

Syndrome aortique aigu

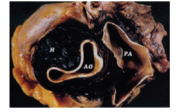
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Réanimation Polyvalente
Inserm CIC 1435
CHU Limoges



Généralités

- ❖ Terrain **hypertendu**
- ❖ Douleur caractéristique : douleur de début **brutal**, **d'emblée maximale**, à type de déchirure, le plus souvent thoracique antérieure mais parfois dorsale ou abdominale
- ❖ Signification : **mise sous tension de la paroi aortique** par une pathologie aiguë / chronique en poussée
- ❖ Risque commun : **fissuration / rupture aortique mortelle**.

Vilacosta I. J Am Coll Cardiol 1998 ; 32 : 83-9
Vilacosta I. Heart 2001 ; 85 : 365-8



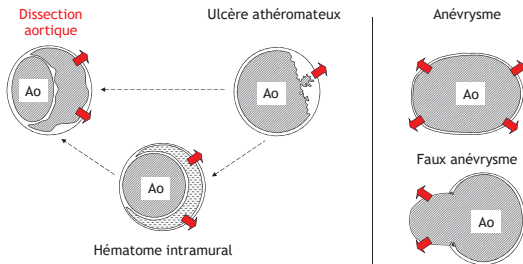
DOULEUR +
EXTRAVASATION =
SYNDROME FISSURAIRE



CHIRURGIE URGENTE

Généralités

Syndrome aortique aigu



Généralités

Extravasation

Research article
Dying from cardiac tamponade
Aravind Swaminathan¹, Karikalan Kandaswamy², Manish Powari³ and Joseph Mathew*¹

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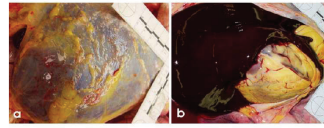
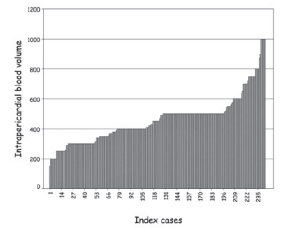


Figure 1
This image depicts a) the characteristic bluish black pericardial distension, observed at postmortem, most often b) containing an admixture of clotted and fresh blood

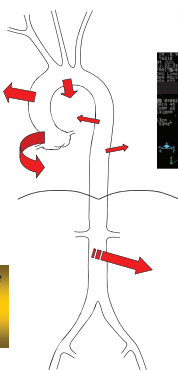
World J Emerg Surg 2007



Tamponnade



Risque de mort subite
par tamponnade ou
rupture aortique :
AORTE ASCENDANTE



Hémomédiastin & hémothorax



Hémopéritoine



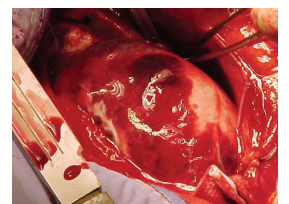
Généralités

Extravasation

Syndrome d'extravasation

- ❖ Péricarde & plèvre (& abdomen) : écho. transthoracique
- ❖ Médiastinum: écho. transoesophagienne / TDM

Syndrome aortique aigu + signe d'extravasation
= bloc !!



Généralités

Extravasation

Présentation

Dissection : aorte **ascendante** > descendante

Hématome intramural : aorte **descendante** > asc.

Ulcère athéromateux : aorte **descendante** > asc.

Anévrisme : aorte abdominale >> thoracique

Faux-anévrisme : aorte descendante > asc.

Généralités

Extravasation

Présentation

Syndrome aortique aigu

Hémodynamique stable Hypotension / choc Présentation atypique

1. Tamponnade +++
2. IAo massive / IDM
3. (Hémorragie : extravasation)

Ischémie aiguë
Paraplégie
Compression médiastinale

Urgence chirurgicale (sauf lésion aortique type B non compliquée)

Dissection aortique touchant l'aorte **ascendante** =
1 à 2% de décès /h pendant les 24 premières heures

De Bakey Type I Type II Type III

Stanford Type A Type B

Traitement Chirurgie Medical

ESC
European Society of Cardiology

ESC GUIDELINES

2024 ESC Guidelines for the management of peripheral arterial and aortic diseases

Developed by the task force on the management of peripheral arterial and aortic diseases of the European Society of Cardiology (ESC). Endorsed by the European Association for Cardio-Thoracic Surgery (EACTS), the European Reference Network on Rare Multisystemic Vascular Diseases (VASCERN), and the European Society of Vascular Medicine (ESVM).

Authors/Task Force Members: Lucia Mazzola [✉], (Chairperson) (Switzerland),

Classification of acute aortic syndromes

Stanford A Stanford B

DeBakey I DeBakey II DeBakey IIIa DeBakey IIIb

Frequency of acute aortic syndrome

60% 10-15% 25-30%

Classification of timing

Time

Hyperacute AAS Acute AAS Subacute AAS Chronic AAS

AAS onset 24 hours post-AAS 14 days post-AAS 14 days post-AAS

ESC

Dissection aortique : pronostic

From Hagan PG JAMA 2000;283:897-903

Simple Risk Models to Predict Surgical Mortality in Acute Type A Aortic Dissection: The International Registry of Acute Aortic Dissection Score

Vincent Rampoldi, MD, Santi Trimarchi, MD, Kim A. Eagle, MD, Christoph A. Nienaber, MD, Jae K. Oh, MD, Eduardo Bossone, MD, Truls Myrnes, MD, Giuseppe M. Sangiorgi, MD, Carlo De Vincentiis, MD, Jeanna V. Cooper, MS, Jianming Fang, MD, MS, Dean Smith, PhD, Thomas Tsai, MD, Arun Raghupathy, MD, Rossella Fattori, MD, Udo Sechtem, MD, Michael G. Dewh, MD, Thoralf M. Sundt III, MD, and Eric M. Isselbacher, MD, on behalf of the International Registry of Acute Aortic Dissection (IRAD) Investigators

Table 5. Preoperative Prediction Model

Variable	Overall Type A (%)	% Among Survivors	% Among Death	Coefficient	Score Assigned	p Value	Death OR (95% CI)
Age ≥ 70 y	27.3	24.1	37.4	0.68	0.7	<0.01	1.98 (1.18-3.29)
History aortic valve replacement	4.5	3.8	6.6	1.44	1.5	<0.01	4.21 (1.56-1.34)
Presenting hypotension, shock, or tamponade	28.8	22.4	49.0	1.17	1.2	<0.01	3.23 (1.95-5.37)
Migrating chest pain	13.8	12.1	19.3	0.88	0.9	<0.01	2.42 (1.32-4.45)
Preoperative cardiac tamponade	15.5	11.7	28.2	0.97	1.0	<0.01	2.65 (1.48-4.75)
Any pulse deficit	28.6	25.7	37.8	0.56	0.6	0.03	1.75 (1.06-2.88)
ECG infarct, new Q waves, ST elevation, or ischemia	21.1	18.7	29.3	0.57	0.6	0.04	1.76 (1.05-3.05)

CI = confidence interval; ECG = electrocardiogram; OR = odds ratio.

Généralités

Extravasation

Présentation

Diagnostic



European Heart Journal (2019) 40, 3538–3700
doi:10.1093/eurheartj/ehz289

ESC GUIDELINES



ESC
European Society
of Cardiology

European Heart Journal (2019) 40, 3538–3700
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ESC GUIDELINES

2014 ESC Guidelines on the diagnosis and treatment of aortic diseases

2024 ESC Guidelines for the management of peripheral arterial and aortic diseases

Developed by the task force on the management of peripheral arterial and aortic diseases of the European Society of Cardiology (ESC) Endorsed by the European Association for Cardio-Thoracic Surgery (EACTS), the European Reference Network on Rare Multisystemic Vascular Diseases (VASCERN), and the European Society of Vascular Medicine (ESVM)

Authors/Task Force Members: Lucia Mazzola ¹, (Chairperson) (Switzerland),

Généralités

Extravasation

Présentation

Diagnostic

Recommendations for diagnostic work-up of acute aortic syndrome

CCT from neck to pelvis is recommended as the first-line imaging technique in patients with suspected AAS since it is widely available, accurate, and provides information about the entry tear, extension, and possible complications (malperfusion, dilatation, or rupture).

In patients with suspected AAS, TOE is recommended to guide peri-operative management and detect complications

Table 4 Revised recommendations

Recommendations in 2017 (PAD) and 2014 (Aortic)	Class	Level	Recommendations in 2024	Class	Level
Recommendations for diagnostic work-up of acute aortic syndrome					
TTE is recommended as an initial imaging investigation. In stable patients with a suspicion of AAS, the following imaging modalities are recommended (or should be considered according to local availability and expertise):	I	C	In patients with suspected AAS, focused TTE (with use of contrast if feasible) is recommended during the initial evaluation.	I	C
MRI	I	C	In patients with suspected AAS, CMR should be considered as an alternative imaging technique if CCT is not available.	IIa	C
TOE	IIa	C	In patients with suspected AAS, TOE is recommended to guide peri-operative management and detect complications.	I	C

Généralités

Extravasation

Présentation

Diagnostic

Clinical suspicion of AAS: determine ADD-RS^a

Aortic dissection detection-risk score (ADD-RS)^a

High-risk condition

- Marfan syndrome
- Family history of aortic disease
- Known aortic valve disease
- Recent aortic manipulation
- Known aortic aneurysm

If one present = 1 ADD-RS point

High-risk pain feature

- Chest, back, or abdominal pain described as abrupt onset, severe intensity, or ripping/tearing

If present = 1 ADD-RS point

High-risk examination feature

- Haemodynamic instability (hypotension/shock)
- Perfusion deficit (pulse deficit, differential systolic blood pressure)
- Focal neurological deficit
- New AR murmur

If one present = 1 ADD-RS point

High risk: ADD-RS ≥2

CCT neck-pelvis without delay and/or focused TTE^b + ECG

Low risk: ADD-RS ≤1

ECG: exclude STEMI (2023 ESC ACS Guidelines)

Chest X-Ray and laboratory test and POCUS (if available)

POCUS

Chest X-Ray

D-dimer

D-dimer and chest X-Ray

CCT

AAS confirmed

AAS excluded

Consider alternative diagnosis

Généralités

Extravasation

Présentation

Diagnostic

Dissection aortique aiguë

❖ Flap intimal (piège : artefact linéaire) :

- ✓ flap : image linéaire traversant la lumière aortique
- ✓ sépare vrai et faux chenal & extension variable (type A ou B)
- ✓ valeur des calcifications (signent l'origine intimale)
- ✓ porte(s) entrée / réentrée

❖ Signes indirects :

- ✓ dilatation (régulière) de l'aorte
- ✓ insuffisance aortique (aigüe / non connue)
- ✓ épanchement péricardique (hémopéricarde)
- ✓ anomalie contraction segmentaire (dissection coronaire)
- ✓ hémomédiastin, hémothorax gauche.

TYPE A (± CHOC)

Roudaut R. In : Echocardiographie clinique de l'adulte. Ed Estem, 2003 ; PP : 953-73

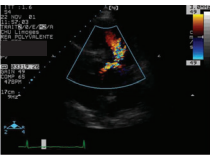
Généralités

Extravasation

Présentation

Diagnostic

Etat de choc : ETT en première intention



Syndrôme aortique aigu & insuffisance aortique : éliminer une dissection aortique proximale.

Généralités

Extravasation

Présentation

Diagnostic

ETO en deuxième intention au bloc opératoire

