Background

- Ocriplasmin is a truncated form of the human serine protease plasmin, which has proteolytic activity against fibronectin and laminin.
- It is administered as an intravitreal injection, and has been shown to be effective in inducing release of vitreomacular adhesion (VMA) in 30% and closure of full-thickness macular holes (FTMH) in up to 40%.  
- It was approved for use in the United Kingdom by the National Institute for Health and Care Excellence (NICE) in 2013.  
- Ocriplasmin can be considered for treatment of VMA in adults who have either: stage II FTMH with a diameter of ≤ 400µm; and/or severe symptoms.  
- However, it is not recommended in either scenario if an epiretinal membrane (ERM) is present.  

Objective

- To evaluate our results of using intravitreal ocriplasmin in patients with symptomatic VMA: specifically the rate of VMA resolution, macular hole closure, other anatomical changes and visual outcomes.

Methods

- Retrospective, interventional, case-series of 12 eyes (11 patients) that received a single intravitreal injection of 0.125mg ocriplasmin (Jetrea®, Alcon/Novartis) between September 2014 and July 2015.

Results

- Mean age was 73.6 +/- 7.3 years (range 64-84), with a male : female ratio was 1 : 1.4.
- 59% (n=7) eyes had no associated ocular comorbidities, whilst the others had cataract (33%, n=3), age related macular degeneration (8%, n=1).
- Symptoms at baseline included: distortion (37%), blurred vision (32%), shadows (21%) and difficulty reading (10%) and diplopia (8%).
- VMA resolution occurred in 41.6% (n=5) by day 28, and in 58% (n=7) by day 136.
- In those with VMA release, distortion reduced in 71% and visual improvement of ≤2 lines occurred 57%.
- Median LogMAR visual acuity improved from 0.3 pre-injection to 0.19 post injection (p=0.32).
- Of the 2 eyes that had a FTMH, none achieved closure. One FTMH remained stable in size at 266µm, whilst the other enlarged from 318µm to 50’µm.
- 1 eye had successful release of VMA but developed a FTMH. (Figure 2)
- At the end of follow-up 25% (n=3) underwent vitrectomy and gas tamponade, with subsequent closure of the FTMHs.
- Spectral domain optical coherence tomography showed subfoveal fluid development in 58% (n=7) and ellipsoid zone loss in 50% (n=6), which fully resolved by 3 months.
- There did not appear to be a significant association between development of SRF and subsequent VMA release.
- 'Acute ocriplasmin retinopathy' has been described, and shows the following features: loss of ellipsoid zone in 26-50% (appears to be related to development of SRF); full field ERG changes in up to 69%; and reduced vision in up to 80%. Interestingly this appears to resolve in 4-36 months – as observed in our patients.

Conclusions

- Our results show comparable rates of VMA release with intravitreal ocriplasmin compared to previously published data.
- We were unable to make definite conclusions regarding the use of ocriplasmin in FTMHs due to the small patient numbers.

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References