm or more) between the aneurysm and the ipsilateral IIA



Type C anatomy

- There are adequate proximal and distal landing zones within the CIA.



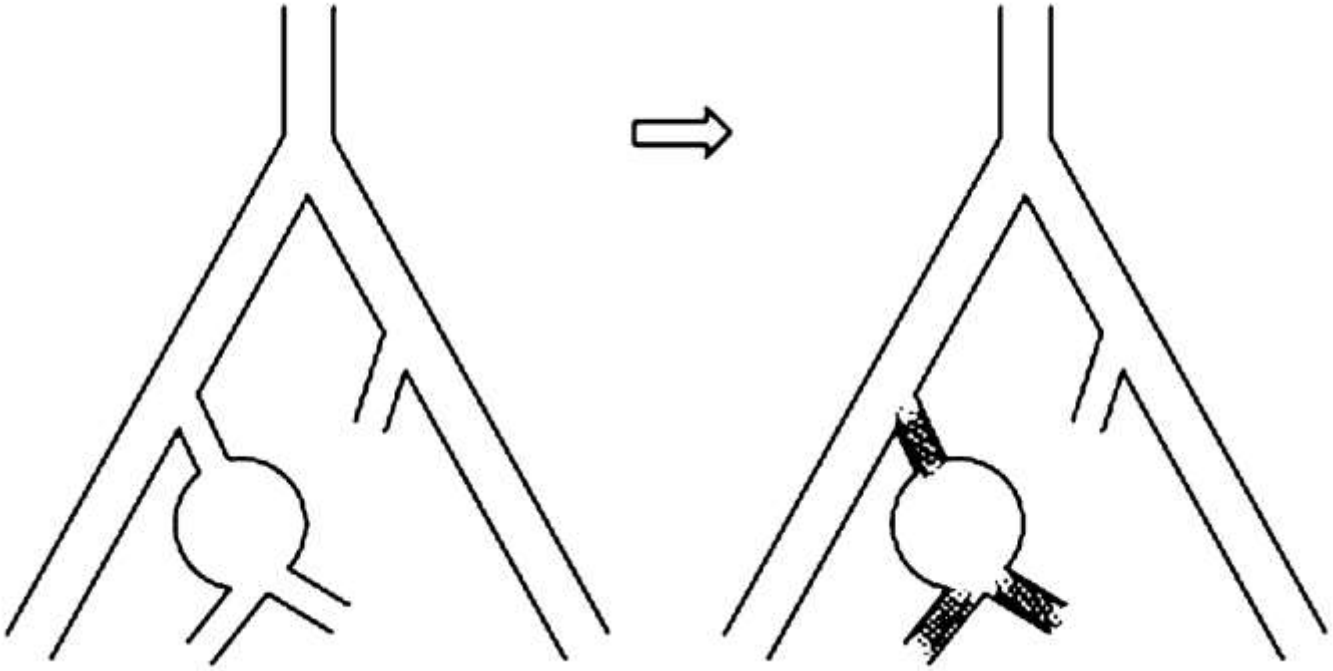


reverse mounted iliac extension (Zenith Flex iliac limb)

J Cardiovasc Surg 2015;56:579-86

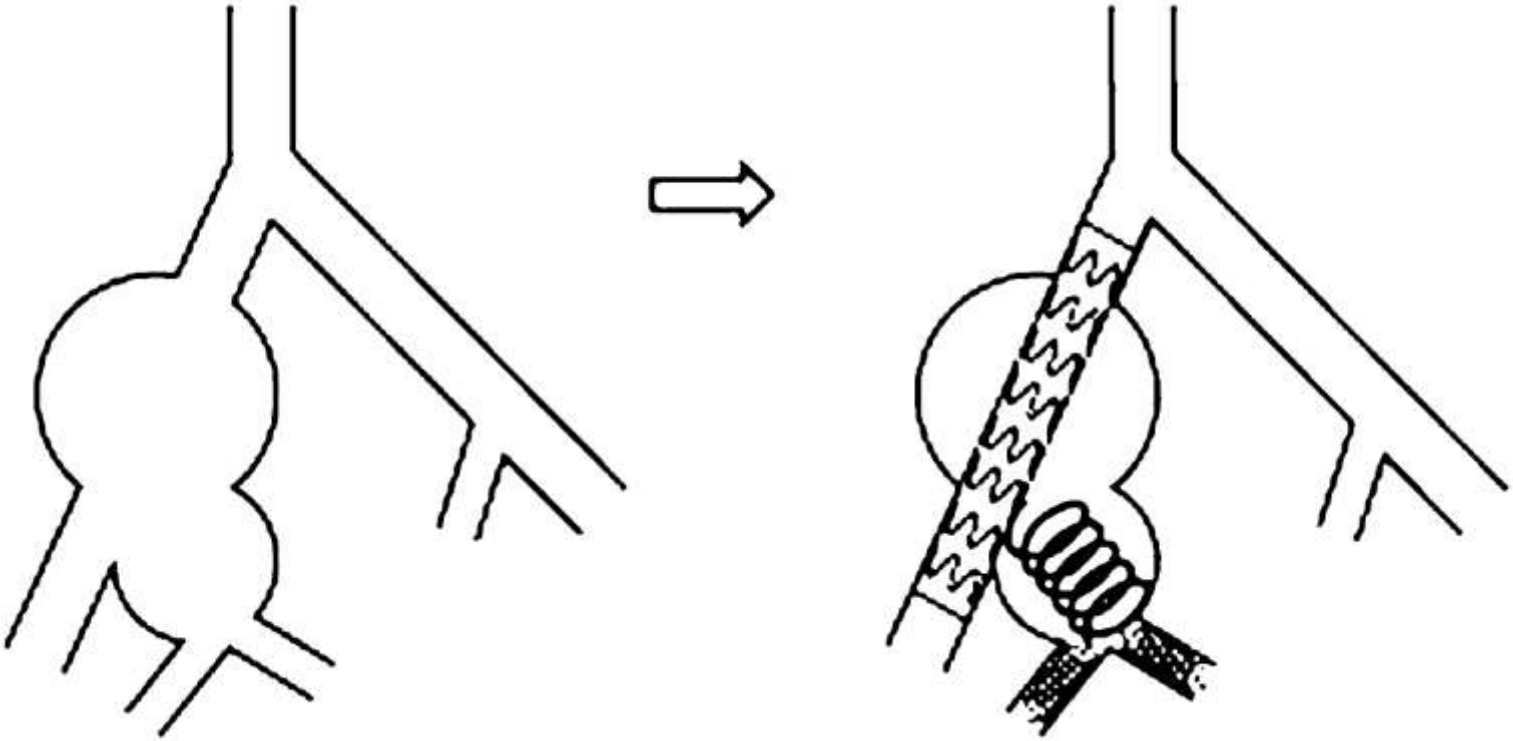
Type D anatomy

- A solitary IIAA that does not extend to the IIA origin and has a length of proximal IIA of at least 1 cm

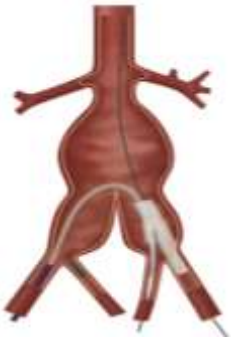


Type E anatomy

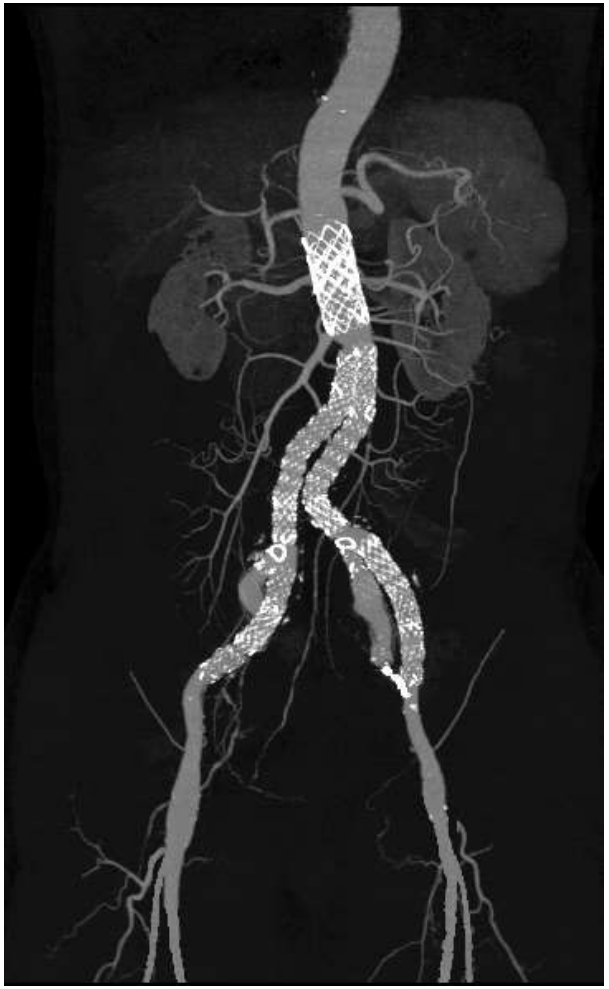
- There is a CIA aneurysm that extends into the ipsilateral IAA



Branched Stent Graft

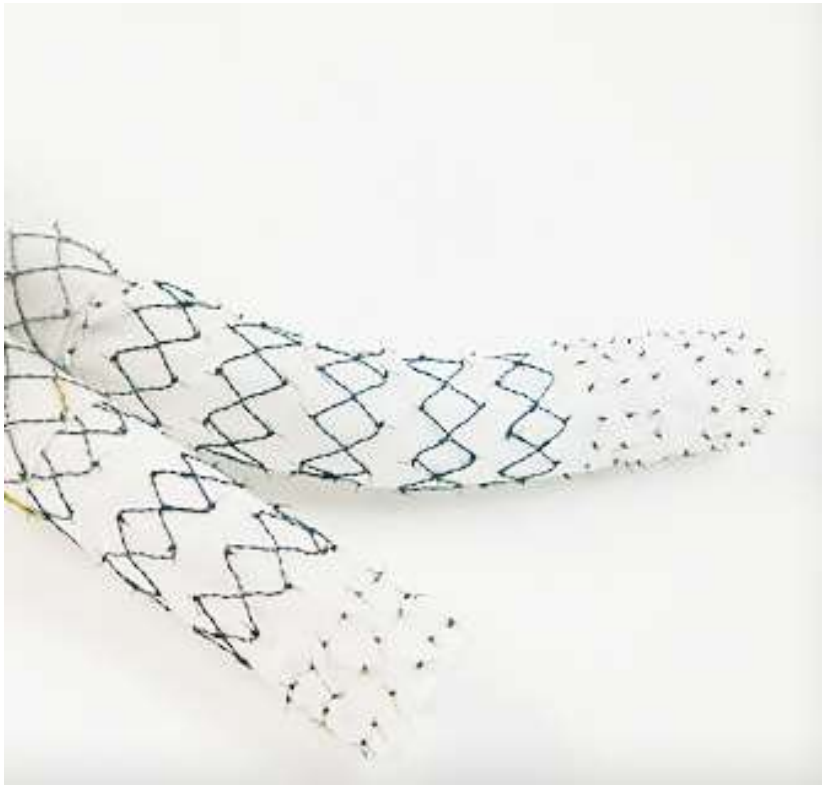


30 months later



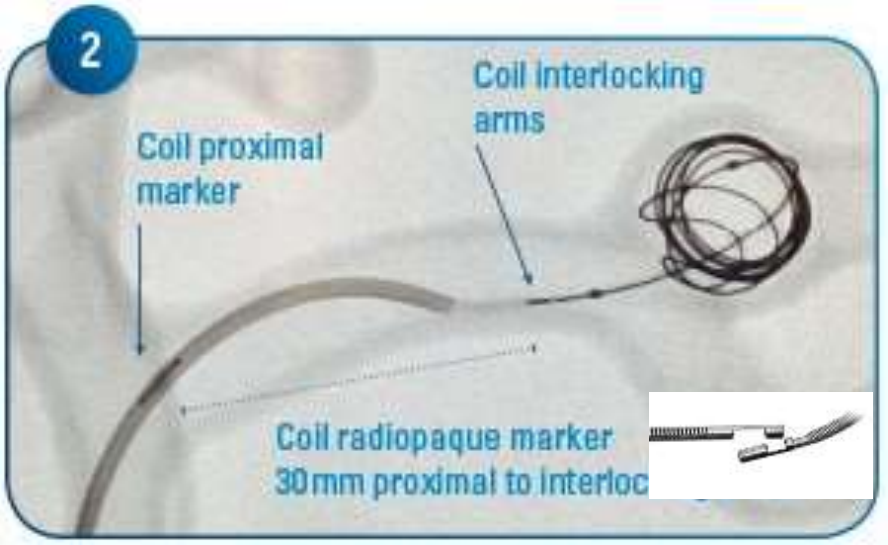
Available stent graft in Korea

Lifestream (BARD)

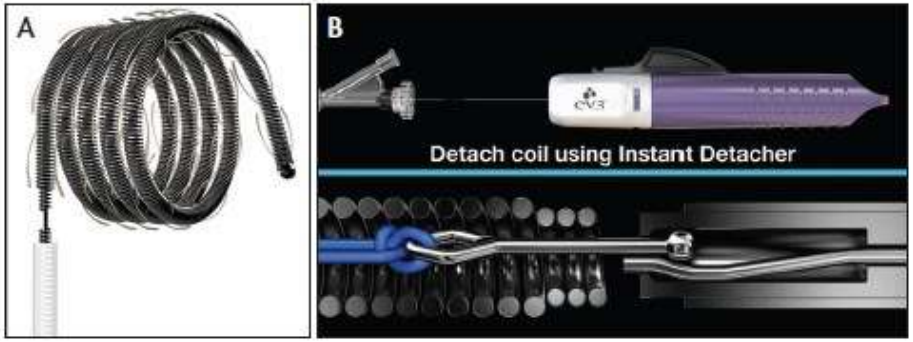


stent graft (S & G)

Available coil and plug for embolization

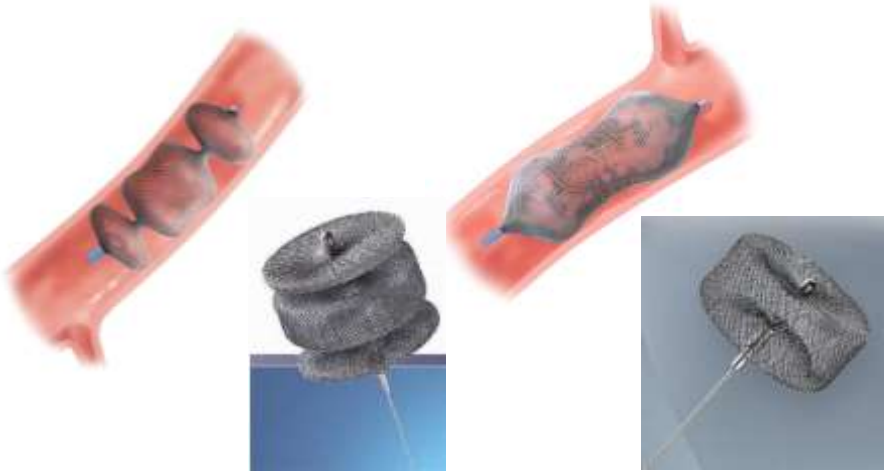


BSC Interlock coil (018, 035)



Covidien Concerto^{TM} coil (018)

COOK Nester coil (018, 035)



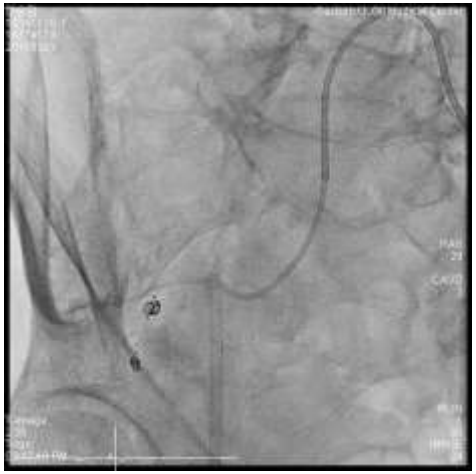
Amplatzer vascular plug I & II

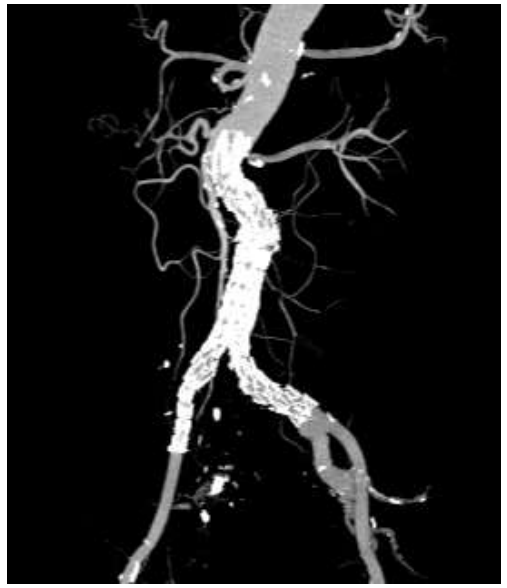
Predictors for reintervention

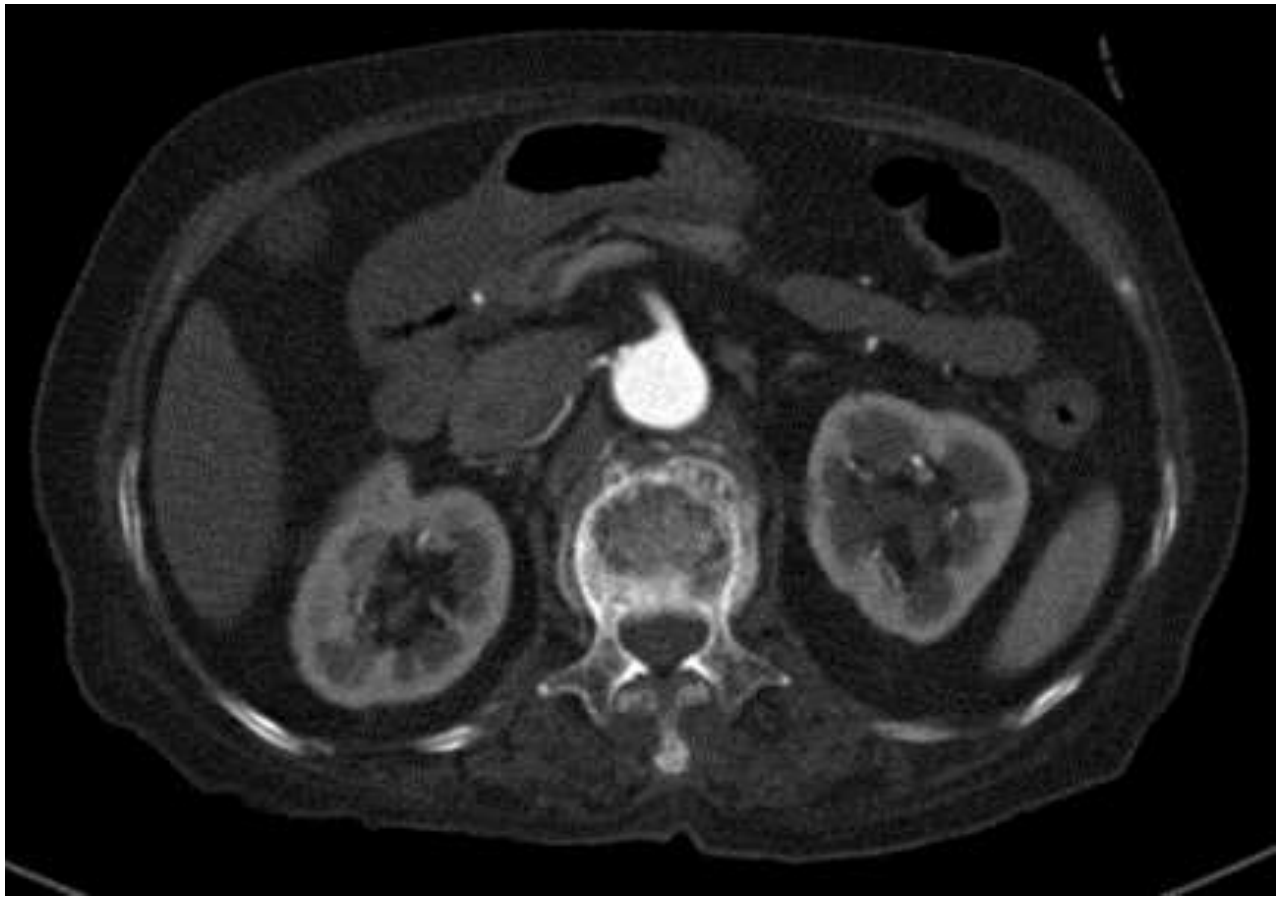
- The rate of **type I endoleak** was significantly higher with **proximal landing zone (PLZ) diameter > 24 mm in the CIA or distal landing zone (DLZ) diameter > 24 mm** (P=0.03 and 0.0014, respectively).
- **Reintervention rate** increased significantly with **increased diameter or decreased length of PLZ; increased DLZ diameter; and endovascular IIAA repair** (P = 0.005, 0.005, 0.02, and 0.02 respectively)

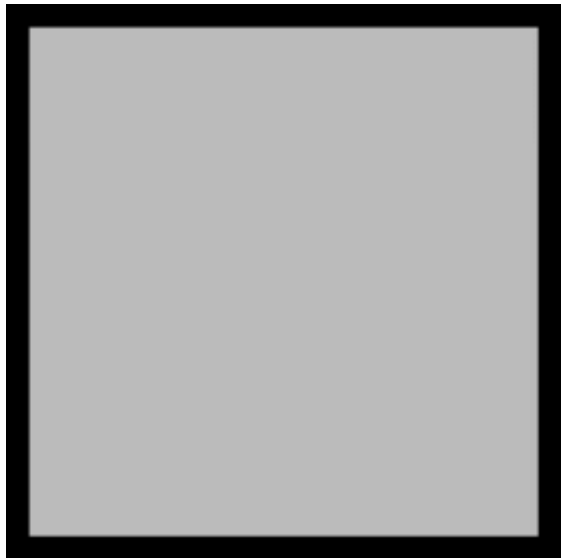
Cardiovasc Intervent Radiol 2011;34:61

What did I do ?









Conclusions

- Isolated IAA are uncommon.
- Large IIAAs have a significant risk of rupture, which is associated with high morbidity and mortality.
- Currently an aneurysm **diameter > 3 cm is** now regarded as the threshold for elective aneurysm repair.
- There are several endovascular repair options based on the anatomy and configuration.
- Endovascular repair is an attractive, minimally invasive option and should be considered a first-line treatment in these patients.


תודה
Dankie
Gracias
Спасибо
شكراً
Merci
Takk
Köszönjük
Terima kasih
Grazie
Dziękujemy
Dėkojame
Ďakujeme
Vielen Dank
Paldies
Kiitos
Täname teid
谢谢
Thank You
Tak
感謝您
Obrigado
Teşekkür Ederiz
Σας Ευχαριστούμ
감사합니다
ขอบคุณ
Bedankt
Děkujeme vám
ありがとうございます
Tack