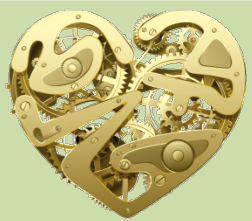

Hospital Braga

Temporal trends of risk profile among patients admitted with acute coronary syndrome

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BACKGROUND

- Cardiovascular disease (CVD) is the one of major cause of mortality and morbidity in the world.[1]
- It is known that about 75% of CVD can be caused by conventional risk factors (CRF).[2]
- Among patients with coronary artery disease, 80-90% presented at least one CRF.[3]
- The recognition of trends in CRF profiles is important, especially as the current risk prediction models such as the Framingham risk score (FRS) are based on risk profiles from decades prior.

AIM

- To determine **if there are differences in conventional risk profile** of patients admitted with acute coronary syndrome **over time**.

1 - Wijeysundera HC, Machado M, Farahati F, Wang X, Witteman W, van der Velde G, et al. Association of temporal trends in risk fa-ctors and treatment uptake with coronary heart disease mortality, 1994-2005. JAMA 2010;303(18): 1841-1847.
2- Yusuf S, Hawken S, Ounpuu S, Dans T, Avezum A, Lanas F, et al. Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries (the INTERHEART study): case-control study. Lancet 2004;364(9438):937-952.
3 - González-Pacheco H, Vargas-Barrón J, Vallejo M, Piña-Reyna Y, Altamirano-Castillo A, Sánchez-Tapia P, Martínez-Sánchez C. Prevalence of conventional risk factors and lipid profiles in patients with acute coronary syndrome and significant coronary disease. Ther Clin Risk Manag. 2014 Oct 6;10:815-23. doi: 10.2147/TCRM.S67945. eCollection 2014.

METHODS

4871 patients (pts) admitted consecutively in our coronary care unit with a diagnosis of acute coronary syndrome from January 2002 to October 2013

GROUP 1	GROUP 2	GROUP 3
2002-2005	2006 to 2009	2010 to 2013
(n=1245, 25.6%)	(n=1562, 32%)	(n=2064, 42.4%)

For each group we studied:

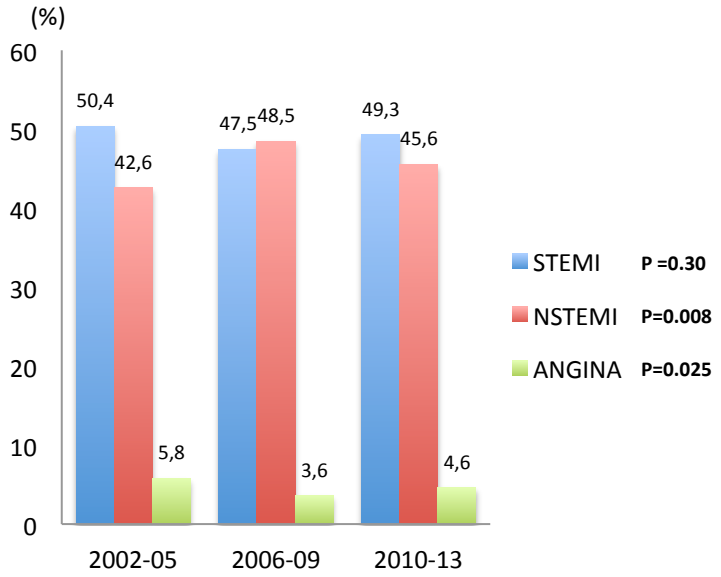
- the **prevalence of conventional risk factors (CRF)** including diabetes, hypertension, smoking and dyslipidaemia **over time**
- We compared findings according to **gender** and **type of acute coronary syndrome**.

RESULTS

- ***Demographic and clinical characteristics of patients***

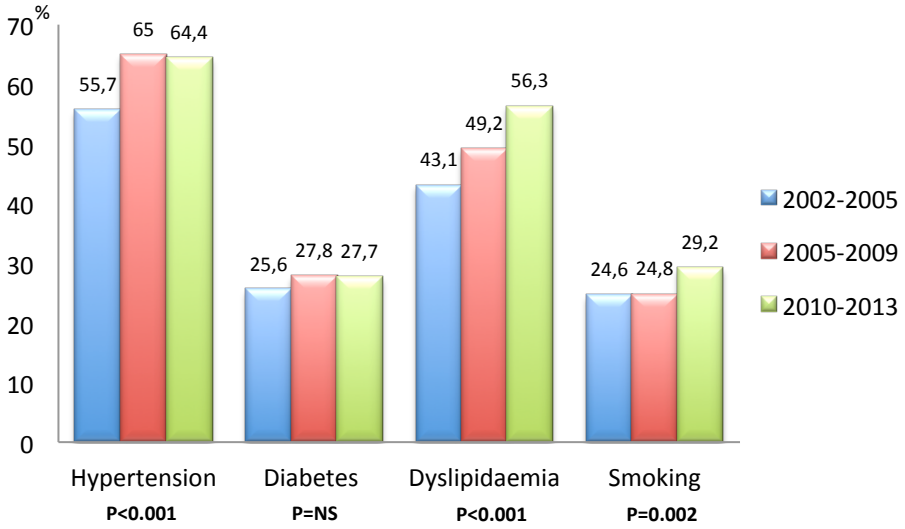
	2002-2005	2006-2009	2010-2013	p
Age (years)	64±13	64±14	64±13	NS
Women (%)	26	26.9	**22.6**	**0.006**
BMI (Kg/m^2)	26.48±4.0	**27.13±5.8**	**27.15±4.7**	**<0.001**
Medical History				
Prior MI (%)	18.1	16.8	15.1	**NS**
Prior CABG (%)	3.4	**3.8**	**8.0**	**<0.001**
Prior stroke (%)	5.9	6.5	7.5	NS
Prior Statin Therapy (%)	20.5	**30.4**	**39.4**	**<0.001**
Prior ACEi/ARB Therapy (%)	25.3	**29.6**	**42.9**	**<0.001**
Clinical Presentation				
Renal dysfunction (%)	18.2	**20.5**	**27.3**	**<0.001**
Anemia	18.9%	**22.3**	**23.8**	**0.018**

- ***Clinical Presentation***



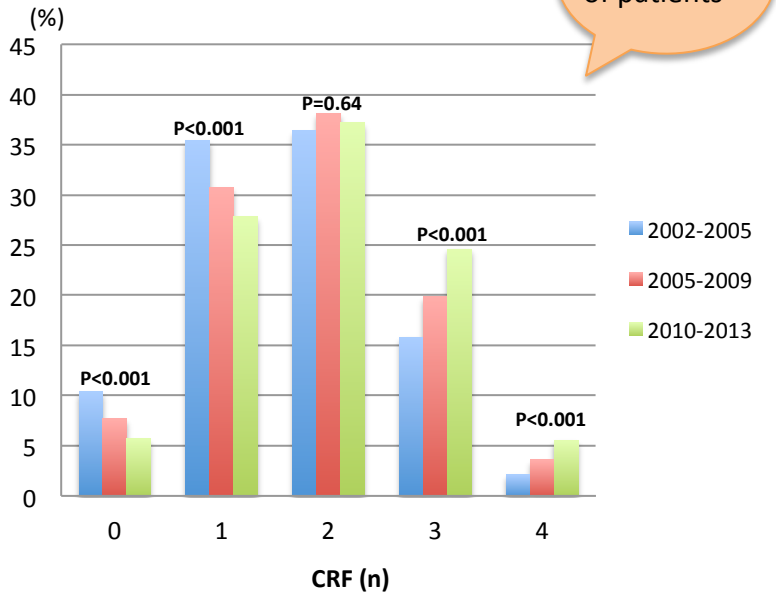
RESULTS

Prevalence of conventional risk factors, over time



Proportion of CRF over time

1 CRF in **92,4%** of patients



RESULTS

Proportion of CRF over time, according to gender

CRF	Sex	G1	G2	G3	p
Diabetes	♀	34.4%	37.4%	**37.3%**	NS
	♂	22.5%	24.3%	24.9%	NS
Hypertension	♀	**69.3%**	**77.4%**	**78.6%**	**0.007**
	♂	50.9%	60.4%	60.2%	<0.001
Dyslipidemia	♀	**45.1%**	**48.6%**	**57.8%**	**0.001**
	♂	57.6%	50.6%	44.1%	<0.001
Smoking	♀	4.9%	10.5%	7.5%	0.018
	♂	**31.6%**	**32%**	**35.5%**	**0.007**

Proportion of CRF over time, according to ACS

CRF	ACS	G1	G2	G3	p
Diabetes	STEMI	20.1%	23%	22.9%	NS
	NSTEMI	32.4%	32.7%	32.7%	NS
Hypertension	STEMI	49.6%	**59.6%**	**58.7%**	**0.001**
	NSTEMI	61.9%	**70.2%**	**69.4%**	**<0.001**
Dyslipidemia	STEMI	37.2	**45.3%**	**50.5%**	**0.001**
	NSTEMI	47.7%	**52.9%**	**60.7%**	**<0.001**
Smoking	**STEMI**	**24.6%**	**24.8%**	**29.2%**	**<0.001**
	NSTEMI	18.6%	21.1%	22.1%	**NS**

CONCLUSION

- It was observed, at least one conventional risk factor in **92.4%** of patients admitted with ACS. Most patients present one to three risk factors.
- The **risk profile** of patients presenting with acute coronary syndrome **worsened over the years**. The **number of CRF per patient** has been **increasing** over time.
- **Dyslipidaemia** and **hypertension were the most prevalent** cardiovascular risk factors in global, by gender and by acute coronary syndrome.
- Smoking habit has been increasing over time, mainly by men and is more prevalent in STEMI patients.
- It is crucial to discuss **more strictness strategies** for primary prevention.

LIMITATIONS OF STUDY

- Single Centre study.
- Drawbacks inherent to retrospective and observational studies, such as unadjusted bias.