



Unexpectedly high prevalence of critic coronary artery disease in asymptomatic dialysis patients screened for transplant wait list.



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BACKGROUND

Cardiovascular events, particularly coronary artery disease (CAD), are the main cause of mortality after kidney transplantation.

However even a critic CAD may be asymptomatic in dialysis patients: therefore, cardiologic evaluations are extensive before transplantation and patients might undergo invasive procedures only to be admitted to the transplant wait list.

Still, there is no consensus on the best pre-transplant screening strategies, as they may be falsely negative or may not strictly correlate with post transplant events.

Aim of this study was to evaluate how many cardiologic tests resulted positive in dialysis patients who were screened for transplant wait list.

METHODS

Design and population

We performed a retrospective analysis of patients who have been evaluated to be included in the kidney transplant wait list and who were evaluated by a cardiologist at that time and just for the admission to the wait-list. All included patients were asymptomatic and would not have undergone any cardiac test at that moment if they were not to be included in the wait list.

Screening protocol:

Any one of:

- Age > 55
- Personal history of cardiac or cardiovascular events
- Diabetes mellitus (ADA 2013 criteria)



- Cardiac Stress test (stress echocardiography or scintigraphy)
- Cardiology evaluation

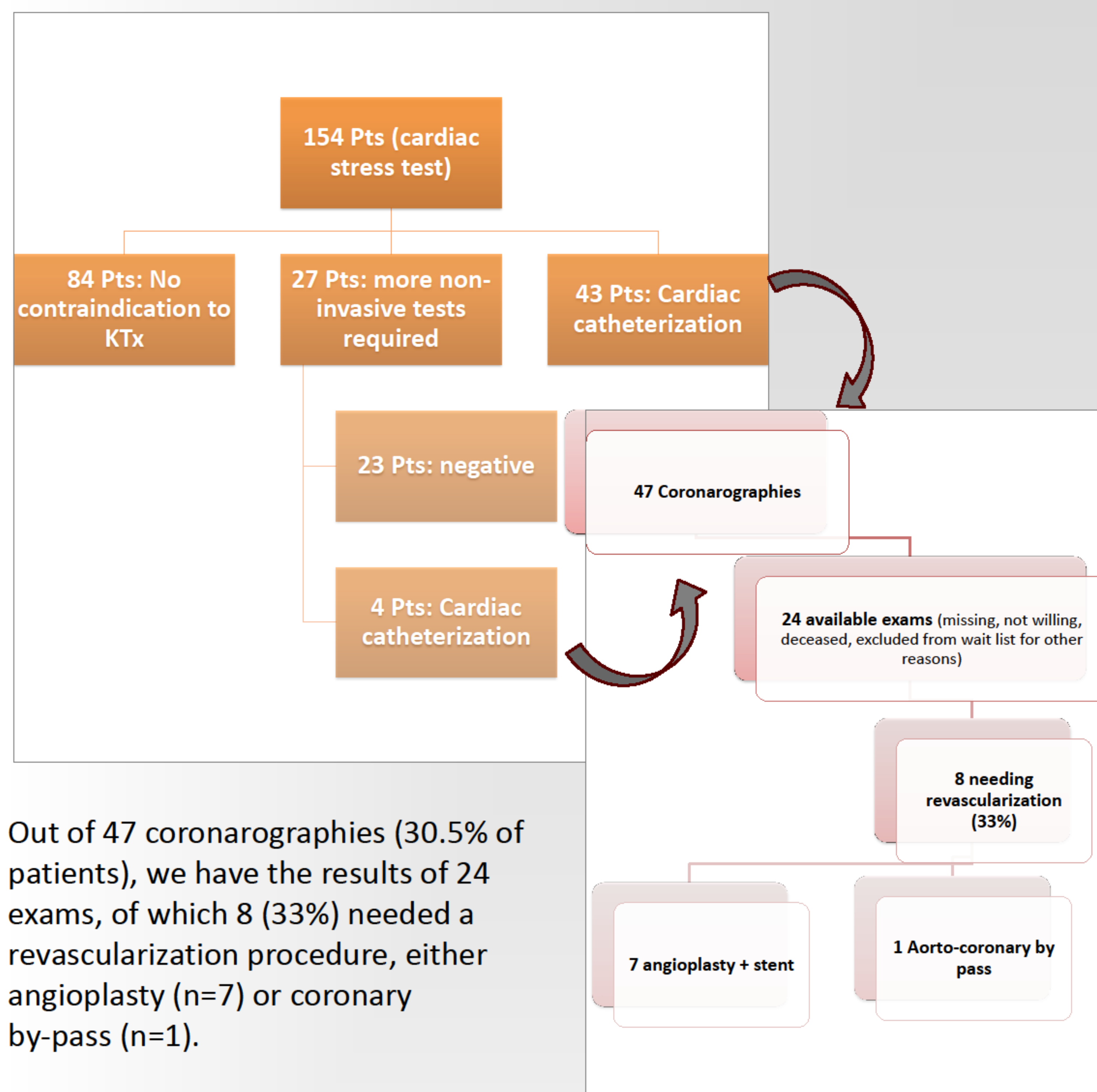


- coronary catheterization

RESULTS

We included in this study 154 transplant candidates with at least one of the risk factors for cardiac events. They all underwent a stress test (scintigraphy or stree echocardiography) and a cardiology evaluation at the Transplant Center.

Cardiology evaluation results:



Out of 47 coronarographies (30.5% of patients), we have the results of 24 exams, of which 8 (33%) needed a revascularization procedure, either angioplasty (n=7) or coronary by-pass (n=1).

	Overall (n=154)	No more exams (n=84)	Coronarography (n=47)	p
Age (years)	60.20±9.14	60.79±9.20	62.44±7.26	0.260
Sex (male)	73.3% (113/154)	71.4% (60/84)	74.5% (35/47)	0.709
Diabetes	34.8% (53/154)	27.3% (23/84)	53.2% (25/47)	0.003
Prev. coron synd	30.5% (47/154)	26.1% (22/84)	38.3% (18/47)	0.149
Previous transplants	14.9%(23/154)	16.6% (14/84)	8.5% (4/47)	0.193

RESULTS: TRANSPLANT RECIPIENTS

	Successful transplant (n=37)	No transplant (n=117)	p
Age (years)	59.93±8.25	60.38±9.44	0.796
Sex (male)	83.8% (31/37)	70.1% (82/117)	0.100
Diabetes	32.4% (12/37)	35.0% (41/117)	0.771
Prev. Coron. synd.	27.0% (10/37)	31.6% (37/117)	0.949
Previous Transpl.	8.2% (3/37)	17.1% (20/117)	0.181
Positive Str. Test	58.8% (20/34)	34.8% (32/92)	0.015
Coronarog.	62.2% (23/37)	32.5% (38/117)	0.001
Positive Coronar.	39.2% (9/23)	52.6% (20/38)	0.306

Only one patient (2.7%) developed a post-transplant coronary event. This patient had no major risk factors and his induction tests were negative.

DISCUSSION

Extensive and "aggressive" cardiac testing in asymptomatic dialysis patients who were willing to be included in a transplant wait-list has yielded to the identification of high risk patients (30.5%), who then underwent coronary catheterization.

Of them, one out of three needed a revascularization procedure.

It is reasonable that a similar "aggressive" screening in asymptomatic patients may yield to an early diagnosis of CAD not only in transplant candidates, but also in dialysis patients, regardless of transplant eligibility.

Future studies are needed to evaluate:

- Efficacy of pre-transplant cardiac revascularization on post transplant cardiac ischemic events
- Better definition of the cardiologic follow up of wait-listed transplant candidates (How often? Which test?)
- Results of aggressive "heart screening" programmes when applied to patients on dialysis

