

Management of EVAR and TEVAR

focus on nursing intervention

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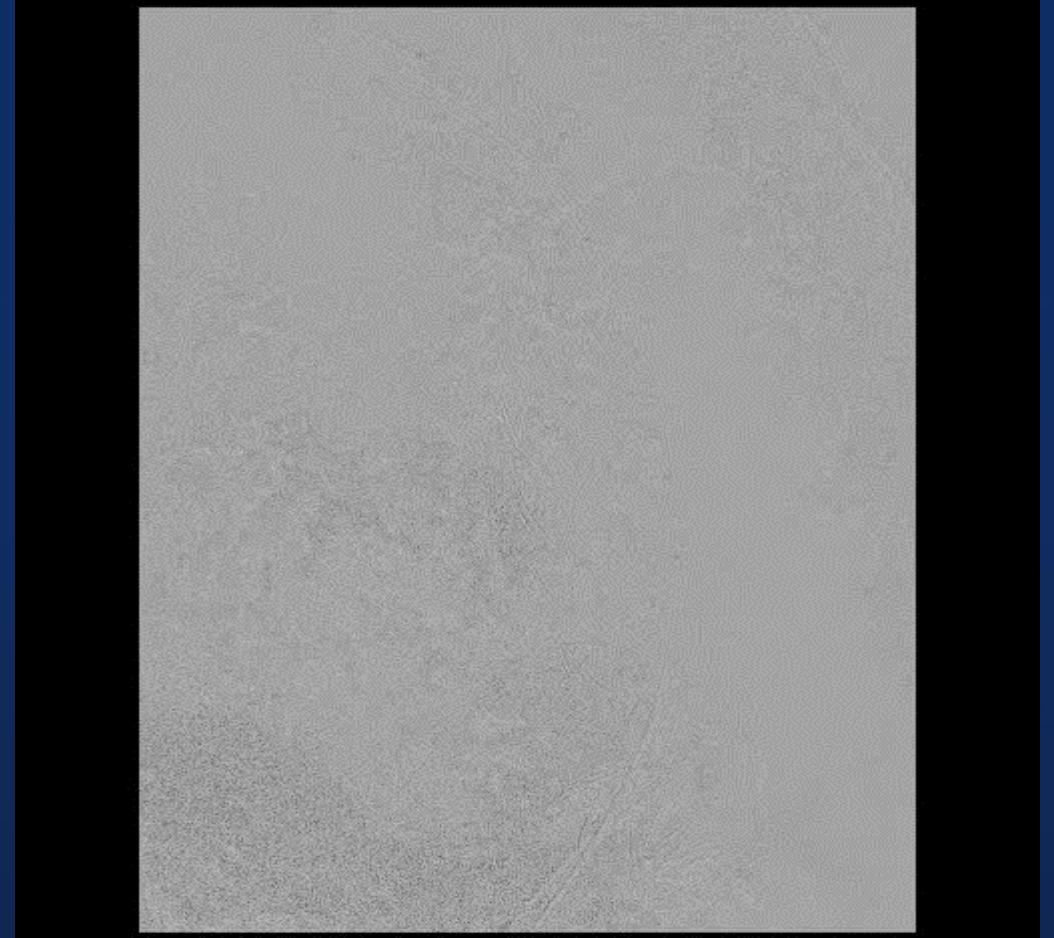
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What is EVAR and TEVAR

Introduction



What is EVAR and TEVAR

Indication

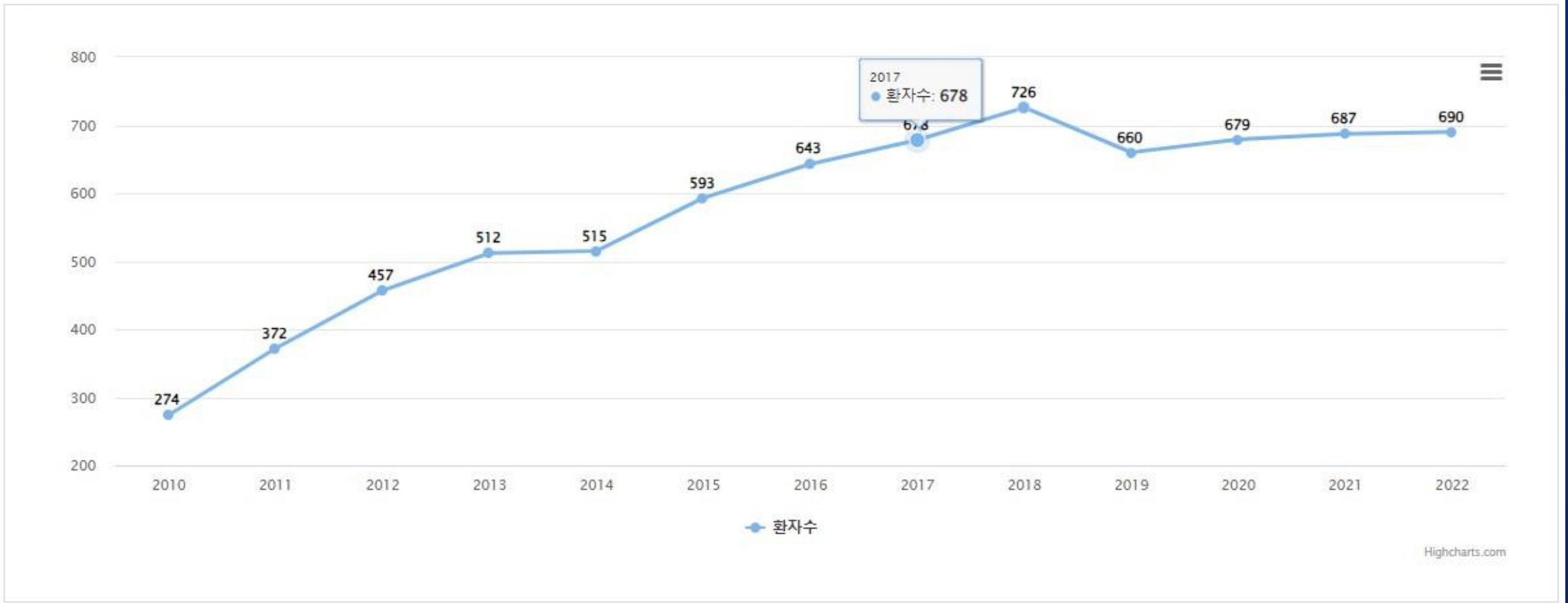
EVAR	TEVAR
<ul style="list-style-type: none">◦ Symptomatic (tenderness abdominal or back pain) or ruptured AAA◦ AAA size $\geq 5.0\sim 5.5\text{cm}$ without symptoms◦ AAA that has expanded by more than 0.5cm within a six months◦ Saccular aneurysm◦ Aortic dissection	<ul style="list-style-type: none">◦ TAA diameter $\geq 6.0\text{cm}$ without symptoms◦ Rapidly enlarging diameter ($\geq 1.0\text{cm}$ in a year)◦ Symptoms such as chest pain◦ Diagnosis of aortic rupture or dissection

What is EVAR and TEVAR

Case volume status

X 연도별 환자수 추이 (단위: 명)

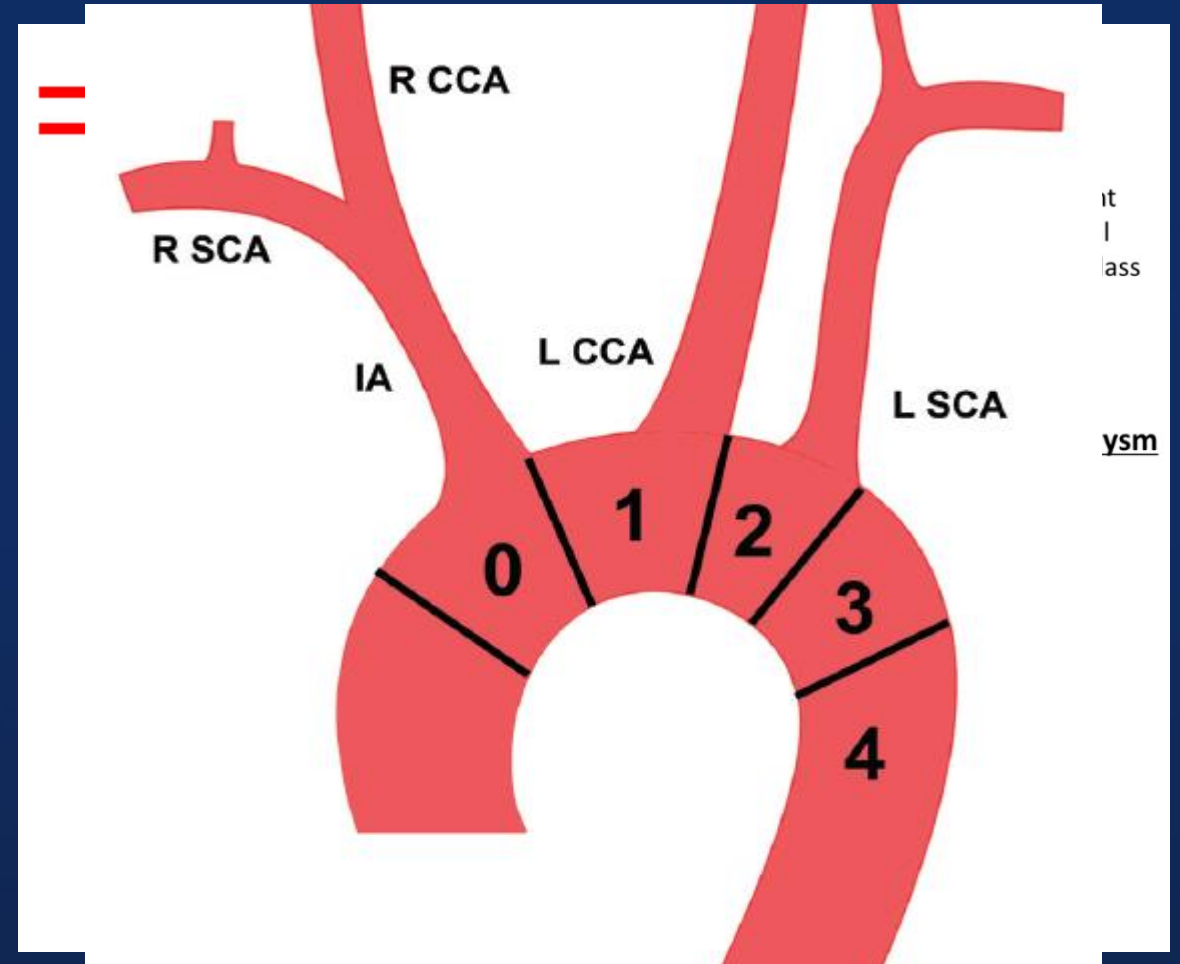
첫 그래프(추이) 연도별 수치를 클릭하면 아래도표(연도별 시각화자료)가 바뀝니다.



Preintervention Nursing

EVAR & TEVAR

- CT measurement
 - Anatomical condition check
 - Proximal & Distal landing zone
 - Graft stent size matching
 - Determining the access point
 - Embolization



Preintervention Nursing

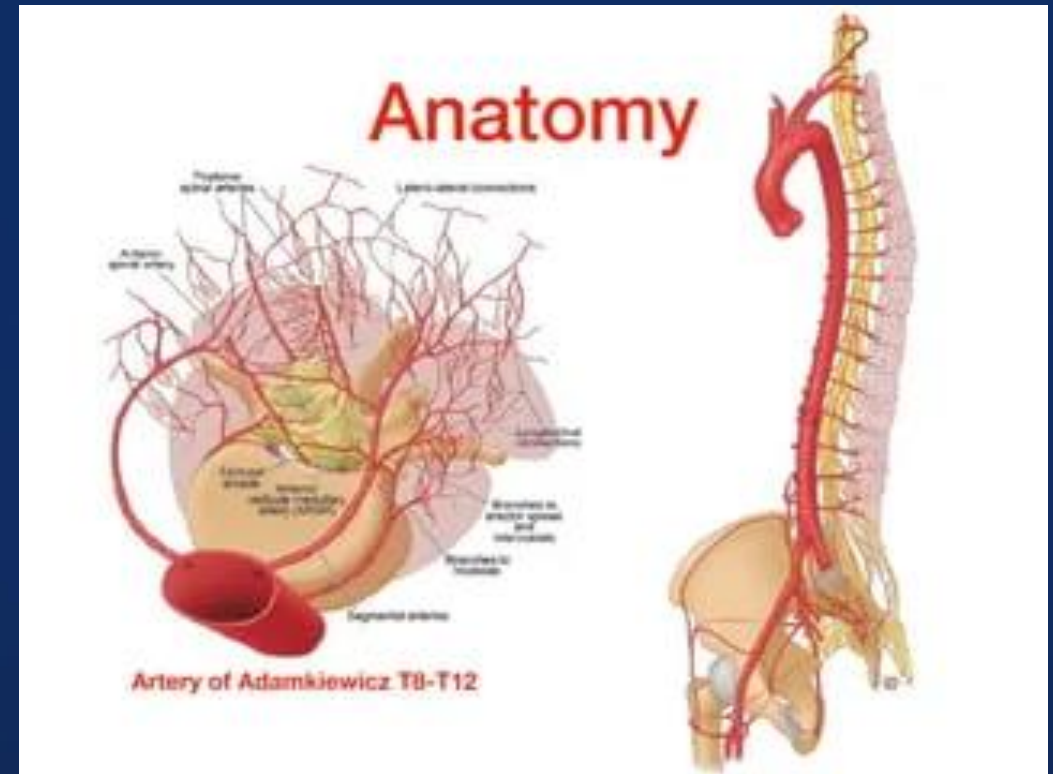
EVAR & TEVAR

- Routine lab – CBC, Creatinine, aPTT, INR, Viral marker, Echo....etc
- Head/Neck CT– if needed Embolization Lt. subclavian artery
- ICU arrange & Permission(intervention, ICU admission, TF, sedation)
- Pre medicine check (Anticoagulation agent)
- Foley cath. insertion

Preintervention Nursing

TEVAR

- Spinal cord injury (SCI)
- Pre-CSF tapping necessary?
- Risk factor check
 - Surgery Hx, Atherosclerosis, low BP during procedure...



Preintervention Nursing

EVAR

- Intervention table setting



Preintervention Nursing

TEVAR

- Intervention table setting



Intra-intervention Nursing

- V/S check (interval 10~15min)
- Hemodynamic complication – low BP, unstable HR
- Pain shock risk – puncture site, abdominal pain, chest pain
- Dye side – Nausea, Vomiting, Redness, urticaria, Itching sense
- Puncture site hemorrhage & hematoma
- Aorta rupture, dissection

Postintervention Nursing

Complications related to Hemostasis

- Puncture site Hemorrhage – Imperfected pre-closer, Calcified vessel, Vessel injury
- Hematoma
 - > **Manual compression or Compressor apply!**
(vasovagal syncope observation)
- Hb, HCT f/u – depend on result Transfusion should be considerate.
- Compartment syndrome -> Emergency OP arrange

Postintervention Nursing

Post Implantation Syndrome (PIS)

- 13 ~ 60% occur after EVAR & TEVAR
- Generally $\leq 40^{\circ}\text{C}$ fever with CRP, WBC increasing
- Inflammatory immune-mediated response
- Platelet decreased to 100,000 ~ 150,000/mm
- Plenty of Thrombus is formed between graft stent and aneurysm
- Distinguished from ***graft infection***

Postintervention Nursing

ETC

- Ischemia of artery, organ – d/t thrombus, embolism, dissection, endograft malpositioning
- Graft infection – uncontrolled fever. culture test(+) -> OP.
- Cerebrovascular event
- Spinal Cord Injury
- OPD F/U interval 1M-6M-1Y recommended by AHA guideline 2022

Insurance

급여대상

1) 대동맥

- 가) 방추형 동맥류(fusiform aneurysm)
 - (1) 흉부대동맥류 직경 5.5cm 이상, 복부대동맥류 직경 5.0cm 이상
 - (2) 4-5cm에서 6개월에 0.5cm 이상 크기가 증가하거나 관련된 임상 증상이 있는 경우
- 나) 파열 위험성이 있는 낭상 동맥류(saccular aneurysm)
- 다) 가성 동맥류 혹은 대동맥 파열
- 라) 대동맥 박리증
 - (1) 최대 대동맥 직경이 4cm 이상인 경우(급성)/또는 6cm 이상인 경우(만성)
 - (2) 기준 이하의 직경이나
 - (가) 분지된 혈관의 허혈성 증후가 있는 경우
 - (나) 박리가 진행되는 경우
 - (다) Dynamic obstruction
 - (라) 가강의 직경이 22mm 이상인 경우(급성)

Insurance

- 1) 흉부대동맥류용 STENT GRAFT
 - 가) TRUNK TYPE
 - : 대동맥 혹은 분지혈관을 광범위하게 침범하는 경우 최대 3개
- 2) 복부대동맥류용 STENT GRAFT
 - 가) BODY
 - : BIFURCATED TYPE 또는 AORTO-UNI-ILIAC 1개
 - 나) EXTENDER
 - (1) BODY EXTENDER: Type I endoleak 의심 시 1개
 - (2) ILIAC EXTENDER: 일측 최대 2개
 - (3) ILIAC BRANCH STENT GRAFT: 일측 1개
- 3) 말초혈관용 STENT GRAFT: 혈관당 1개

Take home message

- EVAR & TEVAR cases are increased steadily. Common treatment.
- Pre intervention lab check and accurate understanding of entire intervention plan.
- Respond sensitively to patient's appeals & V/S changing during procedure.
- Intervention is completed by Hemostasis!
- Don't miss the OPD F/U for Endoleak.

Thank you for your attention



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