

The Relationship between Cardiovascular Diseases and Acetylsalicylic Acid Resistance After Kidney Transplantation

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Introduction

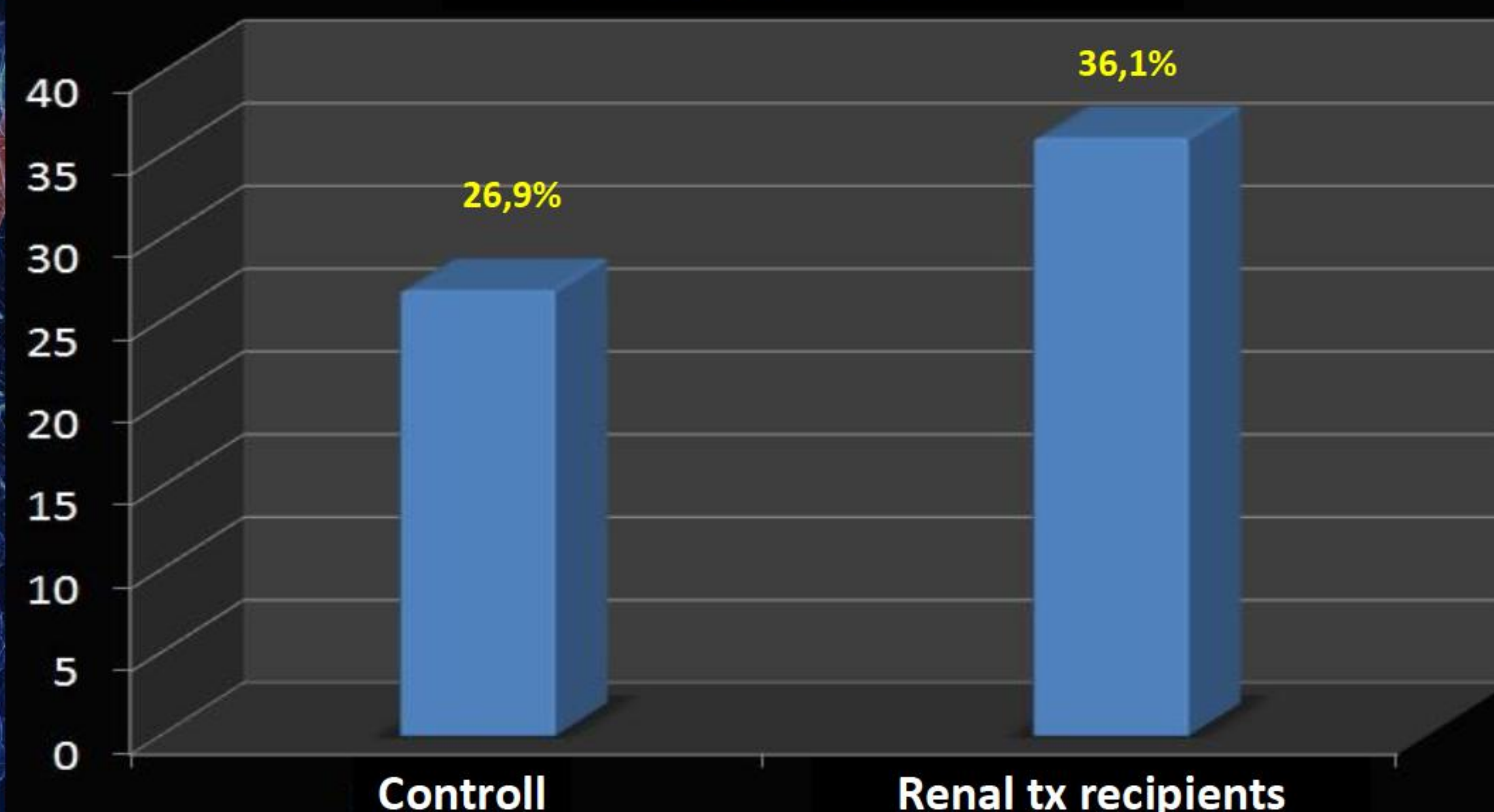
In developed countries the leading cause of death is **cardiovascular disease**.

Mortality after transplantation:

- cardiovascular diseases 35-38%
- malignancies 22-29%
- infections 9-13%

Results

ASA resistance



Options for secondary prevention

- Healthy lifestyle: exercise, healthy eating
- Targets of blood pressure, blood sugar and lipids
- Platelet aggregation inhibitors
 - Inhibitors of TXA2: **acetylsalicylic acid**, triflusal
 - P2Y12 receptor antagonists: **clopidogrel**, prasugrel
 - GP IIb-IIIa antagonists: abciximab, tirofiban, eptifibatid

Results

- We found no significant correlation between the examined 24 factors and the resistance.

Age	Cellcept	ACE inhibitors
Serum Creatinine	Medrol	antilipid therapy
Serum Glucose	Tacrolimus	SRAR
Hematocrit	Sandimmun	CAN
Hemoglobin	Myfortic	type of transplantation
Triglyceride	Certican	diabetes
LDL Cholesterol	Rapamune	BMI
Platelet count	Ca channel blockers	smoking

SRAR: steroid resistant acut rejection CAN: chronic allograft nephropathy

Objectives

- 1) Assessment of ASA-resistance in our patient group and comparing the results with results of the general population.
- 2) Search for correlations between risk factors, other factors and resistance.
- 3) Comparison of data concerning ineffective antiplatelet therapy, mortality and morbidity.

	All renal tx patients(%)	Controll group(%)	p	Significance
mortality	2,74	1,44	0,26	NS
AICS	4,31	1,16	0,01	S
stroke	2,74	2,02	0,56	NS
hypertension	80,39	69,36	0,02	S
diabetes	28,63	20,81	0,02	S
tumor	8,63	5,78	0,17	NS

	R-ASA renal tx patients (%)	NR-ASA renal tx patients (%)	p	Significance
mortality	3,26	2,45	0,70	NS
AICS	5,43	3,68	0,03	S
stroke	4,34	1,84	0,02	S
hypertension	77,17	82,21	0,33	NS
diabetes	33,70	25,77	0,17	NS
tumor	8,70	8,59	0,90	NS

S: significant NS: not significant R-ASA: resistant NR-ASA: not significant S=p<0,05

Patients and methods

Surgery Clinic, Pécs

- 255 renal transplant recipients
- mean age: 49,5 years woman: 36%; man: 64%

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- 346 patients (controll group)
- mean age: 52,6 years woman: 50,6%; man: 49,4%

Methods

- aggregometry (Carat TX4 optical aggregometer)
- processing laboratory parameters and patient data

Conclusion

1. ASA resistance often develops after transplantation.
2. ASA resistance of transplant patients increases the incidence of future cardiovascular diseases.
3. The reason for resistance is still unknown.
4. We agree with the recommendations of the aggregation inhibitor therapy, but we recommend the regular aggregometry test to detect the development of resistance.

