This retrospective study over a 3 year period was designed to assess outcome of patients screened in East Birmingham and referred to a dedicated Medical Ophthalmology clinic within Heart of England NHS Trust for cholesterol emboli.

METHODS
Patients who were identified at routine Diabetic Retinopathy screening with cholesterol emboli (referred via Digital Healthcare iP retinal screening software as "other lesions") during routine Diabetic Retinal Screening in East Birmingham PCT were referred to a specialist Medical Ophthalmology clinic for assessment.

The patients were followed up over a three year period to assess:

| Medication prior to and following diagnosis |
| Treatment |
| Length of Ophthalmic follow up |
| Outcome |

RESULTS
30 patients attended

Medical assessment
Pre-assessment:
3 n/k full medication history
30 patients were known to be receiving medication:
- 22 on antihypertensive therapy
- 23 on aspirin
- 24 on statin
Multiple therapy n = 19

After assessment:
7 patients had medication change:
- 3 aspirin added
- 2 statin added
- 1 changed from aspirin to aspirin
- 1 beta blocker added
Multiple therapy change n = 4/7

Investigative assessment
- 8 - no further radiological investigation:
  - 5 refused doppler investigation (age 79 – 87)
  - 1 still in care medicine / stent 3/12
  - 1 considered unadvisable - unable to undergo further coronary artery by-pass graft surgery
  - 1 doppler not performed – full therapy
- DNA x3. One died of congestive cardiac failure
- 16 consented to carotid doppler studies. (age 59 - 77)
- 1 underwent CT angiogram only
  - 5 - confirmed with some significant degree of carotid disease
- 2 of these patients required carotid endarterectomy surgery.
  - 60-70% stenosis on R, no previous medical history (age 69)
  - >70% stenosis on R, past medical history of CVA (age 59)

CONCLUSION
Annual diabetic retinopathy screening provides opportunistic identification of asymptomatic cholesterol emboli

It provides an opportunity for review of Medical Management in the high risk patient group with appropriate identification and referral for carotid stenosis surgery.

Our local protocol of referral to Ophthalmic Medicine has resulted in significant medical care intervention

CLINICAL CARE AND MANAGEMENT
Of 30 patients who attended:
- 7 patients had appropriate medication change (23%)  
- 16 patients had carotid doppler study + 1 CT investigation (57%)  
- 3 of above had both investigation + medication change (10%)

- 12 - no significant carotid disease. (40%)
- 3 - some degree of carotid disease – no surgery warranted at present (10%)
- 2 - required carotid endarterectomy (6.6%)

MORTALITY
4 patients died, a mortality rate of 12% over 3 years.

70% patients underwent medication / investigative management (21/30)