Other Reviews - - Other Review

Screening for cystic fibrosis-related diabetes: a systematic review.

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Study design (if review, criteria of inclusion for studies)

Systematic review. Screening studies were data extracted if they provided sufficient data to construct 2 × 2 tables. Other screening studies were described in narrative manner. A model was constructed for cost-effectiveness analysis, but was not used because of lack of data.

Interventions

Screening tests.

Outcome measures

Systematic reviews of treatments and screening tests. Screening studies were data extracted if they provided sufficient data to construct 2 × 2 tables. Other screening studies were described in narrative manner. The background to CF and CFRD were described in a narrative manner, as was Chapter 2 on problems with defining CFRD. A model was constructed for cost-effectiveness analysis, but was not used because of lack of data.

Main results

Diabetes is usually defined based on the level of blood glucose (BG) at which the risk of retinopathy occurs. For CFRD, it would be better to define it on the level at which the risk of lung disease (pulmonopathy) rises. There seems little place for treatments other than insulin, but the best insulin regimen remains to be confirmed. The best screening test may be by continuous glucose monitoring systems but further evidence is required. Screening may need to detect BG levels of > 8 mmol/l because that may be the level above which pulmonopathy starts in people with CF.

Authors' conclusions

The evidence base for treatment is disappointing with few large randomised controlled trials. The key question is when treatment should start, perhaps at the post-prandial hyperglycaemia stage. Research is needed. Until that is done, we cannot be sure what we are screening for, and, therefore, which screening strategy should be used. The definition of CFRD should probably be based on pulmonopathy risk, rather than using the classical definition of diabetes. That implies that we should be screening for a wider range of hyperglycaemia than in other forms of diabetes, perhaps to detect BG excursions of > 8 mmol/l. Insulin treatment may need to start at lower levels than formerly accepted.

https://www.ncbi.nlm.nih.gov/pubmed/22572153

See also

Database of Abstracts of Reviews of Effects YR: 2012 NO: 1 PG: 1-180

Keywords

Adult; Diabetes Mellitus; Gastrointestinal Diseases; Pancreatic Diseases; non pharmacological intervention - diagn; screening; diagnostic procedures;