Introduction

The current guidelines state that all patients aged 12 and above with diabetes require screening for diabetic retinopathy on an annual basis. In this audit we question the necessity of annual screening for patients who have no DR and for those with background DR by evaluating the safety of biannual screening in terms of DR progression.

Aim

To evaluate the safety of increasing the screening interval for patients with no diabetic retinopathy (DR) or with background DR.

Method

This audit is a 4 year retrospective follow up of 996 patients who presented with no DR and 500 with background DR at baseline digital DR screening in 2006. DR progression was recorded for both cohorts.

Results

Background DR cohort:

Of the 500 subjects that had background DR in 2006, 231 were referred for DR, with an average DR routine referral rate of 12% (46 subjects) per year as shown by figure 1.

Figure 1: DR progression (500 patients R1M0 at baseline)

No DR cohort:

Of the 996 patients who had no DR at baseline: 51 were referred over the 4 years for sight threatening DR (STDR)

- of these 45 patients have definite STDR confirmed by ophthalmological examination, 6 were placed back on annual recall.
- 78% had type 2 diabetes
- Mean age at referral: 60 years (25-87)
- Mean diabetes duration:10.7 years (3-32)
- Mean HbA1c: 7.8 % (5.7-11.3 %)

As figure 2 shows, there was a relatively low risk of DR progression compared with the risk amongst patients who had background DR at baseline.

Figure 2: DR progression (996 patients R0M0 at baseline)

Conclusions

- Patients who present with background DR should continue to be screened annually as a high proportion of patients with background DR at baseline developed sight threatening DR (STDR) (12%)

- A relatively low proportion of patients with no DR at baseline were referred for STDR (1.3%). 50/51 referrals had observable retinopathy as just one patient required laser treatment.

- It could be recommended that it is safe to screen patients with no DR biannually due to low risk of developing STDR

- The rates of patients who did not attend (DNA) was between 10-20% each year for both cohorts. If screening biannually was to be implemented then the importance of attending screening should be stressed to patients in order to prevent sight loss due to diabetes.

If biannual screening was adopted for patients with no DR at baseline, a total of 7 (0.7%) patients out of the 51 that were referred would not have been appropriately referred for STDR and would have waited a further year for identification. The other patients had developed background DR prior to referral so would have reverted back to annual screening.