5 6 7 JUIN 2019

APPAC

Coronaropathie de la Femme: Un pronostic singulier

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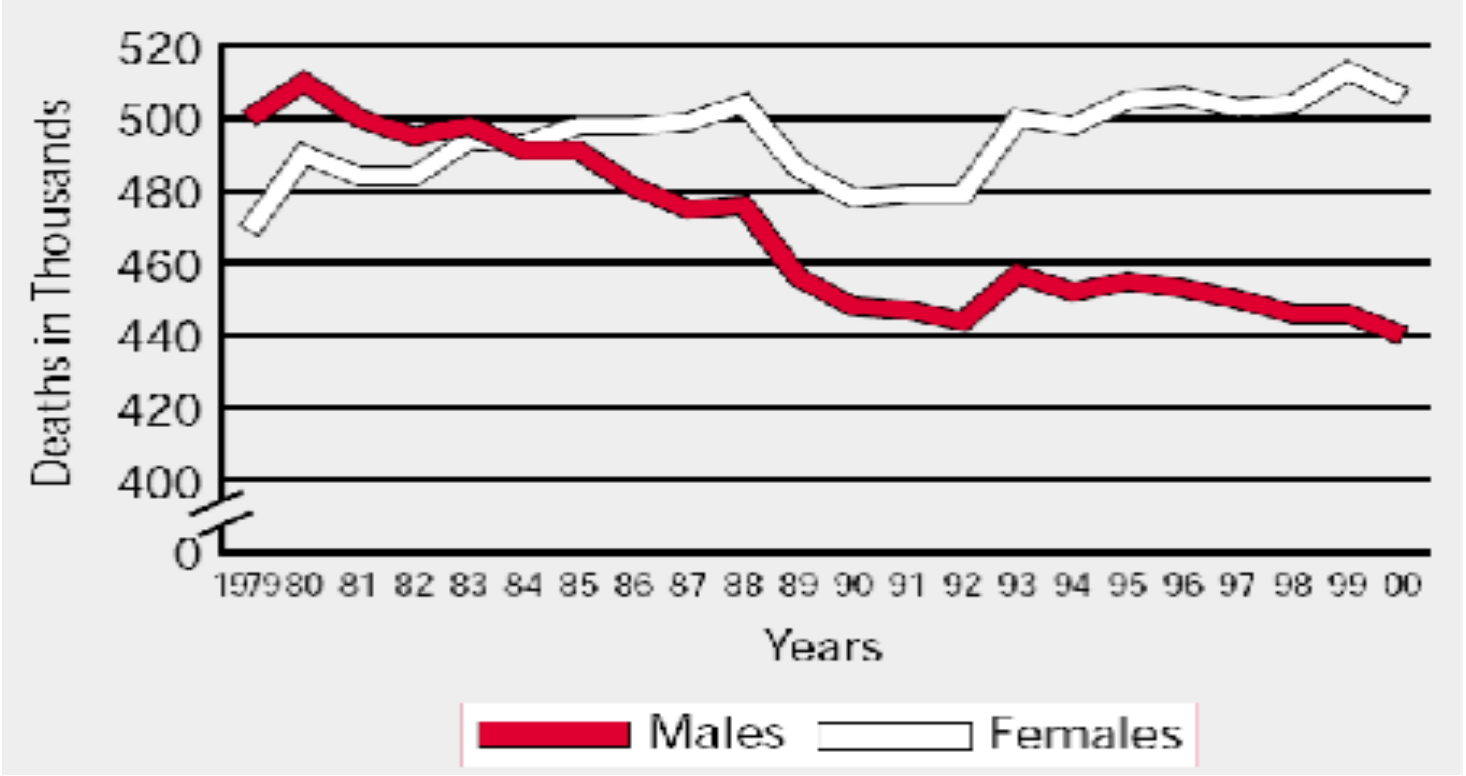
FRANCE

Cardiovascular Mortality

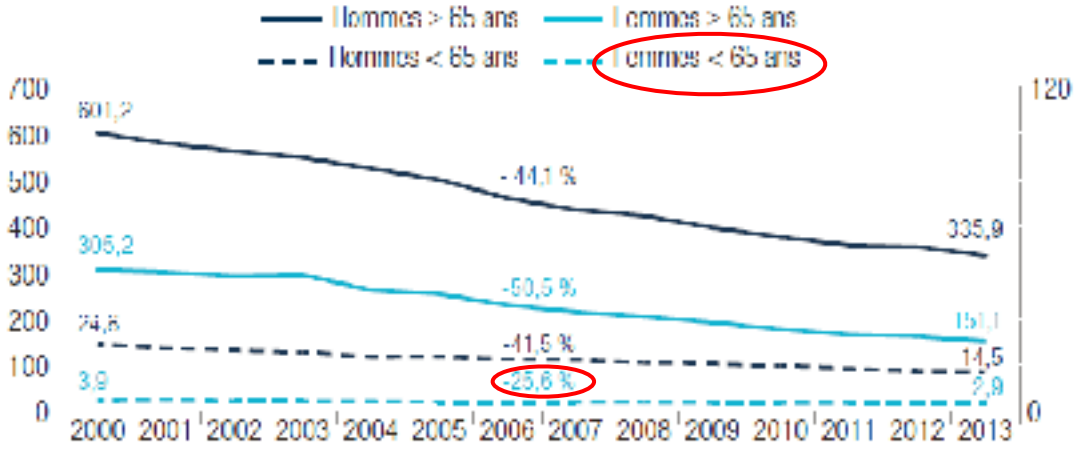


AHA Heart and Stroke Statistics Update 2003

Cardiovascular Mortality

GRAPHIQUE 3

Évolution du taux standardisé* de mortalité par cardiopathie ischémique selon le sexe et la classe d'âges, de 2000 à 2013



* Taux standardisés sur l'âge pour 100 000 habitants, selon la population européenne de référence (Revision of the European Standard Population, Eurostat 2013).

Champ • France entière (hors Mayotte).

Sources • Certificats de décès (CépiDc) ; statistiques démographiques (INSEE) ; exploitation Santé publique France.

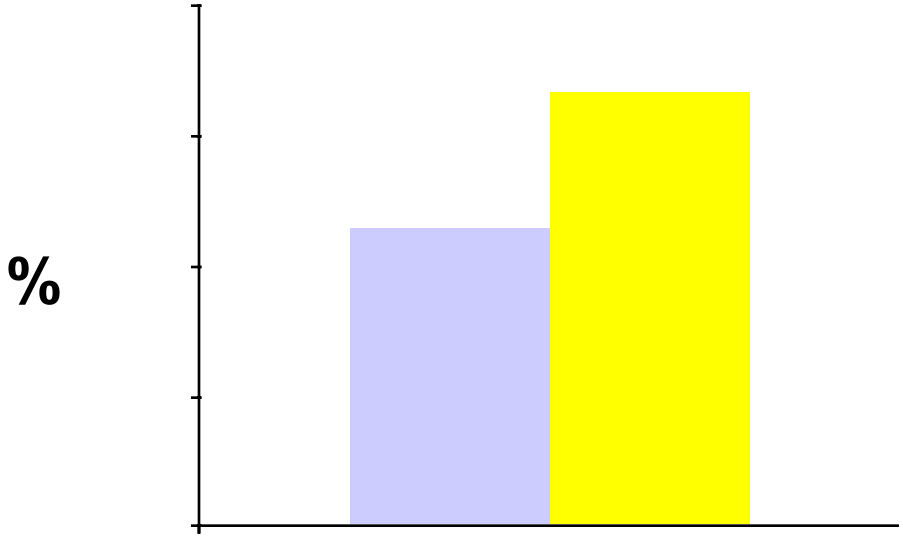
Coronaropathie de la Femme

- Syndromes coronariens aigus: **ST +**
- Syndromes coronariens chroniques: **CTO**

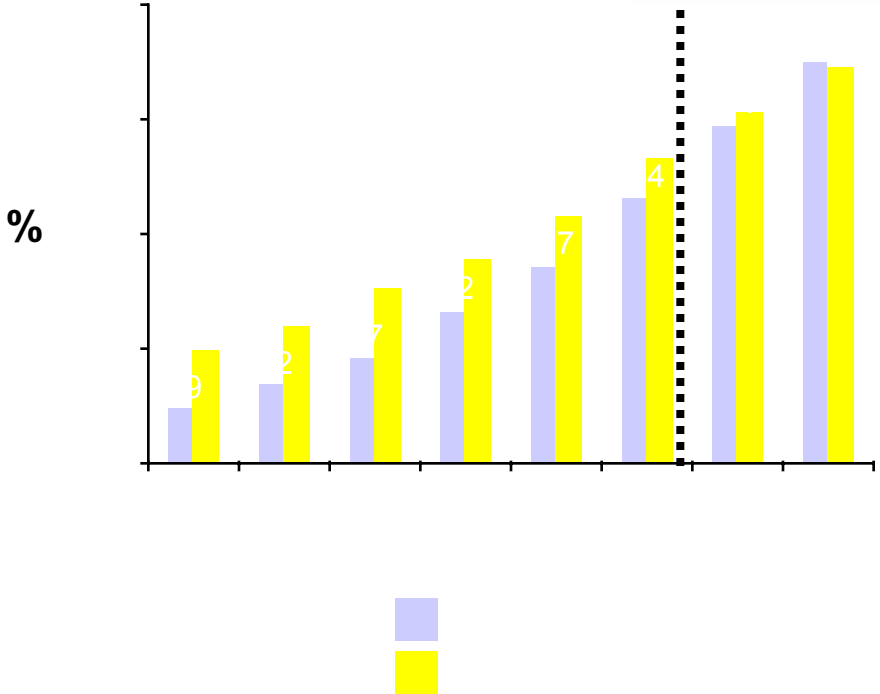
Prognosis: ACS STE NRMI 2 Registry (94-98)

Vaccarino et al. *N Engl J Med* 1999;341:217-25

Unadjusted In-Hospital Mortality



OR=1.54 (1.51-1.57)
P<0.001



Comparison of Baseline Characteristics, Clinical Features, Angiographic Results, and Early Outcomes in Men vs Women With Acute Myocardial Infarction Undergoing Primary Coronary Intervention*

Table 2—*Angiographic Variables and 30-Day Outcomes of 1,032 Patients**

Variables	Overall (n = 1,032)	Women (n = 158)	Men (n = 874)	p Value
IRA				0.06
Left anterior descending	55.5 (573)	54.4 (86)	55.7 (487)	0.76
Left circumflex	7.5 (80)	3.2 (5)	8.6 (75)	0.02
Right	35.1 (362)	40.5 (64)	34.1 (298)	0.12
Left main	1.8 (17)	1.9 (3)	1.8 (14)	0.74
Multivessel coronary disease	37.8 (386)	40.6 (59)	37.2 (309)	0.41
Left main lesion	4.2 (43)	3.8 (6)	4.2 (37)	0.80
Significant obstruction of LAD†	65.2 (663)	63.3 (100)	65.7 (563)	0.41
Initial TIMI grade flow	0.6 ± 0.9	0.7 ± 1.0	0.6 ± 0.9	0.44
Pre PCI obstruction, %	95.4 ± 6.4	95.9 ± 6.6	95.4 ± 6.4	0.33
Intercoronary collaterals	31.0 (320)	32.9 (52)	30.7 (268)	0.57
Stent implantation	50.6 (522)	48.1 (76)	51.0 (446)	0.50
Intra-aortic balloon pump support	32.8 (339)	39.2 (62)	31.7 (277)	0.06
Final TIMI grade 3 flow	84.0 (867)	84.8 (134)	83.9 (733)	0.77
Left ventricular ejection fraction, %	53.0 ± 13.6	52.5 ± 16.0	53.1 ± 13.2	0.73
Recurrent chest pain	1.9 (20)	1.9 (3)	1.9 (17)	1.0
Re-resuscitation	1.4 (14)	1.3 (2)	1.4 (12)	1.0
Repeated PCI	1.4 (14)	1.3 (2)	1.4 (12)	1.0
30-d mortality	5.5 (58)	14.6 (23)	7.4 (65)	0.003

*Data are expressed as mean ± SD or % (No.) of patients. LAD = left anterior descending (LAD) artery.
†≥ 50% of obstruction by quantitative angiographic analysis.

Cheng, I et al. Chest 2004;126;47-53

French Cardio ARIF Registry

METHODS: The Greater Paris area comprises 11 million inhabitants and accounts for 18% of the French population. Data from all PCIs performed in the 42 centers of this area is entered in a mandatory registry with internal and external audits held by the hospital governmental agency. Clinical status at discharge (dead or alive) is also recorded in another hospital-based database and a cross-check performed to validate all deaths.

From 2003 to 2007, 16063 patients were treated by PCI for STEMI within 24 hours of the onset of chest pain, 3542 (22.0%) were women and 12521 (78%) men.

Benamer *et al* Eurointervention;6:1073-79

In-hospital Mortality

Multivariate analysis

Table 4. Multivariate analysis for in hospital mortality.

		OR	[IC]	p
Female gender	Women vs Men	1.38	[1.16-1.63]	0.0002
Age	<55	1	–	<0.0001
	[55-65[	1.64	[1.24-2.16]	
	[65-75[	2.88	[2.21-3.75]	
	≥75	6.49	[5.08-8.30]	
Diabetes mellitus	Yes vs. No	1.36	[1.13-1.63]	0.001
Cardiogenic shock	Yes vs. No	20.67	[17.23-24.80]	<0.0001
Left main	Yes vs. No	2.06	[1.56-2.71]	<0.0001
CAD >50%	One vessel disease vs. <50%	0.64	[0.39-1.03]	0.002
	Two vessel disease vs. <50%	0.80	[0.50-1.28]	
	Three vessel disease vs. <50%	0.93	[0.58-1.49]	

PCI: percutaneous coronary intervention; CAD: coronary artery disease

EuroIntervention 2011;6:1073-1079

In-hospital complications

Table 3. In-hospital complications.

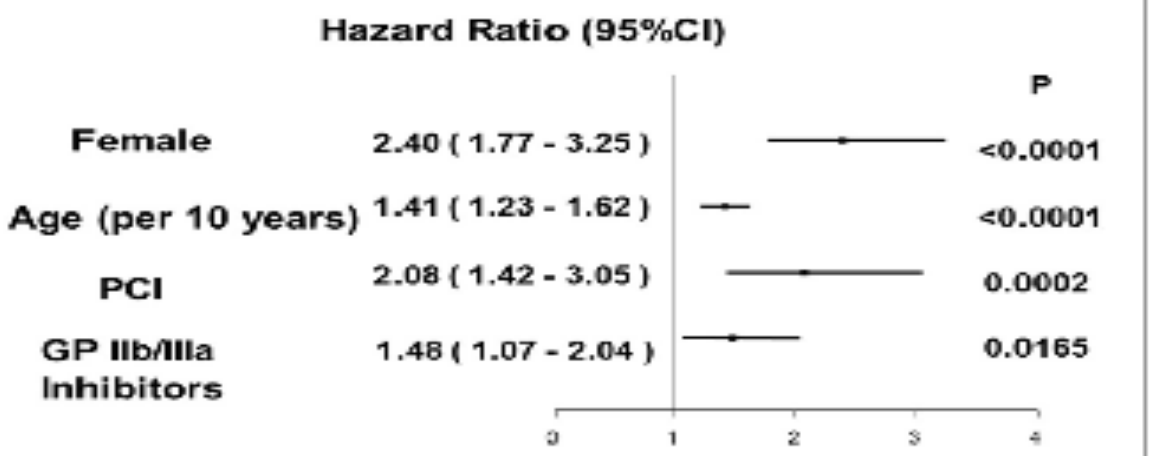
PCI	N	Men N=13,096	Women N=3,664	*p*
Transfusion	16,514	0.4 (45)	1.2 (42)	<0.0001
Vascular surgery	16,514	0.2 (16)	0.2 (7)	0.3
Cardiac surgery	16,514	20 (0.15)	9 (0.25)	0.2
Re-infarction	15,680	111 (0.91)	23 (0.67)	0.2
Dialysis	16,514	12 (0.09)	1 (0.03)	0.3
Stroke	16,514	25 (0.19)	18 (0.50)	0.015

EuroIntervention 2011;6:1073-1079

Radial Versus Femoral Access for Coronary Angiography/Intervention in Women With Acute Coronary Syndromes

Insights From the RIVAL Trial (Radial Vs femorAL access for

FIGURE 3 Predictors of Major Vascular Complications



Significant predictors of major vascular complications as assessed by multivariable analysis. These include women, older age (per 10 years), patients undergoing percutaneous coronary intervention (PCI), and the use of glycoprotein (GP) IIb/IIIa inhibitors.
CI = confidence interval.

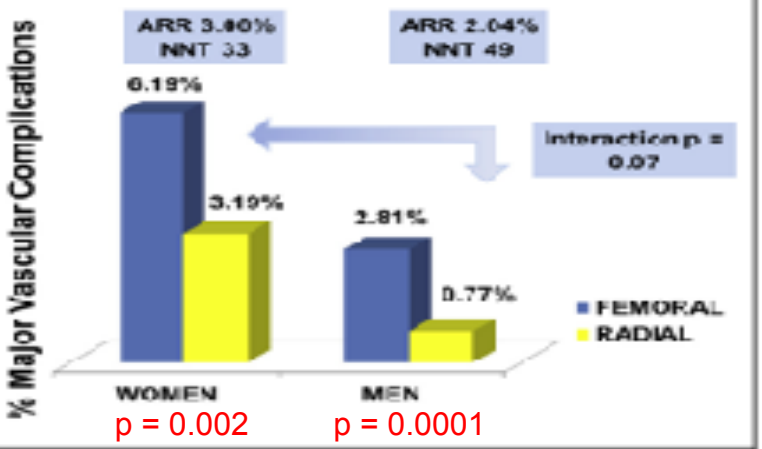
J Am Coll Cardiol Intv 2015;8:505–12

Radial Versus Femoral Access for Coronary Angiography/Intervention in Women With Acute Coronary Syndromes

Insights From the RIVAL Trial (Radial Vs femorAL access for coronary intervention)

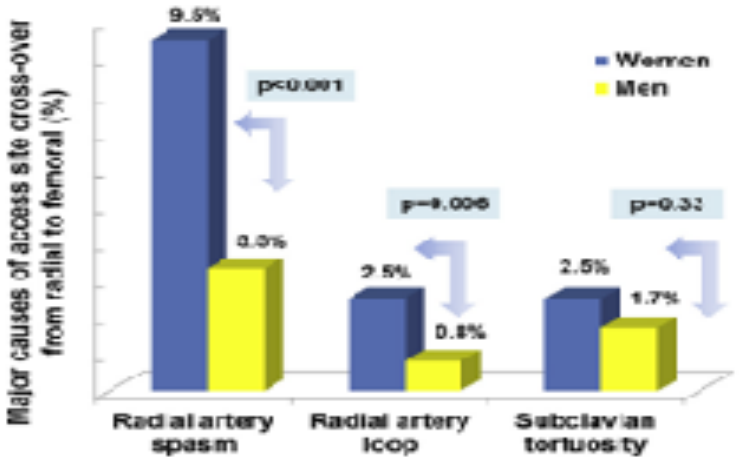
Crossover rates in women (11.1% vs. 1.9%;p < 0.0001) and men (6.3% vs. 1.9%; p < 0.0001)

FIGURE 1 Rates of Major Vascular Complications of Radial Versus Femoral Access in Both Women and Men



The interaction p was nonsignificant (0.07). The absolute risk reduction (ARR) for radial access versus femoral access in women was 3.0%, compared with 2.0% in men. NNT = number needed to treat.

FIGURE 2 Major Reasons for Access Site Crossover From Radial to Femoral in Women and Men



There was a significant difference in the rates of crossover due to radial artery spasm (9.5% vs. 3.3%; p < 0.001) and radial artery loops (2.5% vs. 0.8%; p = 0.006) in women versus men.

J Am Coll Cardiol Intv 2015;8:505–12

Comparison of Baseline Characteristics, Clinical Features, Angiographic Results, and Early Outcomes in Men vs Women With Acute Myocardial Infarction Undergoing Primary Coronary Intervention*

Cheng-I Cheng, MD; Kuo-Ho Yeh, MD; Hsueh-Wen Cheng, PhD;

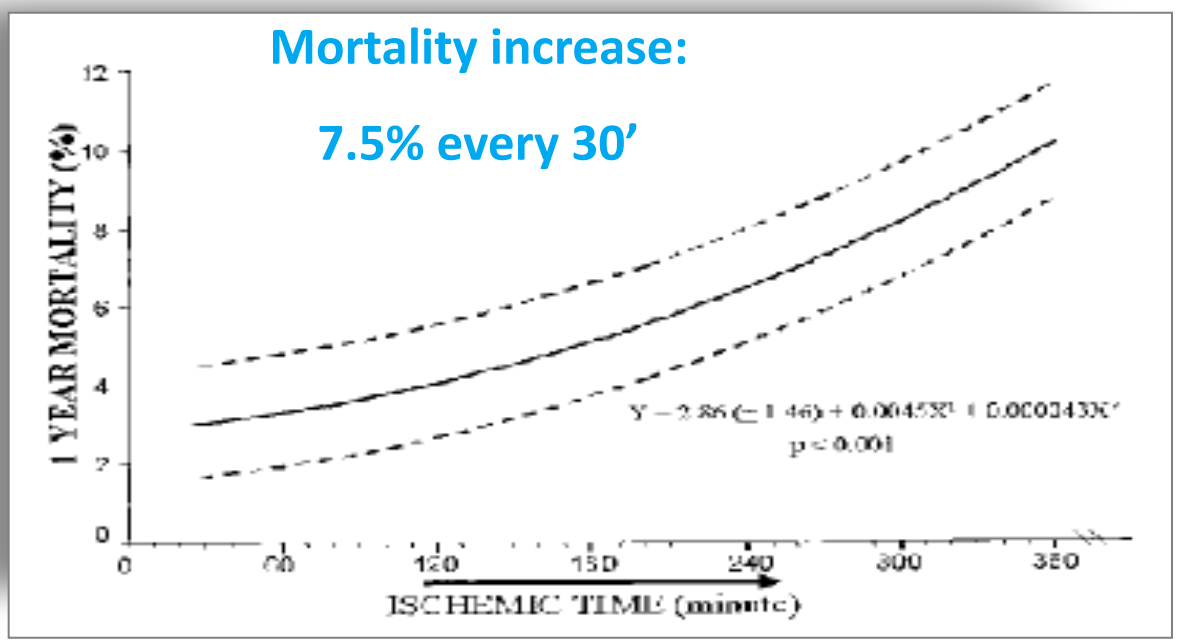
Table 1—*Baseline Characteristics and Clinical Features of 1,032 Patients

Variables	Overall (n = 1,032)	Women (n = 158)	Men (n = 874)	p Value
Age, yr	62 ± 12	67 ± 11	61 ± 12	< 0.0001
Hypertension	48.4 (499)	67.1 (106)	45.0 (393)	< 0.0001
Hypercholesterolemia	41.8	40.8	42.4	0.70
Diabetes mellitus	25.2 (260)	38.6 (61)	22.8 (199)	< 0.0001
Current smoking	56.0 (578)	5.1 (8)	65.2 (570)	< 0.0001
Previous myocardial infarction	11.7 (121)	10.8 (17)	11.9 (104)	0.66
Previous stroke	6.3 (65)	8.2 (13)	6.0 (52)	0.26
Previous coronary bypass	0 (0)	0 (0)	0 (0)	
Prehlarction angina	31.3 (323)	34.1 (54)	30.8 (269)	0.40
Complete atrioventricular block	14.1 (146)	20.9 (33)	12.9 (113)	0.005
Right ventricular infarction	14.4 (149)	21.7 (39)	12.6 (110)	< 0.0001
Paroxysmal atrial fibrillation	9.4 (97)	13.3 (21)	8.7 (76)	0.07
Ventricular tachyarrhythmias	14.0 (144)	17.7 (28)	13.3 (116)	0.14
Cardiogenic shock	12.5 (129)	17.1 (27)	11.7 (102)	0.06
Arrival time, min	158 ± 134	206 ± 145	156 ± 133	0.17
Reperfusion time, min	284 ± 173	317 ± 175	284 ± 172	0.03
Adjunctive antiplatelet therapy	21.9 (226)	25.3 (40)	21.3 (186)	0.28
Major bleeding complications†	4.2 (43)	7.6 (12)	3.6 (31)	0.019
Acute stroke	2.1 (22)	3.8 (6)	1.8 (16)	0.13
Advanced CHF (≥ NYHA class III)	20.2 (208)	29.1 (46)	18.5 (162)	0.002
Free wall rupture of myocardium	0.78 (8)	1.9 (3)	0.23 (2)	< 0.0001

*Data are expressed as mean ± SD or % (No. of patients).
†Any bleeding complications requiring blood transfusion.

Cheng, I et al. Chest 2004;126;47-53

Delay and Mortality

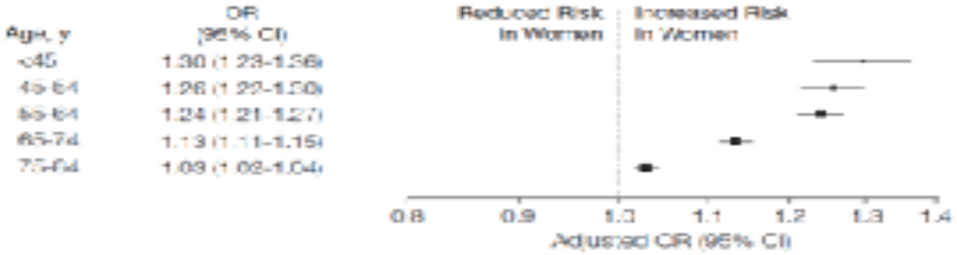


De Luca et al, Circulation 2004;109:1223-1225

Association of Age and Sex With Myocardial Infarction Symptom Presentation and In-Hospital Mortality

Présentation clinique sans douleur thoracique « typique »

Figure. Sex Differences in Myocardial Infarction Presentation Without Chest Pain/Discomfort, Stratified by Age



P<.001 for all comparisons. In these multivariable models, candidate variables for inclusion in the model include demographics, baseline characteristics, cardiovascular risk factors, and medical history (Table 1). Separate adjusted models were performed within each age stratum to find the age-stratum–specific odds ratio (OR) for women vs men, and within each age stratum, the reference group was men.

Canto et al, JAMA. 2012;307(8):813-822

Association of Age and Sex With Myocardial Infarction Symptom Presentation and In-Hospital Mortality

Retard et moins de reperfusion chez les femmes surtout sans douleur

Table 3. Process of Care for MI Patients With and Without Chest Pain, Stratified by Sex and Age: NRMI, 1994-2005

Variable	Age <65 y (n = 400 996)				Age ≥65 y (n = 743 177)			
	Women Without Chest Pain (n = 27 370)	Women With Chest Pain (n = 80 928)	Men Without ChestPain (n = 62 974)	Men With Chest Pain (n = 239 063)	Women Without Chest Pain (n = 174 786)	Women With Chest Pain (n = 196 486)	Men Without Chest Pain (n = 160 281)	Men With Chest Pain (n = 219 614)
	Initial reperfusion among eligible candidates, %							
Fibrinolytic treatment	17.4	42.2	18.0	43.6	8.9	31.7	9.5	34.4
Primary PCI	16.3	31.9	21.7	38.3	5.9	19.3	7.8	21.2
Immediate CABG	0.6	0.9	1.2	1.6	0.3	0.8	0.6	1.6
Any reperfusion	34.6	76.3	41.4	81.6	15.2	52.0	18.1	50.2
	Intervals after hospital arrival							
First electrocardiogram, mean (SD), min	54.2 (93.2)	18.1 [21.2]	26.6 (91.1)	13.3 [17.4]	54.4 (92.9)	16.4 [21.1]	31.1 (91.7)	15.5 [18.9]
Median (IQR)	22.0 (10.0-48.0)	11.0 [5.0-22.0]	17.0 (8.0-39.0)	9.0 (4.0-16.0)	23.0 (10.0-48.0)	12.0 [5.0-22.0]	20.0 (9.0-42.0)	10.0 (5.0-19.0)
Fibrinolytic treatment, mean (SD), min	81.2 (83.2)	49.6 (49.2)	61.6 (64.7)	42.5 [42.2]	80.2 (77.9)	54.0 (56.9)	72.8 (75.3)	48.0 [47.4]
Median (IQR)	56.0 [36.0-100.0]	39.0 (29.0-58.0)	44.0 (27.0-75.0)	30.0 [22.0-50.0]	60.0 [37.0-87.0]	42.0 (29.0-64.0)	52.0 (32.0-88.0)	39.0 (25.0-58.0)
Primary PCI, mean (SD), min	153.3 (115.4)	121.4 [96.8]	140.2 (121.5)	110.5 [92.5]	155.6 (113.1)	126.5 [92.4]	151.4 (121.2)	121.0 [92.3]
Median (IQR)	126.0 [94.0-175.0]	102.0 [78.0-139.0]	112.0 [83.0-156.0]	95.0 [73.0-124.0]	129.0 [99.0-181.0]	107.0 [82.0-141.0]	123.0 [90.0-175.0]	102.5 [79.0-139.0]

Canto et al, JAMA. 2012;307(8):813-822

Association of Age and Sex With Myocardial Infarction Symptom Presentation and In-Hospital Mortality

Mortalité s … eur typique

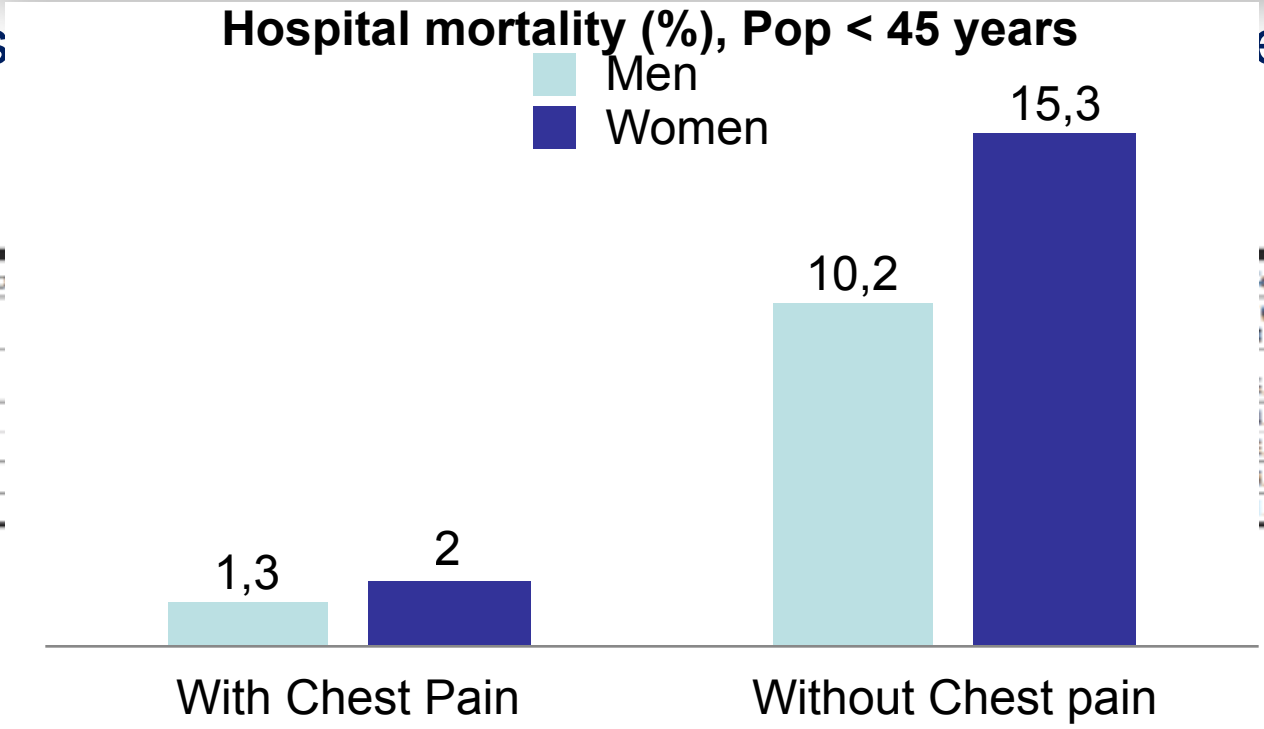


Table 6. Hospital Mo … ex: NRMI, 1994-2006[a]

Age, y	…	Without Pain	P Value
<45 (n = 66 540)	…	…	…
45-54 (n = 132 777)	…	…	…
55-64 (n = 201 019)	…	…	…
65-74 (n = 267 460)	…	…	<.001
≥75 (n = 475 697)	…	…	…

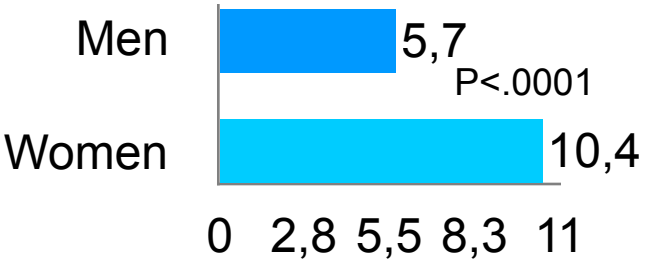
Canto et al, JAMA. 2012;307(8):813-822

Delay and mortality
STEMI < 24 hours (Estim registry From 2006 to 2010)

10362 patients

Transfered from another Hospital
2361 patients

No reperfusion: 604pts: 7,5%



7397 pts with primary reperfusion therapy:
1557 (21%) women et 5840 (79%) men

H. Benamer EuroIntervention 2016;12:e542-e549, August 2016

Delays to treatment

		Men (N=5840)	Women (N=1557)	P	
Person calling the dispatch center, n (%)	Patient or parent	3651 (62.5)	942 (60.5)	<.0001	
	General practitionner	724 (12.4)	254 (16.3)		
	Cardiologist	122 (2.1)	53 (3.4)		
	Fireman	1187 (20.3)	259 (16.5)		
	Other	156 (2.7)	49 (3.1)		
Delays, median (Q1-Q3)	Symptoms to call (hours)	0.9 [0.4 - 2.4]	1.3 [0.5 - 3.3]	<.0001	+ 24 min
	Symptoms to FMC[4] (hours)	1.3 [0.8 - 2.8]	1.8 [1.0 - 3.8]	<.0001	+ 30 min
	Call to FMC (minutes)	20 [14 - 27]	20 [14 - 30]	0.02	
Reperfusion strategy, n (%)	Pre-hospital thrombolysis	1113 (19.1)	188 (12.1)	<.0001	
	Primary PCI[5]	4727 (80.9)	1369 (87.9)		
Delays to treatment, median (Q1-Q3)	FMC to Pre-hospital thrombolysis (minutes) (for Pre-hospital thrombolysis patients)	25 [20-34]	28 [21-35]	0.0159	+ 3 min
	FMC to guide (minutes) (for Primary PCI patients)	91 [77-109]	97 [82-115]	<0.0001	+ 6 min

H. Benamer EuroIntervention 2016;12:e542-e549, August 2016

Multivariate analysis

We have a problem with STEMI in Women
Why a worst prognosis ?

STEMI (< 24H) higher mortality in women

7397 pts: 1557 Women et 5840 Men

Table 2. Step-by-step multivariate analysis for in-hospital mortality in women.

Model	N	OR [95% CI]	*p*-value
M1: Unadjusted	7,213	2.13 [1.73-2.63]	<0.0001
M2: M1–age, cardiovascular risk factors, severity criteria*	5,915	1.45 [1.11-1.89]	0.0067
M3: M2–MI location	5,915	1.46 [1.12-1.91]	0.0054
M4: M3–delays	5,737	1.40 [1.05-1.84]	0.017

M1 to M4 are models 1 (M1) to 4 (M4); each additional model is adjusted on the variables of the previous model – the additional specified variable. *Age, cardiovascular risk factors (personal history of CAD, family history of CAD, smoking, diabetes, hypertension, dyslipidaemia, obesity), severity criteria (cardiac arrest, catecholamine use, heart failure Killip class III or IV). CAD: coronary artery disease; MI: myocardial infarction; OR: odds ratio

H. Benamer EuroIntervention 2016;12:e542-e549, August 2016

EST-CE QUE LA POPULATION FEMININE CHANGE?

Article

Evolution of ST-Elevation Acute Myocardial Infarction Prevalence by Gender Assessed Age Pyramid Analysis—The Piramyd Study

Aurélie Loyeau [1], Hakim Benamer [2,3], Sophie Bataille [1], Sarah Tepper [4,5], Thévy Boche [6], Lionel Lamhaut [5,7,8,9], Virginie Pirès [10], Benoit Simon [11], François Dupas [12], Lisa Weisslinger [4,5], Gaëlle Le Ball [13], Alexandre Allonneau [14], Jean-Michel Juliard [15], Yves Lambert [16] and Frédéric Lapostolle [4,5,*]

Objective: To compare the evolution of the age pyramid of patients with ST-elevation myocardial infarction (STEMI) according to gender. Methods: Data from patients with STEMI managed in pre-hospital settings prospectively collected in the greater Paris area. Evolution of patient demographics and risk factors was investigated.

Results: 28,249 patients with STEMI were included in the registry between 2002 and 2014, 21,883 (77%) males and 6366 (23%) females.

J. Clin. Med. **2018**, *7*, 509

Article

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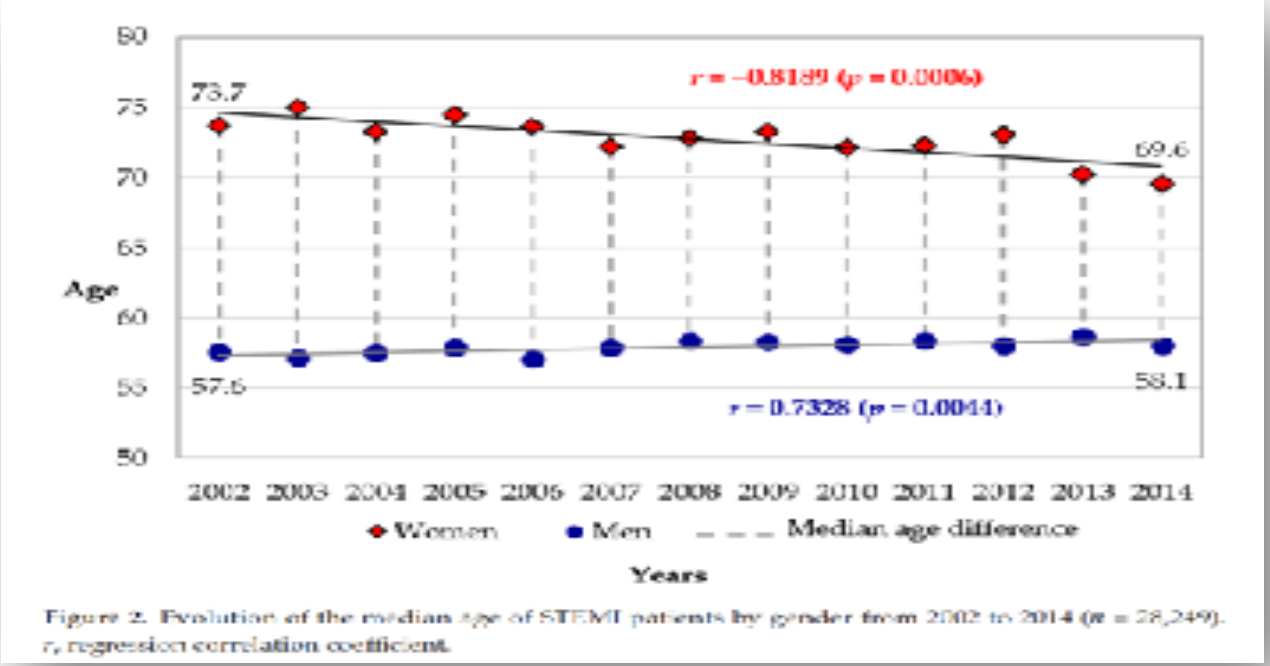

Figure 2. Evolution of the median age of STEMI patients by gender from 2002 to 2014 (n = 28,249). r, regression correlation coefficient.

J. Clin. Med. **2018**, *7*, 509

Article

Evolution of ST-Elevation Acute Myocardial Infarction Prevalence by Gender Assessed Age Pyramid Analysis—The Piramyd Study

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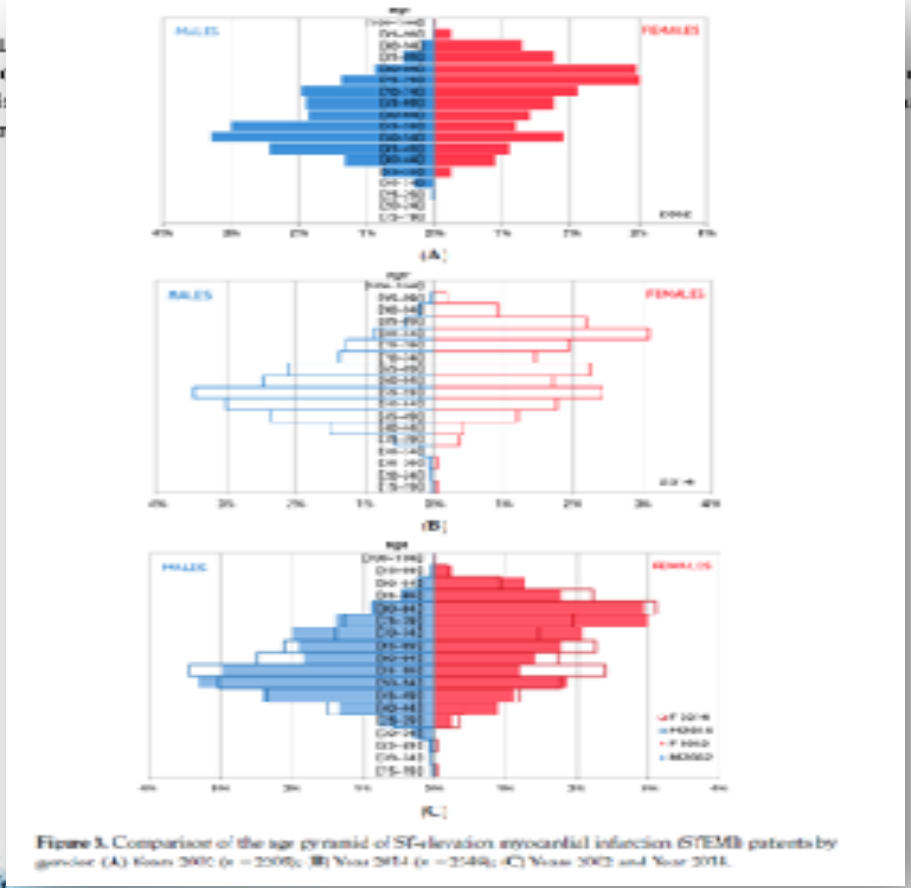

Figure 3. Comparison of the age pyramid of ST-elevation myocardial infarction (STEMI) patients by gender. (A) Years 2005 (n = 2508); (B) Years 2014 (n = 2548); (C) Years 2002 and Year 2014.

J. Clin. Med. **2018**, *7*, 509

Article

Evolution of ST-Elevation Acute Myocardial Infarction Prevalence by Gender Assessed Age Pyramid Analysis—The Piramyd Study

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Table 1. Comparison of the prevalence of risk factors according to gender (n = 19,684).

	n	Men	Women	p-Value (khi2 Test)
Personal coronary history	19,077	2772 (19%)	709 (17%)	0.0015
Family coronary artery disease	19,076	2664 (18%)	681 (16%)	0.0019
Smoking	19,018	8686 (59%)	1406 (33%)	<0.0001
Diabetes	19,076	2309 (16%)	777 (18%)	<0.0001
Hypertension	19,078	5507 (37%)	2306 (54%)	<0.0001
Dyslipidemia	19,079	5242 (35%)	1404 (33%)	0.0021
Excess weight	19,082	3633 (25%)	982 (23%)	0.0388
Absence of risk factor	19,076	1054 (7%)	413 (10%)	<0.0001

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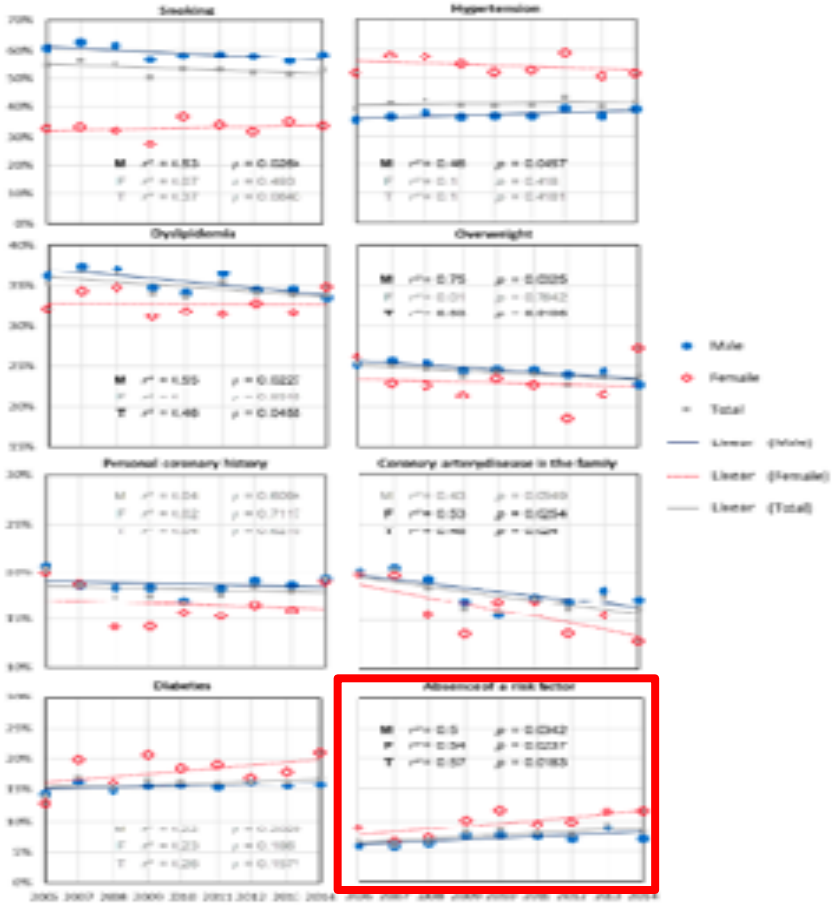
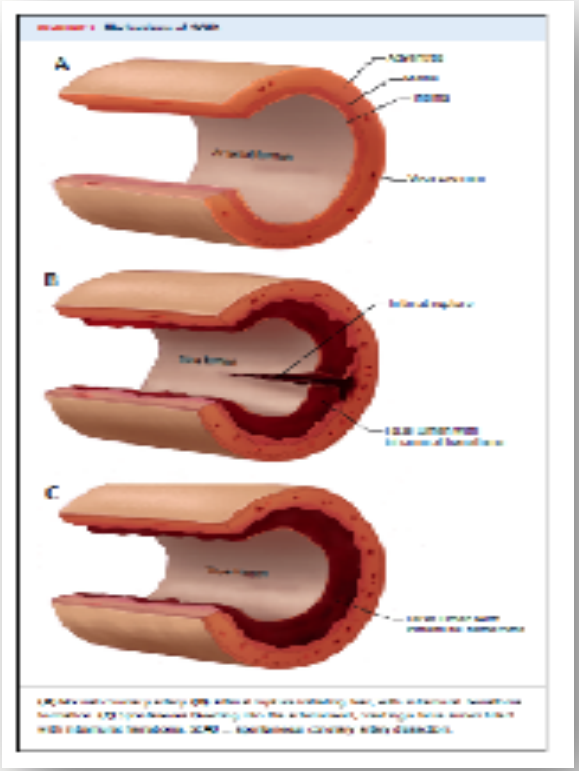


Figure 4. Evolution of the prevalence of risk factors, in the general population, and in males and females, from 2006 to 2014 (*n* = 19,604).

J. Clin. Med. **2018**, *7*, 509

Coronary haematoma and a coronary dissection in ACS in women



- ✓ **Knowledge:** Becoming more important for this entity
- ✓ **Frequent:** 1/3 of ACS in young women
- ✓ **A model:** To understand STEMI in young women?
- ✓ **Management of SCAD:** remains challenging
- ✓ **Research:** Many things remain to be discovered

How and when to suspect spontaneous coronary artery dissection: novel insights from a single-centre series on prevalence and angiographic appearance

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Euro**Intervention** 2017;12:e**2236**-e**2243**

RESEARCH CORRESPONDENCE

Coronary Artery Fenestration

A Promising Technique for Rescue Management of Spontaneous Intramural Hematoma With Luminal Compression

J A C C : C A R D I O V A S C U L A R I N T E R V E N T I O N S V O L . 1 1 , N O . 1 8 , 2 0 1 8 Letters S E P T 2 4 , 2 0 1 8 : 1 9 0 2 – 7

JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY

Association of the *PHACTR1/EDN1* Genetic Locus With Spontaneous Coronary Artery Dissection

Coronaropathie de la Femme

- Syndromes coronariens aigus: **ST +**
- Syndromes coronariens chroniques: **CTO**

Stable Angina Gender Differences

Daly C et al. *Circulation* 2006;113:490-8

	Male (N=2,197)	Female (N=1,582)	*P* Male vs Female
Age	60 ± 11	62±11	<0.001
Sx severity			<0.001
CCS I	41	35	
CCS II	46	53	
CCS III	13	12	
Sx duration			0.001
<1 mo	2	1	
0-5 mo	55	50	
6-11 mo	21	21	
>12 mo	23	28	

Gender and coronary stenting

Mehilli J et al. *JAMA* 2000;284:1799-805

	Male (N=3,263)	Female (N=1,001)	*P* Male vs Female
Age	63 ± 11	69±10	<0.001
HTN	68	75	<0.001
Diabetes	19	27	<0.001
Smoking	30	17	<0.001
Cholesterol	47	57	<0.001
Previous MI	37	33	0.006
Previous CABG	14	9	<0.001
↓ LVEF	30	24	<0.001
Multivessel Dz	76	65	<0.001
Lesion length	12.3 ± 7.3	11.8 ± 6.5	0.03
Vessel size	3.06 ± 0.54	2.98 ± 0.50	<0.001
Complex lesions	73	71	0.23
CTO	8	8	0.52

Are we ready for a gender-specific approach in interventional cardiology?☆

Paolo Calabrò [a,b,*], Giampaolo Niccoli [c], Felice Gragnano [d,e], Erik Lerkevang Grove [d,e], Rocco Vergallo [c], Dimitri P. Mikhailidis [f], Giuseppe Patti [g], Carmen Spaccarotella [h], Niki Katsiki [i], Giulia Masiero [j], Daisuke Ueshima [k], Eduardo Pinar [l], Alaide Chieffo [j], Gian Paolo Ussia [m], Ingo Eitel [n,o], Giuseppe Tarantini [p]
on behalf of the Working Group of Interventional Cardiology of the Italian Society of Cardiology

Coronary angiography

- Higher overall prevalence of coronary artery anomalies (> LAD/LCx originating from separate ostia, < myocardial bridge)
- Higher prevalence of normal coronary arteries
- Less severe coronary artery disease

Fractional flow reserve (FFR)

- Higher FFR values
- Lower proportion of hemodynamically significant stenoses (i.e., FFR<0.80)

Intravascular ultrasound (IVUS)

- More focal pattern of atherosclerosis (i.e., smaller number of non-culprit plaques, shorter lesions)
- Smaller plaque plus media area, smaller plaque volume and plaque burden
- Smaller volumes of necrotic core, fibrous tissue, fibro-fatty tissue and calcium (*)

Optical coherence tomography (OCT)

- Similar culprit plaque morphology (~ 50% plaque rupture, ~ 25% plaque erosion)
- Smaller lipid arc and greater reduction in lipid arc after statin therapy
- Lower prevalence of calcification
- Similar prevalence of TCFA, microchannels and macrophages

Fig. 1. *Specific angiographic, functional (IFR) and morphological (IVUS, OCT) features of coronary artery disease in women. All reported differences are as compared with men. LAD, left anterior descending; LCx, left circumflex; IFR, fractional flow reserve; IVUS, intravascular ultrasound; OCT, optical coherence tomography; TCFA, thin-cap fibroatheroma. * indicates morphological features assessed by virtual histology (VH)-IVUS.

International Journal of Cardiology 286 (2019) 226–233

Is sex associated with adverse outcomes after percutaneous coronary intervention for CTO?

Mariama Akodad [a,b,1], Marco Spaziano [a,1], Carlos J. Garcia-Alonso [a], Yves Louvard [a], Francesca Sanguineti [a], Philippe Garot [a], Thomas Hovasse [a], Thierry Unterseeh [a], Bernard Chevalier [a], Thierry Lefèvre [a], Hakim Benamer [a,*]

[a] Institut Cardiovasculaire Paris Sud, Hôpital Privé Jacques Cartier, Massy, France
[b] Hôpital Universitaire Arnaud de Villeneuve, Montpellier, France

We aimed to identify sex-related differences in long-term clinical outcomes after CTO PCI. Methods and results: All consecutive patients undergoing CTO PCI between 2004 and 2012 were included in a pro- spective registry. Baseline, procedural characteristics and clinical outcomes were compared according to sex. Out of **1343 patients**, **194** were female (**14.4%**).

International Journal of Cardiology 288 (2019) 29–33

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Table 2
Predictors of CTO PCI success.

Variable	Odds ratio	95% confidence interval	p-Value
Age	*0.983*	*0.971–0.996*	*0.012*
No hypertension	*1.399*	*1.052–1.861*	*0.021*
No previous CABG	*2.245*	*1.432–3.518*	*0.001*
Tapered entry shape	*1.690*	*1.292–2.212*	*<0.001*
No calcifications	*1.599*	*1.205–2.122*	*0.001*
Occlusion < 20 mm	*1.240*	*1.534–2.629*	*<0.001*
Gender (female)	1.140	0.773–1.681	0.508

CABG: coronary artery bypass graft; CTO: chronic total occlusion; PCI: percutaneous coronary intervention.

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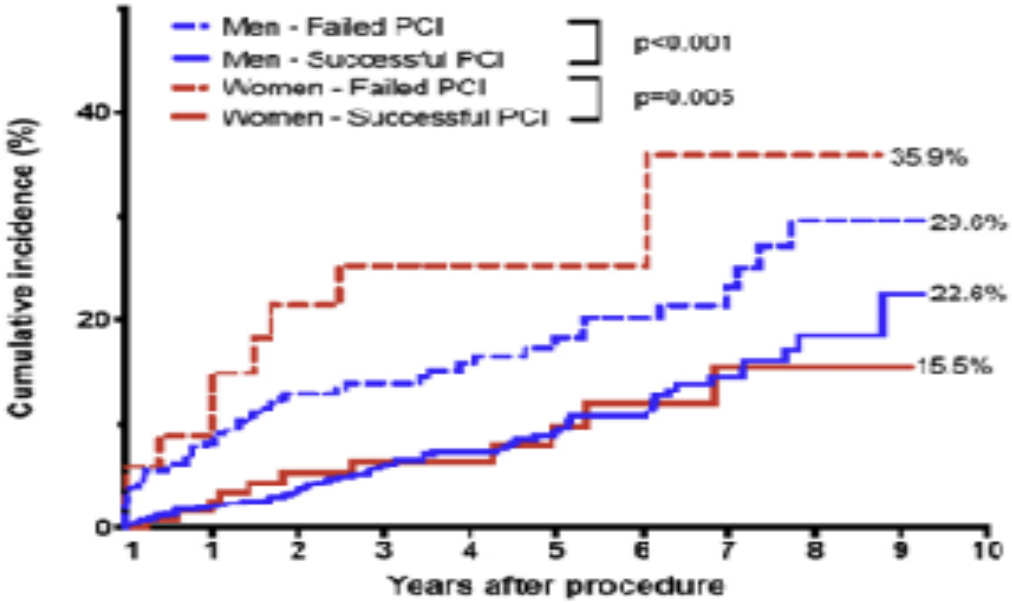

Fig. 3. Cumulative MACE (Death of any cause, MI, TVR and TLR) rates at 8 years follow-up of successful vs failed PCI for CTO in male and female patients.

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CONCLUSIONS

- Terrain différent: Age, diabète, vaisseaux…
- Et a changé: plus de femmes jeunes et sans FdR!
- Surmortalité dans le SCA ST +
- Moins de reperfusion et délais sont plus longs
- Présentation est différente (ne plus parler de douleur typique!)
- Plus de risque hémorragique, intérêt particulier de la voie radiale.
- Dissection et hématome coronaire: des mécanismes différents chez la femme jeune, dont le traitement doit être différent?
- Coronaropathie stable les résultats sont bons
- CTO: net impact de la revascularisation