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SHORT COMMUNICATION

Follow-up rates for patients needing regular intravitreal therapy in rural north-western Western Australia

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ABSTRACT:

Introduction: Regular intravitreal injections are an important treatment for significant vision impairment caused by diabetic macular oedema. Barriers to intravitreal treatment for rural Australian patients include travel time to appointments, especially as patients face a high volume of other medical appointments for their diabetes and related co-morbidities. This audit addresses intravitreal injection compliance by identifying patients lost to follow up in north-western Western Australia.

Methods: A retrospective audit of all injections was performed in the Pilbara and Kimberley between January and December 2018. Outcome measures included total injections, number of injection patients, rates of patients lost to follow-up by region, Aboriginal and Torres Strait Islander status and diagnosis. The audit was extended to include the first 6 months of 2019 to ensure further treatment plan timeframes had lapsed.

Results: A total of 140 patients received injections, resulting in 346 injections. Ten patients were excluded due to relocation to another region and three patients were deceased. Seventeen patients were lost to follow-up (12.1%). Of those lost to follow-up, 14.3% were in the Pilbara region and 10% in the Kimberley region. Similar rates with respect to Indigenous status with 12.6% identifying as Aboriginal and 11.4% not. 15.8% were treated for diabetic macular oedema and 3.8% for age-related macular degeneration.

Conclusion: The logistics of providing appropriate intravitreal therapy, including scheduling timely visits and working in hospital

and community-controlled settings, requires a specific focus on those needing intravitreal treatment. The study highlights the importance of coordination and systems to enable patients to receive injections in remote settings. Further analysis of optimal patient management plans for appropriate frequency and treatment outcomes is required.

Keywords:

diabetic macula oedema, intravitreal injection, ophthalmology, Western Australia.

FULL ARTICLE:

Introduction

The logistics to provide timely and appropriate intravitreal therapy in remote areas requires extensive coordination efforts. This audit addressed intravitreal injection compliance by identifying patients lost to follow-up in north-western Western Australia in 2018.

Lions Outback Vision provides visiting specialist outreach services and includes a mobile ophthalmology clinic that travels across Western Australia to service people in rural and remote communities. These clinics strive to provide regular intravitreal injections for predominantly public patients with diabetic macular oedema, who may not have accessed similar vision-saving treatment elsewhere.

Methods

A retrospective audit of all injections was performed in the Pilbara and Kimberley regions of north-western Western Australia between January and December 2018.

Outcome measures included total injections, number of injection patients, rates of patients lost to follow-up by region, Aboriginal and Torres Strait Islander status and diagnosis. The audit was extended to include the first 6 months of 2019 to ensure further treatment plan timeframes had lapsed.

Ethics approval

The study received exemption from the ethics boards of the University of Western Australia given it analysed retrospective records of de-identified data. It was conducted according to the tenets of the Declaration of Helsinki.

Results

A total of 140 patients received a total of 346 injections. Ten patients were excluded due to relocation to another region and three patients were deceased. Seventeen patients were lost to follow-up (12.1%).

Of those lost to follow-up, 14.3% were in the Pilbara and 10% in the Kimberley. Similar rates were observed with respect to Indigenous status, with 12.6% identifying as Aboriginal and 11.4% as non-Aboriginal. Patients who were being treated for diabetic maculopathy were more likely to be lost to follow-up than those with age-related macular degeneration, with 15.8% and 3.8% respectively (odds ratio 4.69, p=0.1442).

Discussion

Key barriers to intravitreal injection treatment adherence in diabetic macular oedema patients in Australia were frequency and travel time to appointments for their treatment, especially as patients face a high volume of other medical appointments for their diabetes and related co-morbidities. Other barriers to intravitreal injection therapy compliance included patient anxiety prior to intravitreal injection and recovery time following an injection[1].

In the remote outreach setting, there were further barriers to coordination. It has been reported that the most prevalent reasons for non-attendance to medical appointments recalled by Indigenous patients were 'other commitments' and 'lacked transportation'[2].

In the context of outreach clinics, which have been reported to have 51% non-attendance[2], the loss to follow-up rate in our service was low and represented good coordination and administration.

The logistics of providing appropriate intravitreal therapy, such as scheduling timely visits and working in hospital and community-controlled settings, requires a specific focus on those needing intravitreal treatment.

Conclusion

This study highlighted the importance of coordination and systems to enable patients to receive injections in remote settings. These much-needed services are not possible without funding. A recent systematic review advised higher funding for crucial providers of non-clinical support, particularly eye health coordinators[3]. The *Roadmap to Close the Gap for Vision* had similar recommendations, advocating for coordination of services to ensure timely treatment for eye disease is accessible to all Australians[4].

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