Safety of decision making in AMD patients on antivegf therapy

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INTRODUCTION

Antivegf for neovascular AMD(nAMD) has been shown to effectively maintain vision. Treatment involves regular intravitreal injections(IVT) over many years. Patients are monitored by vision and OCT changes involving monthly review, face to face or via virtual clinics where decision making regarding follow up is asynchronous to patient attendance. Virtual clinics are helpful to manage patient numbers and aid efficient service delivery. Many units across the country work in multidisciplinary teams involving doctors and allied health professionals (AHP) to deliver an efficient, safe and sustainable service

AIMS

Aims of this audit were to evaluate

1. If the clinical decision making by a tiered multidisciplinary team is safe
2. If the AMD pathway is efficient and safe
3. If the remotely supervised AHP led Elgin(District general hospital, DGH) intravitreal injection service is safe
4. To assess the clinical case mix in the remote DGH injection service (set up only for AMD but now takes on other conditions needing IVT)

MATERIALS &METHODS

In Grampian, decision making on follow up for nAMD patients attending virtual clinics is made in 3 tiers: level 1 (Specialist nurses) escalate complex patients to level 2(Specialist hospital optometrists). Level 3 is a senior ophthalmologist to whom level 2 queries are directed.

For this audit, clinic lists and EPRs, (Medisoft) of all patients who attended AMD clinics (where asynchronous review of notes occurred) during a 2-week period was reviewed.

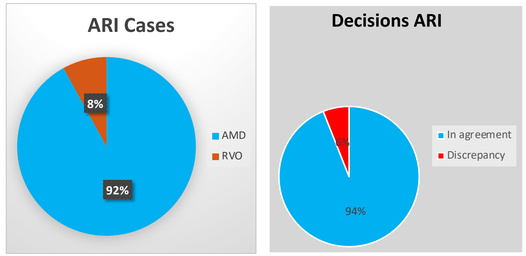
186 case notes from 31/08/20 to 11/09/20 of patients attending Aberdeen and Elgin AMD service were reviewed where the level 1 had made follow up plans. These decisions were checked by a level 2 reviewer (CM)

Further to this, another audit of 25 case records was completed looking at the level 2 decision making, checked by level 3 (CS)

RESULTS

Review of Level 1 decisions

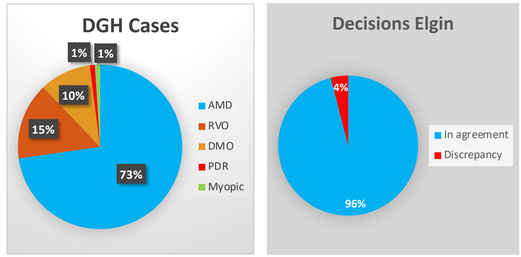
Aberdeen Royal Infirmary(ARI)
87 cases : 92% AMD



Level 2 in agreement with level 1 for 94% of AMD clinical decision making
In 6% of cases there was a discrepancy

1. OCT not reported and 2nd eye new presentation missed
2. Incorrect OCT reported as OCT scan had not been acquired
3. Treatment interval advised by level 1 deemed to be too long by level 2
4. Patient booked directly for injection after an 8 month treatment free interval, eye with subfoveal fibrosis, therefore not needing treatment

Dr Gray's hospital, Elgin
99 cases : 73% AMD



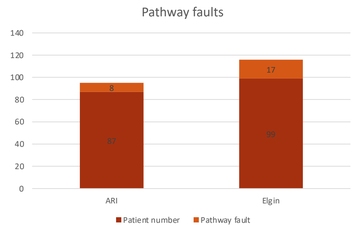
Level 2 in agreement with level 1 for 96% of AMD clinical decision making
In 4% of cases there was a discrepancy

1. Potentially overtreating (6/6 eye)
2. Increasing CNV activity but treatment interval was not shortened
3. Potentially overtreating peripapillary CNV

Patient did not come to harm in any of the cases

Pathway faults

ARI (9%): in 2 cases no OCT obtained
in 6 cases OCT obtained but not reported
DGH (17%) : in 17 cases OCT was obtained but not reported (this was due to patient being in loading phase or on fixed protocol where OCT was not deemed necessary but had been obtained)



DGH case mix in virtual clinics

Only 73% AMD
DGH IVT service is staffed with level 1 reviewers who are trained in AMD
Due to geography and COVID 19, some 'non-AMD' patients are imaged and treated in Elgin
As per protocol, difficult AMD decisions and all 'non-AMD' clinical decisions from the remotely supervised service at DGH, are directly escalated to level 3

Level 3 review of level 2 decisions

25 records of patients escalated by level 1 to level 2 for decision making were reviewed by CS (level 3)
Except for one patient where level 3 would have reviewed earlier(4/52 rather than 8/52), there were no safety concerns
No patient harm was picked up due to any level 2 decision making

CONCLUSION

Safety of AMD decision making across both sites – 95% agreement between levels 1& 2, 96% between levels 2 &3

Potential harm in < 1%

The remotely supervised Elgin service performing safely with no patient harm in 99/99 cases reviewed

AMD pathway efficient and safe with 5 % pathway faults primarily related to imaging reporting

More non-AMD cases reviewed in DGH by level 1 reviewers needing direct input from level 3
(COVID, patient perception/expectation, travel difficulties contributory factors)

Workload of over 100 virtual reviews per week needing a delicate balancing act with utmost flexibility from the team

REFERENCES

Khanna S, et al, Current and upcoming anti-VEGF therapies and dosing strategies for the treatment of neovascular AMD: a comparative review, BMJ Open Ophth 2019;4:e000398 doi:10.1136/bmjophth-2019-000398

Richard P Gale et al, Action on neovascular age-related macular degeneration(nAMD): recommendations for management and service provision in the UK hospital eye service, Eye 2019 March 33(Suppl 1): 1-21

RCOPHTH- The Way Forward Age-Related Macular Degeneration and Diabetic Retinopathy Options to help meet demand for the current and future care of patients with eye disease