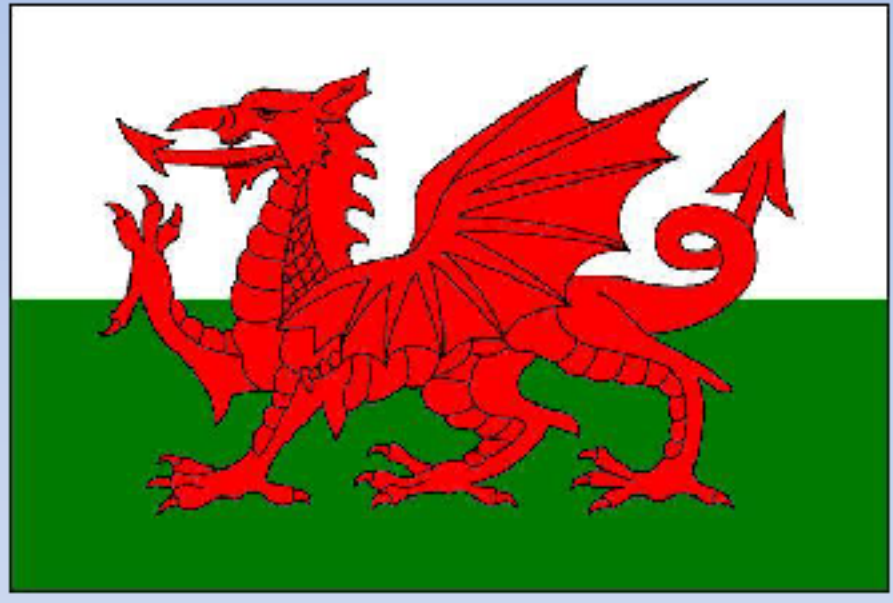


CARDIOVASCULAR RISK FACTORS AND MANAGEMENT IN WELSH RENAL TRANSPLANT PATIENTS.



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Introduction:

Cardiovascular disease is more frequent in renal transplant patients than in the general population^(1,2,5,6). It is the leading cause of death in renal transplant recipients and a significant cause of morbidity^(4,6). The cause of this increased frequency is multifactorial; traditional factors such as diabetes, hypertension and dyslipidaemia^(3,5,6) which are also know side effects of anti-rejection medication, as well as other factors, of which there is a growing evidence regarding their roles, such as; chronic inflammation, graft renal insufficiency, proteinuria and elevated homocysteine levels^(2,6).

The use of antiplatelets, anti-hypertensives and cholesterol lowering medication are important in managing these risk factors⁽⁶⁻⁸⁾.

Aims:

We aimed to look at the management of cardiovascular risk factors from data collected as part of an all Wales transplant audit.

Method:

All patients in Wales across the 5 renal centres; Bangor, Cardiff, Swansea, Rhyl and Wrexham, 6 months post transplantation with a functioning graft were included. Their most recent follow up and blood tests to the 1st May 2013 were used. Data was collected including medications, fasting total cholesterol and blood pressure.

Results:

There were 1630 patients in total across the 5 centres. The average age was comparable across all centres. The gender of the patients had a similar distribution (40% +/-4% were female) in all centres, apart from centre E where only 22% of the patients were female.

Table 1 displays a comparison of some of the cardiovascular risk factors and treatments. Cholesterol control across Wales was similar, as was blood pressure control, but the use of ACE inhibitors and antiplatelet agents (such as aspirin, clopidogrel or dipyridamole) varied across the Country.

More than half of the Welsh transplant patients had a blood pressures greater than the recommended values as suggested by the renal association⁽⁹⁾ and a quarter of patients had cholesterol levels greater than suggested⁽⁹⁻¹⁰⁾.

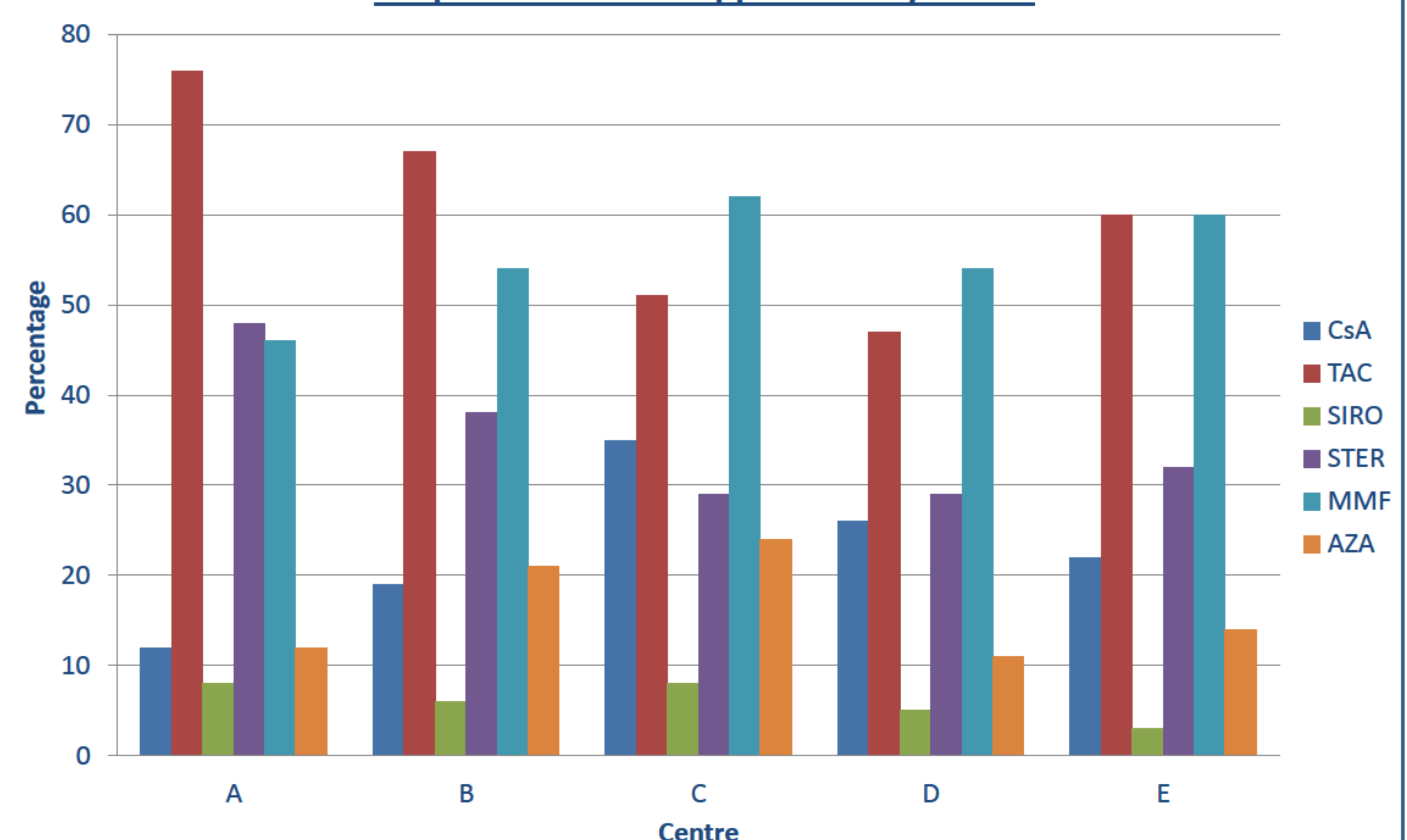
The graph shows the variation in immunosuppressant therapy used across the different centres. The increased tacrolimus and steroids in centres A and B are likely to represent more recent transplantations.

Table 1 - Cardiovascular risk factors in Welsh renal transplant patients

Centre	A	B	C	D	E
Number of patients	1042	289	142	85	72
Median age	52	58	53	57	56
Median time (yrs) since transplant	6	7	8.5	11.5	7
Median age at transplant	46	51	44.5	45.5	49
Percentage of patients with cholesterol >5mmol/L	26	22	23	-	25
Percentage of patients treated with a statin	53	56	58	47	56
Percentage of patients with a systolic BP >130mmHg	64	58	56	64	73
Percentage of patients with a diastolic BP >80mmHg	54	43	51	60	42
Percentage of patients treated with a ACEi	26	19	25	21	25
Percentage of patients with a BMI >30	29	24	44	16	-
Percentage of patients treated with an antiplatelet	69	72	32	-	43
Percentage of patients with NODAT	-	6	11	-	11
Serum creatinine - median	125	124	130	137	124

A '-' relates to where data has not been provided

Graph 1 - Immunosuppressant by centre



Conclusion:

The management of renal transplants was broadly similar across Wales, however there was variation in anti-rejection medications and aspirin use. The data suggests that there is room for improvement in the prophylactic management of cardiovascular risk factors, possibly by greater use of angiotensin converting enzyme inhibitors for hypertension treatment and HMG-CoA reductase inhibitors for cholesterol control. There is also a potential for more uniform use of antiplatelets across Wales⁽⁵⁻⁸⁾.

Future consideration:

We aim to improve our treatment of cardiovascular risk factors in Welsh transplant patient as a result of the outcomes from this audit, with a plan to re-audit this shortly.

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