Diabetes in Cystic Fibrosis

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BACKGROUND

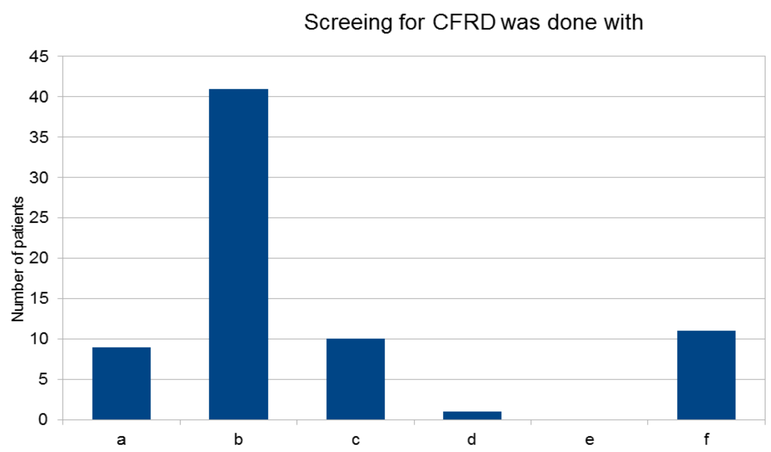
Patients with Cystic fibrosis are now living longer due to advances in nutritional and medical care. As a consequence a larger number are developing related co- morbidities such as cystic fibrosis related diabetes (CFRD). CFRD is the most common co-morbidity in CF, with the prevalence being up to 50% by the age of 30. (1)

AIMS

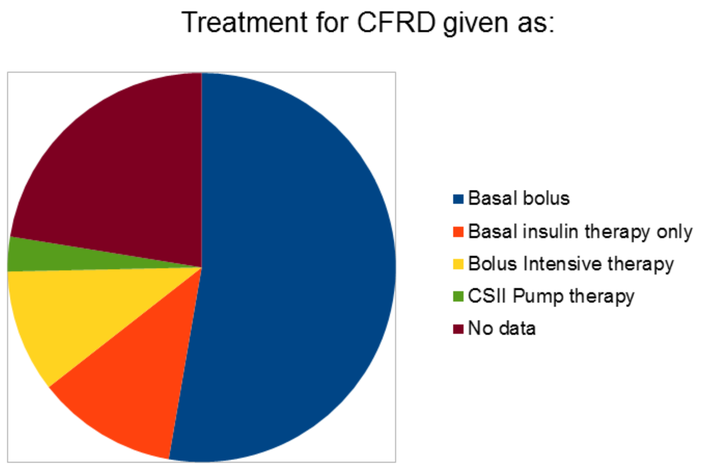
To assess current practice in relation to the UK CF Trust guidelines 2004 – Screening for CFRD should begin at age 12 using OGTT. Patients should be treated with insulin and reviewed quarterly by MDT specialising in CFRD. HbA1C should be measured quarterly to guide further therapy. Annual screening for complications should occur in all patients older than 12 years.

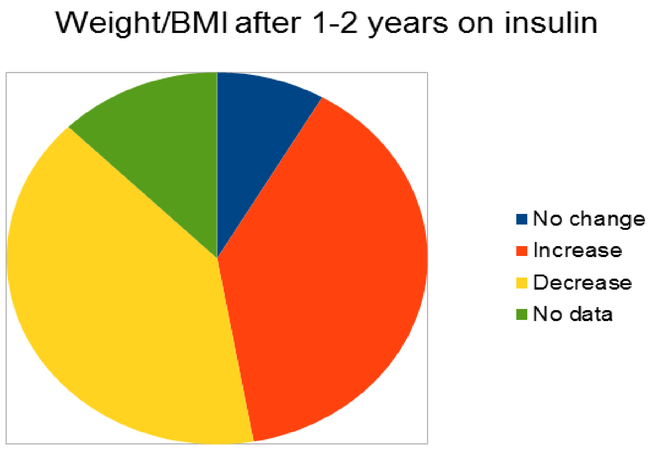
METHODS

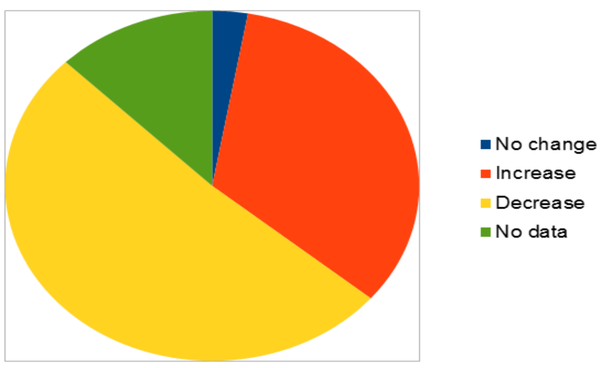
Retrospective case notes and hospital database review of adults with CFRD at Nottingham University Hospital between the years 1998 and 2014. Also data was collected about changes to weight and lung functions following 1-2 years of insulin therapy.

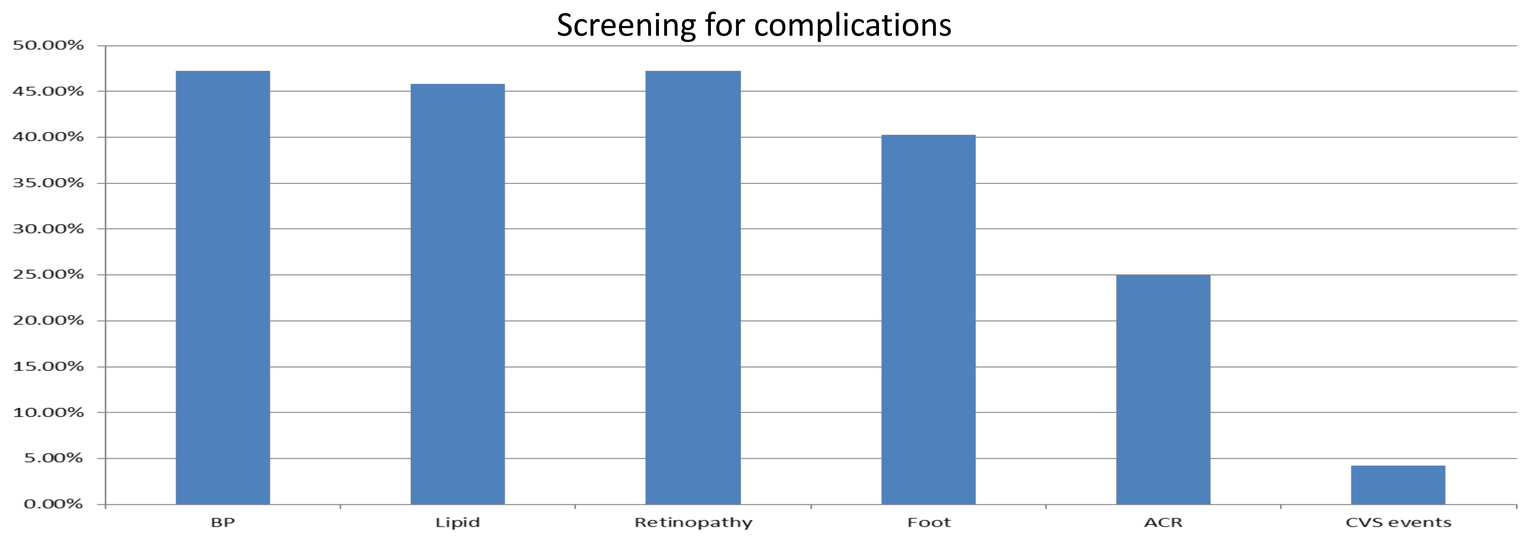


Key	
a.	OGTT
b.	OGTT and SMBG
c.	HbA1c level and OGTT
d.	HbA1c level alone
e.	CGMS
f.	No data available









DISCUSSION

72 patients were identified (40 males, 32 females). Mean age: 30 (range 18-62). In 83.3% of patients CFRD was diagnosed with OGTT and patients were treated with various insulin regimens. 61% of patients were seen quarterly. HbA1C was measured quarterly in 41.7%. Blood pressure, retinopathy, Foot, ACR, CVS events and lipid profile were screened annually in 47.2%, 40%, 25%, 4.2% and 45.8% respectively. Weight after 1-2 years on insulin was static in 9.5%, increased in 44.4%, decreased in 46%, whereas, lung function was stable in 3.2%, increased in 38%, decreased in 58.7%.

CONCLUSION

Overall, most of our patients were diagnosed with OGTT and treated with insulin. However, our performance is average in terms of follow up, monitoring and screening for complications. These discrepancies could partially be explained by the fact that data was collected from 1998, but the guidelines were only issued in 2004. Also paediatric databases and notes were not used. Another issue with monitoring is the large number of DNAs. Nonetheless, there is likely room for improvement in these areas.

REFERENCES

(1) Moran A, Pillay K, Becker DJ *et al*. Management of cystic fibrosis-related diabetes in children and adolescents. Paediatric diabetes 2014; 20: 65-76.
(2) Siwamogsatham O, Alvarez J, Tangpricha V. Diagnosis and treatment of endocrine comorbidities in patients with cystic fibrosis. Current Opinion 2014; 21:5.

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