Actualités SCA & Grossesse

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Déclaration de Relations Professionnelles
Disclosure Statement of Financial Interest
Docteur Estelle Vautrin

J'ai actuellement ou j'ai eu au cours des deux dernières années, une affiliation ou des intérêts financiers ou intérêts de tout ordre avec une société commerciale ou je reçois une rémunération ou des redevances ou des octrois de recherche d'une société commerciale:

I currently have, or have had over the last two years, an affiliation or financial interests or interests of any order with a company or I receive compensation or fees or research grants with a commercial company:

Affiliation/Financial Relationship	Company
• Grant/Research support	Hexacath, Lilly, Abbott
• Consulting Fees/Honoraria	Astra Zeneca
• Major Stock Shareholder/equity	None
• Royalty Income	None
• Ownership/Founder	None
• Intellectual property Rights	None
• Other Financial Benefit	None

Epidémiologie

- Pathologies cardiovasculaires: 1ere cause de mortalité maternelle indirecte au cours de la grossesse

- Incidence du SCA : 0,01%

- Incidence en progression:

1/73 000 en 1990 contre 1/24 000 en 2000

Ladner HE and al. Obstet Gynecol 2005

- La grossesse multiplie le risque d'IDM par 3-4

James AH et al. Circulation 2006

Facteur de risque

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STATE-OF-THE-ART PAPER

Acute Myocardial Infarction Associated With Pregnancy

Arie Roth, MD,* Uri Elkayam, MD†
Tel Aviv, Israel; and Los Angeles, California

Table 2 Comparison Between Select Data From 1922 to 1995 Versus 1995* to 2005

Variable	1922–1995 (n = 125)	1995–2005 (n = 103)	p Value
Mean age ± SD, yrs	33 ± 6	33 ± 5	1.0
Age range, yrs	16–45	19–44	—
Anterior MI location, n/n (%)	89/122 (73)	73/94 (78)	0.75
Multiparous, n/n (%)	93/111 (84)	53/80 (66)	<0.01
Hypertension, %	19	15	0.35
Diabetes mellitus, %	5	11	0.93
Smoking, %	26	45	<0.01
Family history of MI, %	8	22	<0.01
Hyperlipidemia, %	2	24	<0.01

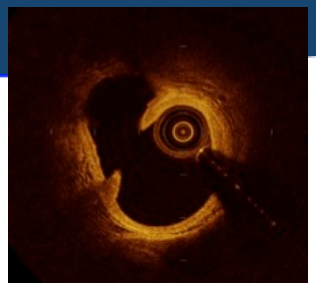
Table 1 Select Data in 103 Pregnancies Complicated by MIs

Variable	Antepartum Group (n = 46)	Peripartum Group (n = 22)	Post-Partum Group (n = 35)
Mean age ± SD, yrs	[illegible]	32 ± 5	34 ± 5
Age range, yrs	19–45	24–44	22–43
Anterior MI location, n/n (%)	30/41 (73)	16/22 (73)	27/31 (87)
Multiparous, n/n (%)	27/37 (73)	6/13 (46)	19/29 (66)
Hypertension, %	18	15	11
Diabetes mellitus, %	13	10	11
Smoking, %	62	15	43
Family history of MI, %	33	5	18
Hyperlipidemia, %	23	15	32
Pre-eclampsia, %	2	7	[illegible]
Congestive heart failure or cardiogenic shock after MI, n (%)	2 (4)	3 (14)	4 (11)
Coronary anatomy available, n (%)	[illegible]	21 (95)	34 (97)
Stenosis	25 (54)	[illegible] (27)	10 [illegible]
Dissection	5 (11)	11 (50)	12 (34)
Thrombus	2 (4)	1 [illegible]	[illegible] (14)
Spasm	1 (2)	0	1 (3)
Embolus	2 (4)	0	0
Normal	6 (13)	3 (14)	4 (11)

ATHEROSCLEROSE

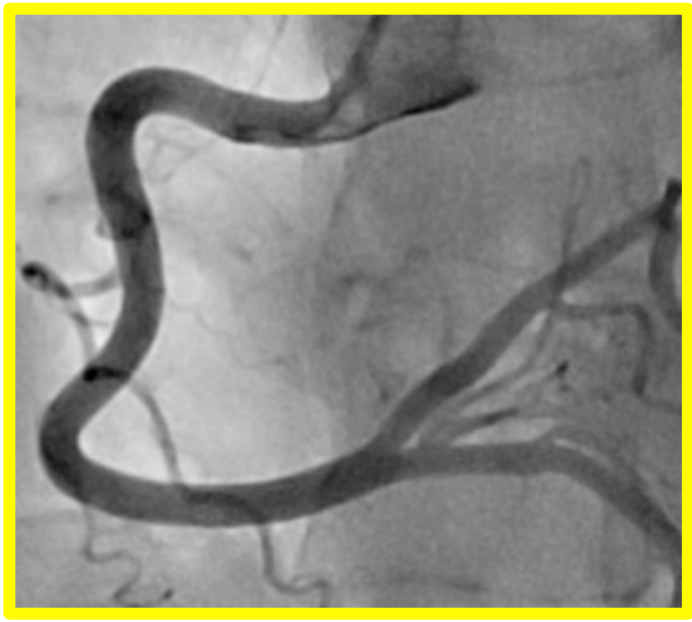
DISSECTION

Roth and al. JACC 2008

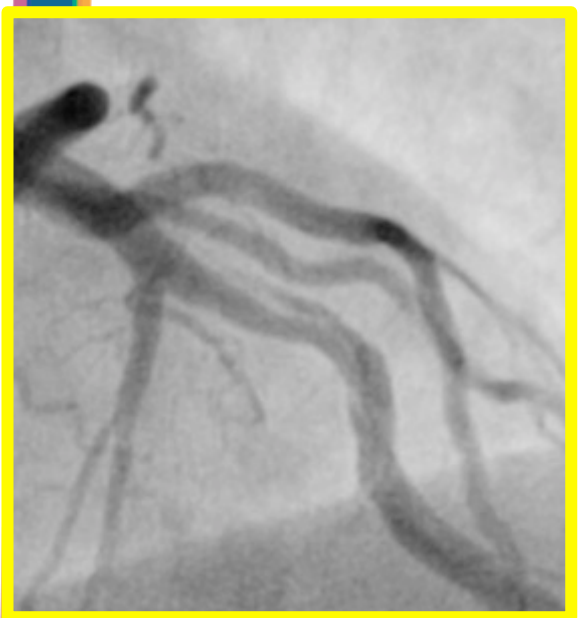


Dissection coronaire

5 signes angiographiques :



1. **Absence d'athérome sur l'ensemble du réseau**



2. Flap intimal

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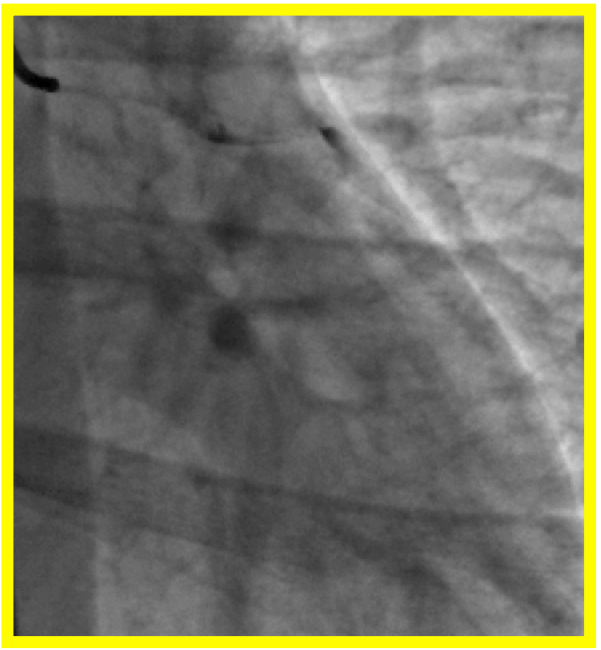
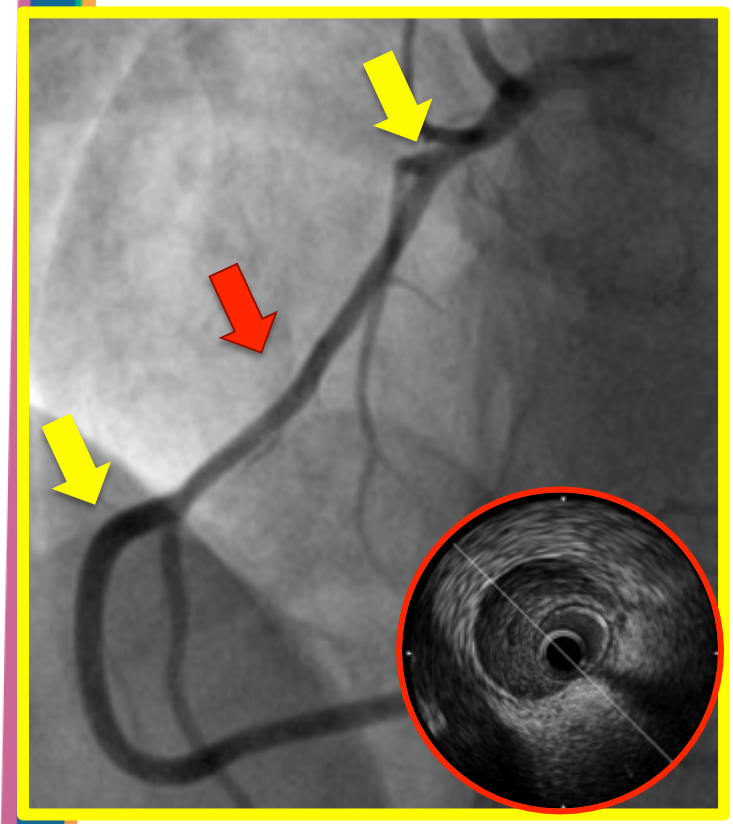
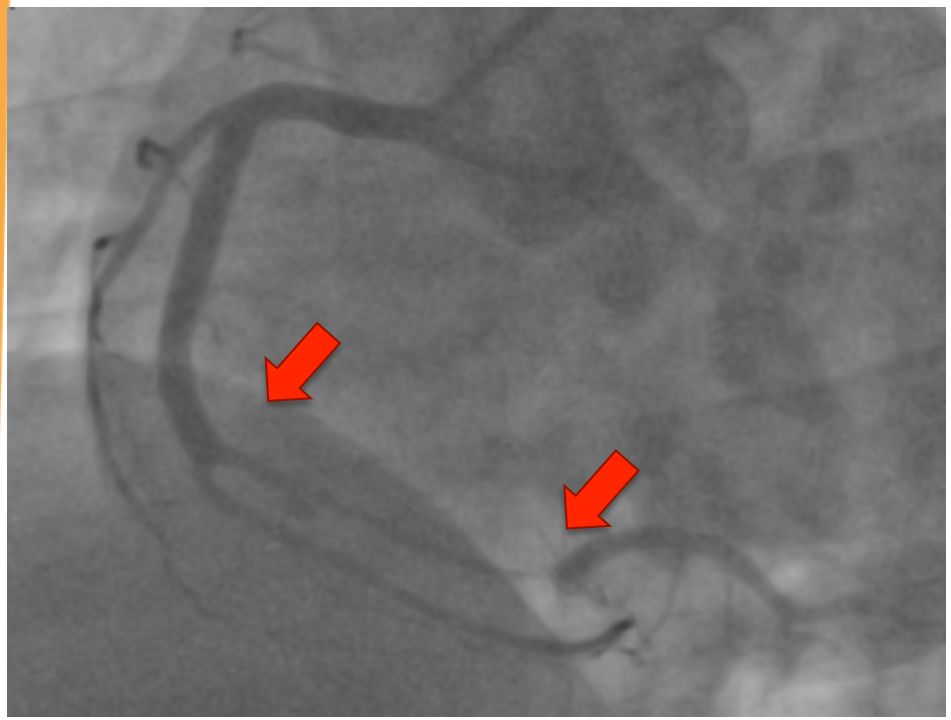
3. Tatouage de contraste extraluminal



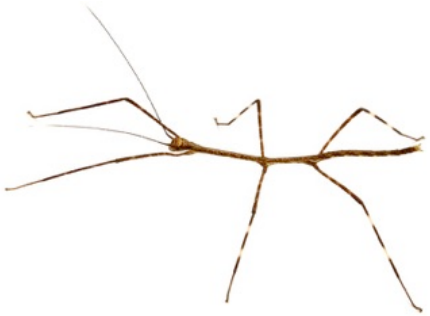


4. Réduction lisse de calibre ou occlusion en « queue de radis » avec aspect de « trop belle artère » en amont ou aval

Pascal MOTREFF, Géraud SOUTEYRAND



5. Début ou fin de la réduction de calibre sur branche collatérale



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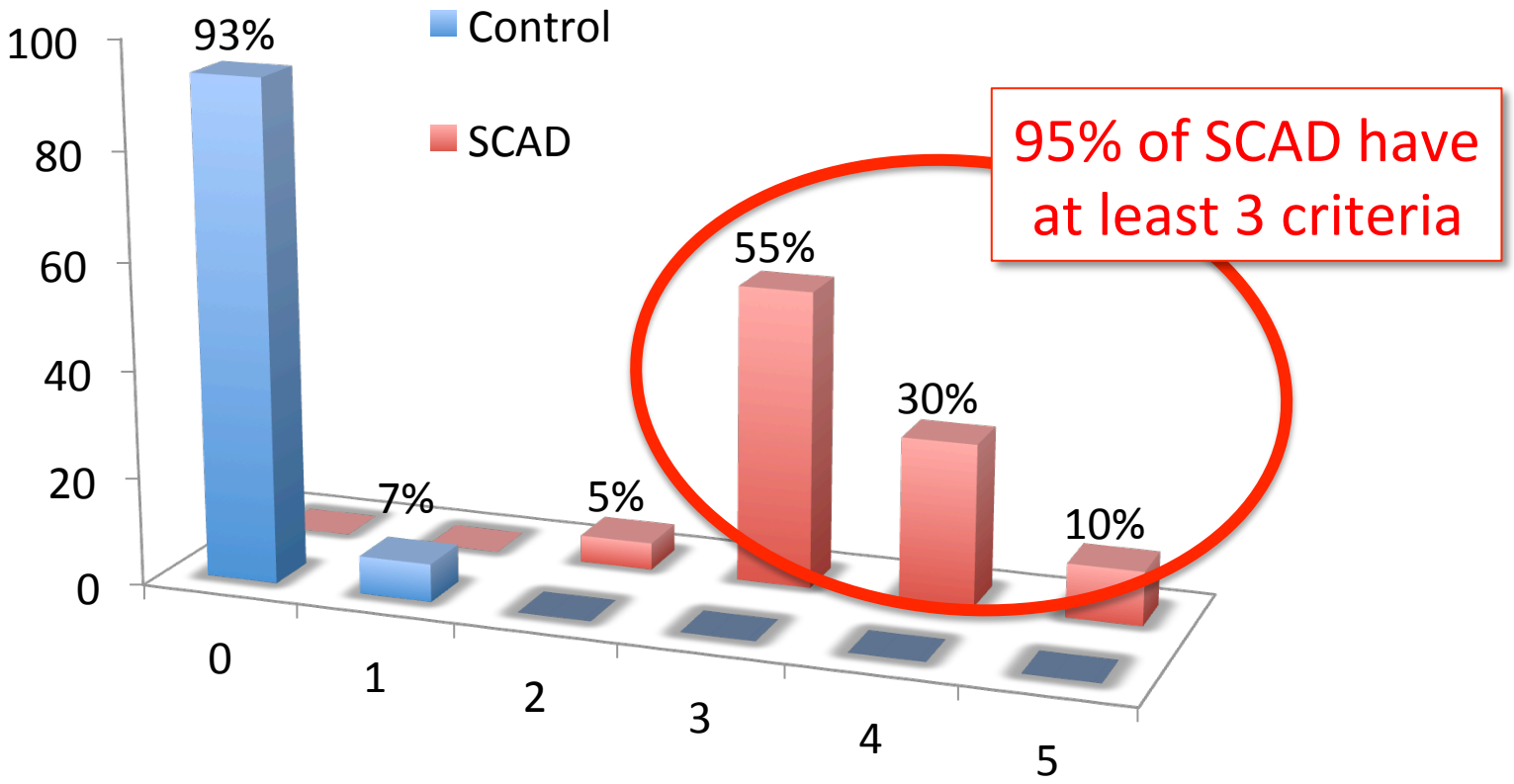
Clermont- Ferrand registry

5 Angiographic criteria :



Pascal MOTREFF, Géraud SOUTEYRAND

European Heart Journal (2011) **32**, 3147–3197
doi:10.1093/eurheartj/ehr218

ESC Guidelines on the management of cardiovascular diseases during pregnancy

Table 13 **Recommendations for the management of coronary artery disease**

Recommendations	Class[a]	Level[b]
ECG and troponin levels should be performed in the case of chest pain in a pregnant woman.	I	C
Coronary angioplasty is the preferred reperfusion therapy for STEMI during pregnancy.	I	C
A conservative management should be considered for non ST-elevation ACS without risk criteria.	IIa	C
An invasive management should be considered for non ST-elevation ACS with risk criteria (including NSTEMI).	IIa	C

[a]Class of recommendation.
[b]Level of evidence.
ACS = acute coronary syndrome; ECG = electrocardiogram; NSTEMI = non ST-elevation myocardial infarction; STEMI = ST-elevation myocardial infarction.

- ✓ Angioplastie primaire
- ✓ Thrombolyse: CI relative
- ✓ Traitement:

- **Acceptés**: aspirine, plavix, HNF, HBPM, B Bloquant, nitrates, inhibiteurs calciques
- **Non recommandés**: ticagrelor, prasugrel, antigp2b3a
- **CI**: IEC, ARA II, statine

Irradiation du fœtus et de la mère

Table 3 **Estimated fetal and maternal effective doses for various diagnostic and interventional radiology procedures**

Procedure	Fetal exposure		Maternal exposure	
Chest radiograph (PA and lateral)	<0.01 mGy	<0.01 mSv	0.1 mGy	0.1 mSv
CT chest	0.3 mGy	0.3 mSv	7 mGy	7 mSv
Coronary angiography[a]	1.5 mGy	1.5 mSv	7 mGy	7 mSv
PCI or radiofrequency catheter ablation[a]	3 mGy	3 mSv	15 mGy	15 mSv

[a]Exposure depends on the number of projections or views.
CT = computed tomography; PA = postero-anterior; PCI = percutaneous coronary intervention.

- ✓ Dépend de la dose et de l'âge gestationnel
- ✓ Principe ALARA, Tablier de plomb dorsal
- ✓ Si possible > 12 SA (organogénèse)
- ✓ Dose à l'utérus < 100mGy : sans conséquence pour le foetus

European Heart Journal (2011) **32**, 3147–3197
doi:10.1093/eurheartj/ehr218

ESC GU

ESC Guidelines on the management of cardiovascular diseases during pregnancy

Prise en charge des dissections

- Pas de recommandations
- **Médicale…**

Spontaneous Coronary Artery Dissection
Revascularization Versus Conservative Therapy

PCI for SCAD is associated with high rates of technical failure even in those presenting with preserved vessel flow and does not protect against target vessel revascularization or recurrent SCAD. A strategy of conservative management with prolonged observation may be preferable.

Tweet M, Circ Cardiovasc Interv. 2014

Mortalité materno foetale

Table 2 Comparison Between Select Data From 1922 to 1995 Versus 1995* to 2005

Variable	1922–1995 (n = 125)	1995–2005 (n = 103)	p Value
Deaths, n (%)			
Mother	26 (20)	11 (11)	0.08
Infant	16 (12)	6 (9)	

Table 1 Select Data in 103 Pregnancies Complicated by MIs

Variable	Antepartum Group (n = 46)	Peripartum Group (n = 22)	Post-Partum Group (n = 35)	All Groups (n = 103)
Deaths, n (%)				
Mother	4 (9)	4 (18)	3 (9)	11 (11)
Infant	5 (11)	1 (5)	—	6 (9)*

Roth and al. JACC 2008

Contraception

- ✓ **Recommendations HAS 2013**
  - ✓ Pilule Oestroprogestative CI à vie
  - ✓ Privilégier : dispositif intra utérin au cuivre ou contraception progestative
- ✓ Délai minimum avant nouvelle grossesse : 1 AN

Nouvelle grossesse?

- ✓ Evaluation pré-conceptionelle pour autoriser la grossesse
- ✓ Aspirine seul

Table 6 Modified WHO classification of maternal cardiovascular risk: principles

Risk class	Risk of pregnancy by medical condition
I	No detectable increased risk of maternal mortality and no/mild increase in morbidity.
II	Small increased risk of maternal mortality or moderate increase in morbidity.
III	Significantly increased risk of maternal mortality or severe morbidity. Expert counselling required. If pregnancy is decided upon, intensive specialist cardiac and obstetric monitoring needed throughout pregnancy, childbirth, and the puerperium.
IV	Extremely high risk of maternal mortality or severe morbidity; pregnancy contraindicated. If pregnancy occurs termination should be discussed. If pregnancy continues, care as for class III.

Modified from Thorne *et al.*[72]
WHO = World Health Organization

Conditions in which pregnancy risk is WHO IV (pregnancy contraindicated)
• Pulmonary arterial hypertension of any cause
• Severe systemic ventricular dysfunction (LVEF <30%, NYHA III–IV)
• Previous peripartum cardiomyopathy with any residual impairment of left ventricular function
• Severe mitral stenosis, severe symptomatic aortic stenosis
• Marfan syndrome with aorta dilated >45 mm • Aortic dilatation >50 mm in aortic disease associated with bicuspid aortic valve
• Native severe coarctation

Adapted from Thorne *et al.*[73]
LVEF = left ventricular ejection fraction; NYHA = New York Heart Association; WHO = World Health Organization.

GACI

APPAC

Etude DISCO

Registre Français Multicentrique des **DIS**sections **CO**ronaires Spontanées

Etude parrainée par le GACI, dirigée par P.Motreff et H.Benamer, avec le soutien des jeunes Cardiologues Interventionnels représentés au GACI par V. Auffret et B.Lattuca

Intervention'Elles

Etude WAMIF

ETUDE PROSPECTIVE de l'INFARCTUS DE LA FEMME JEUNE : ANALYSE DESCRIPTIVE CLINIQUE, MORPHOLOGIQUE ET BIOLOGIQUE

Merci de votre attention !