Retinal screening in Wales – A real eye opener!

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The National Screening Committee suggests annual retinal screening for all diabetic patients over the age of 12 years. Currently in the All Wales Adult CF service we arrange annual retinalopathy screening for all patients on insulin therapy in their locality.

Objective: To review the prevalence of diabetic retinopathy and maculopathy in adult CF patients on insulin therapy and predictors of retinopathy/maculopathy. To also review uptake of annual retinal screening appointments.

Method: Age, sex, FEV1%, BMI, Hba1c, number of years on insulin, presence of retinopathy/maculopathy and attendance rate at retinal screen were examined for the year 2012.

Results: 67 (40 female) of the 228 (29%) patients attending our centre in 2012 were receiving insulin therapy. The mean age (SD) and FEV1% were 29.3 years (9.1) and 57.9 (24.7) respectively. The mean (SD) Hba1c and BMI were 60.8 (18.4) and 22.2 (2.9) respectively. 43 of the 67 (64%) had a retinal screen in the last year of whom 18 (42%) had evidence of retinopathy (6 mild, 9 moderate, 2 preproliferative, 1 proliferative) and 6 had also maculopathy. Patients with retinopathy had higher Hba1c (69.4 p = 0.04) and mean number of years on insulin (10.7 years p < 0.001) than those without retinopathy.

Conclusion: Almost half the patients who attended screening had evidence of retinopathy. Over a third of patients did not attend screening in the last year. Age, sex and FEV1% did not predict attendance at retinal screen.


Red cell parameters to monitor vitamin B12 status in children with cystic fibrosis

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Objectives: Although vitamin B12 is water soluble, there is potential for people with CF to be deficient, in particular if the terminal ileum has been resected, as part of neonatal surgery for meconium ileus. Some UK centres have advocated the routine monitoring of vitamin B12 levels. In this study, we investigated whether routine red blood cells parameters might be a useful tool to identify macrocytosis relating to vitamin B12 deficiency.

Methods: Retrospective case note review. The full blood count from each annual review was recorded to measure trends in Mean Cell Volume (MCV), Mean Corpuscular Haemoglobin (MCH) and Mean Cell Haemoglobin Concentration (MCHC).

Conclusion: 83 children attending the Alder Hey Children’s Hospital were included (16 of whom had undergone neonatal MI surgery). A further 35 network patients who had undergone neonatal MI surgery were included. There was no difference in MCV between the children who had neonatal surgery for meconium ileus (31) and those children who had no surgery. A significant proportion of older children in the non-surgery group (19%) had a MCV that was consistently higher than the normal range. We identified no overt cases of macrocytic anaemia, but the consistent finding of mean cell volumes outside the normal range has prompted further investigation of these children and highlights the potential of this straightforward strategy to identify subclinical deficiency. We approached 16 UK Paediatric CF centres; four were routinely measuring MCV and one was routinely measuring vitamin B12. We recommend that centres routinely record MCV at annual review and consider further assessment of B12 status as required.