



The Relationship Between Abdominal Aortic Calcification and GFR in CKD 3-5 - RENEXC

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Aims

To analyze the relationship between AAC score and measured GFR(mGFR) in patients with CKD 3-5 and evaluate other potential risk factors.

Methods

This is a baseline data analysis of a randomized controlled clinical trial (RENEXC), including 151 adult patients with eGFR < 30ml/min/1.73 m², not on renal replacement therapy.

- mGFR was measured by iohexol clearance.
- AAC was evaluated by lateral lumbar X-ray and using the scoring system described by Kauppila to calculate the AAC score.
- 24-hour pulse pressure was calculated using the average value of 24-hour systolic blood pressure minus the average value of 24-hour diastolic blood pressure.
- Multiple linear regression analysis was performed to analyze the relationships between variables with R software. The level of significance was set at p<0.05.

Results

The patients' age ranged from 19 to 87, with a mean age of 66 years (98 men and 53 women). The mGFR ranged from 8 to 55 ml/min/1.73 m², with an average of 22.5 ± 8.2 ml/min/1.73 m². The prevalence of AAC in this group of patients was 85%.

	GFR		pulse pressure		Sex		Age		CVD	
	1ml/min/1.73m ²		mmHg		male		1 year increase		With CVD	
	Eff ± SE	P	Eff ± SE	P	Eff ± SE	P	Eff ± SE	P	Eff ± SE	P
AAC (Score)	-0.13 ± 0.06	0.02	0.1 ± 0.04	0.01	-2.8 ± 1.0	0.006	0.29 ± 0.04	<0.001	4.41 ± 1.01	<0.001
					-2.96 ± 1.03	0.005	0.25 ± 0.04	<0.001	3.61 ± 1.09	0.001

Conclusions

- AAC was highly prevalent in patients with CKD 3-5 and strongly related with age and cardiovascular disease.
- Higher AAC score was significantly related to mGFR decline and increased pulse pressure.



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