

Title: ANTIPLATELET DRUG RESISTANCE IN ASIAN POPULATION

Category: Acute Coronary Syndromes

Abstract

Background: Stent thrombosis and consequent post PCI complication are being reported from many centres in India. There is very little data on Aspirin and Clopidogrel resistance in Indian population.

Aim : The study is to estimate the Prevalence of Aspirin and Clopidogrel resistance in Indian patients after Percutaneous Coronary Intervention. The study includes total of 200 consecutive Percutaneous Coronary Intervention(PCI) patients who consented for the study.

Methods: Anti-platelet drug resistance was evaluated on day seven using Verify now RPFT point of care system.

Results: 174 patients (87 %) are males and 26 (13%) patients are female in the age group 35 to 83 years. The study shows that 43 patients (22%) are resistant to Aspirin and 157 patients (78 %) are Sensitive to Aspirin. There is significant (P=0.03) difference in male and female patients in Aspirin sensitive 124/11 (71/42%) and resistant 50/15 (29/58%) patients. There is no significant difference (P=0.450) in Aspirin resistance /sensitivity and age distribution. This study did not show any statistically significance (P=0.973) in Aspirin sensitive /resistance in DM patients. Our study shows 65 patients (32.%) are resistant to Clopidogrel and 135 patients (68%) are sensitive to Clopidogrel . There is significant (P=0.003) difference in Clopidogrel sensitivity/ resistance in male/ female patients. Our study did not shows statistically significant (P=0.07) difference in Clopidogrel Sensitivity /resistance in Age distribution. There was no statistically significant difference (P=0.141) in Clopidogrel sensitive / resistance in diabetes patients. Our study also shows 6.5 % of the patients are resistant to both Aspirin and Clopidogrel.

Conclusion: Our study shows Aspirin resistance in 22 % and Clopidogrel resistance in 32% in Coronary intervention Patients. The prevalence of Aspirin and Clopidogrel resistance is similar to finding reported from Caucasian population.

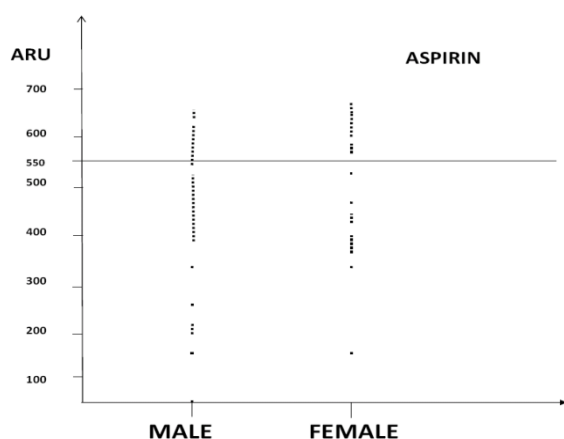


Figure 1. Distribution Aspirin Resistance

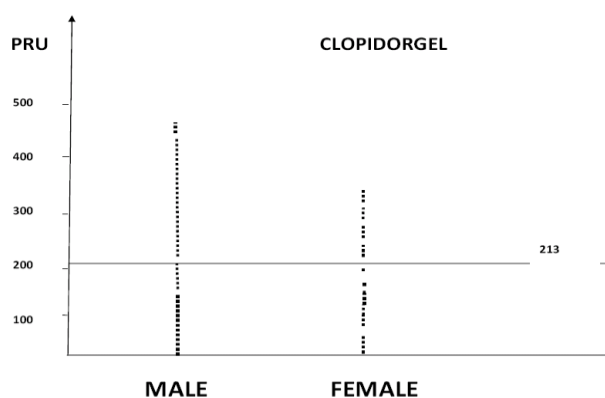


Figure 2. Distribution of Clopidogrel resistance

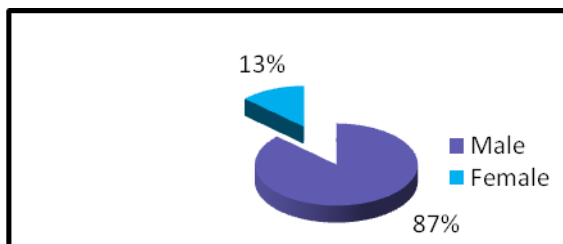


Table 1: Distribution according to sex

Sex	N = 200	%
Male	174	87
Female	26	13

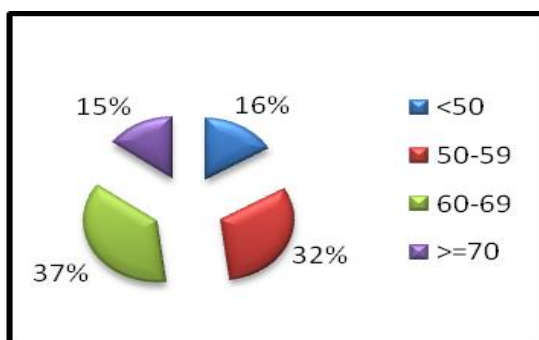


Table 2: Distribution according to age

Age	N = 200	%
<50	33	16.0
50-59	63	32.0
60-69	74	37.0
>=70	30	15.0

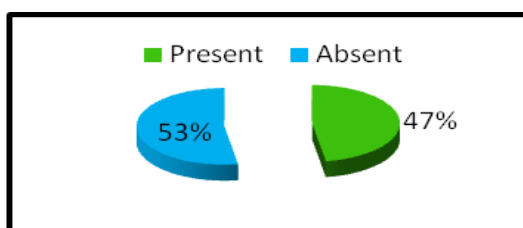


Table 3: Distribution according to DM

Diabetes	N = 200	%
Present	105	52.5

Absent	95	47.5
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Table 4: Distribution according to Aspirin

Aspirin	N = 200	%
Sensitive	157	78
Resistant	43	22

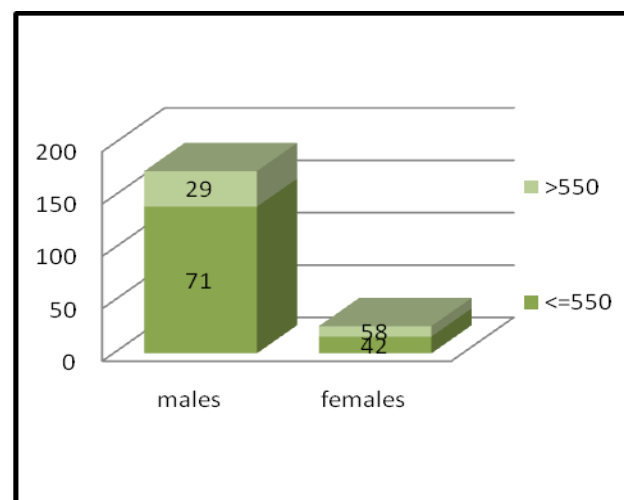


Table 5: Association between aspirin resistance & gender

Aspirin	Male		Female		χ^2	p
	No.	%	No.	%		
Resistant	50	29	15	58	4.72	0.03
Sensitive	124	71	11	42		

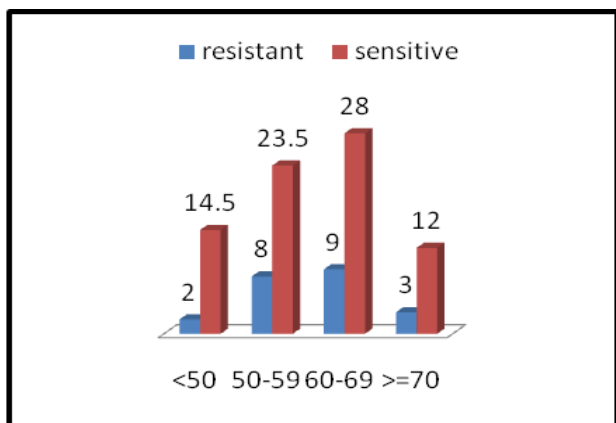


Table 6: Association between aspirin resistance & age

Age (yrs)	Aspirin					
	Sensitive		Resistant		χ^2	p
	No.	%	No.	%		
<50	4	2.0	29	14.5	2.6	0.45
50-59	15	8	48	24		
60-69	16	8.0	58	29.0		
>=70	6	3.0	24	12.0		

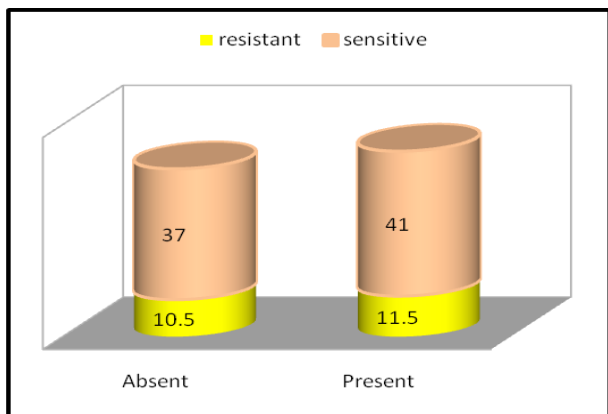


Table 7: Association between Aspirin & DM

DM	Aspirin				χ^2	p
	Sensitive		Resistant			
	No.	%	No .	%		
Present	26	40	69	60		

Absent	39	51.1	66	48.9	0.001	0.973
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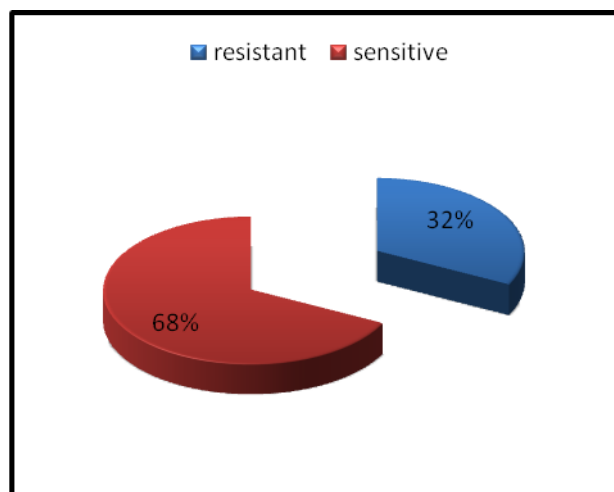


Table 8: Distribution of clopidogrel resistance

Clopidogrel	N = 200	%
Sensitive	135	68.0
Resistant	65	32.0

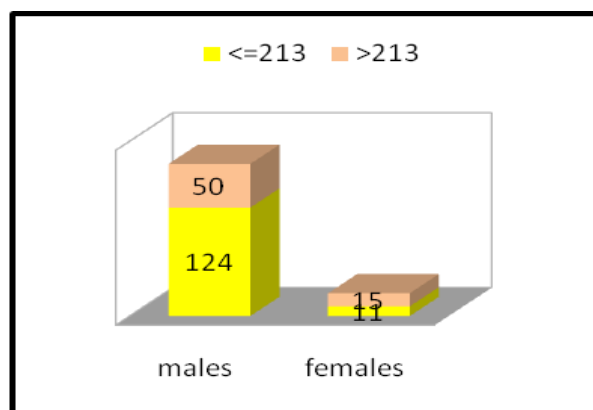


Table 9: Association between Clopidogrel & Gender

Clopidogrel	Males		Females		χ^2	p
	No	%	No	%		
Resistant	31	18	10	38	8.65	0.003
Sensitive	143	82	16	62		

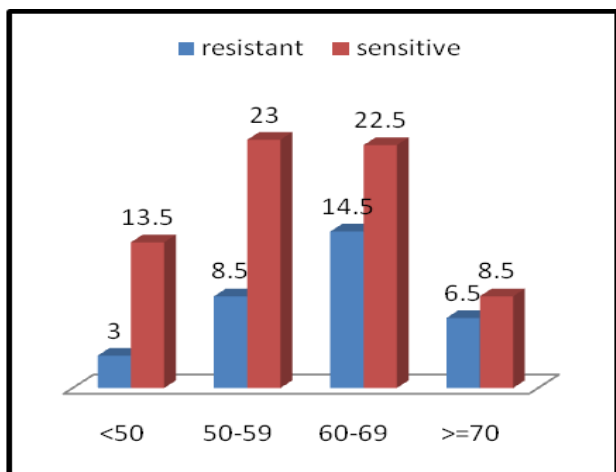


Table10: Association between clopidogrel resistance and age

Age (yrs)	Clopidogrel				χ^2	p
	Sensitive		Resistant			
	No.	%	No.	%		
<50	6	3	27	13.5	7.07	0.07
50-59	17	8.5	46	23		
60-69	29	14.5	45	22.5		

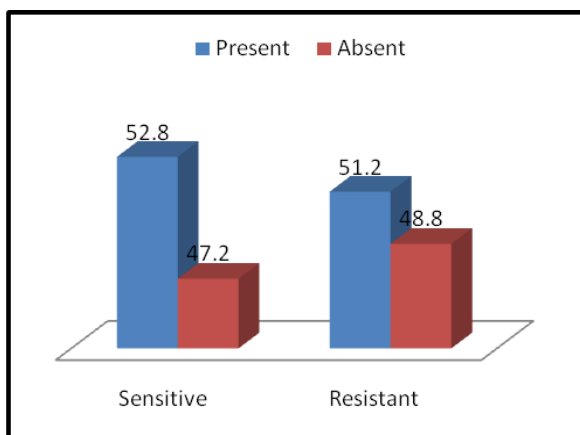


Table 11: Association between Clopidogrel & DM

DM	Clopidogrel				χ^2	p
	Sensitive		Resistant			
	No	%	No	%		
Present	84	52.8	21	51.2	2.17	0.141
Absent	75	47.2	20	48.8		

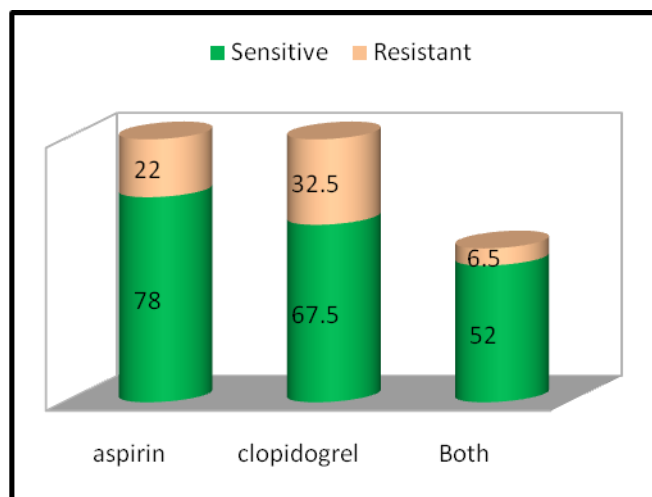


Table 12: Distribution of both Aspirin & Clopidogrel Resistance

	Aspirin	Clopidogrel	Both
Sensitive	78	67.5	52
Resistant	22	32.5	6.5