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Cardiovascular risk in an adult CF population: a 10 year retrospective analysis

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Objectives: 1) To characterise changes in cardiovascular risk factors in an adult population over a 10 year period. 2) To determine whether any difference exists between pancreatic sufficient versus insufficient subjects

Methods: Data was extracted retrospectively from an electronic clinical record (ECR) for all patients registered in 2017 who had attended the adult CF regional centre for 10 years. Weight, height, BMI, cholesterol, cholesterol:HDL ratio, triglyceride, systolic blood pressure, diastolic blood pressure, pancreatic sufficiency were recorded at 3 time points [2008,2013,2017] for each subject. Cardiovascular risk was assessed for a) the entire population and b) pancreatic sufficient versus insufficient subjects. Paired and unpaired tests were used to assess differences at time points

Results: Of the 424 patients registered within this time period, 214(126 male) had values recorded for 2008, 2013 and 2017. Of this sample (n=214), mean age was 37.6 (\pm 8.48) years and 24/212 (11.3%) were pancreatic sufficient. (Table 1)

Year	Weight (kg)	Height (m)	BMI (Kg/m ²)	Cholesterol (mmol/l)	Cholesterol:HDL ratio	Triglyceride (mmol/l)	Systolic BP (mmHg)	Diastolic BP (mmHg)
2008	65.3	1.68	22.8	3.84	2.81	1.22	121.4	73.5
2013	66.8	1.68	23.2	3.98	2.81	1.42	127.4	77.6
2017	67.5	1.68	23.6	4.19	2.96	1.41	126.3	77.9
Sig.	p<0.001	p=0.5	p<0.001	p=0.002	p=0.11	p=0.008	p<0.001	p<0.001

[Table 1: CVD risk factors 2008-2017]

Pancreatic insufficient (PI) and sufficient (PS) patients, BMI (kg/m²) and cholesterol (mmol/l) were significantly different between status across each year (Table 2).

Year	BMI (Kg/m ²)	Cholesterol (mmol/l)	Cholesterol:HDL ratio	Triglyceride (mmol/l)	Systolic BP (mmHg)	Diastolic BP (mmHg)
	PI v PS	PI v PS	PI v PS	PI v PS	PI v PS	PI v PS
2008	22.4 v 25.8**	3.77 v 4.48*	2.81 v 3.21	1.23 v 1.04	121.0 v 124	73.2 v 76.1
2013	23.0 v 25.7**	3.89 v 4.74**	2.81 v 3.50*	1.45 v 1.18	126.7 v 132.9	77.8 v 76.0
2017	23.2 v 26.4**	4.08 v 5.07*	2.96 v 3.48	1.41 v 1.37	126.3 v 125.7	78.1 v 76.4
*p<0.01	**p<0.001					

[Table 2 Risk factors for CVD (PI v PS)]

Conclusion: Values for CVD risk factors documented have risen across a 10 year time period. In PS patients mean cholesterol values in 2017 (5.05mmol/l) exceed the UK recommendation (5.0mmol/l).