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Quality of Life in MacTel Type 2

Dr. Wykoff:
Hi, I'm Charles Wykoff and it's great to be here with my good friend and colleague, Dean Elliott. This is CME on ReachMD.

So, Dean, the topic here today is functional vision which we know that is often affected in patients with macular telangiectasia type 2, or Mac-Tel. And the key question is, how does functional vision effect a patient's quality of life in this disease process?

Dr. Elliott:
Great to be here, Charlie. Thank you.

Visual acuity is mostly stable with small changes over time, in most patients. A large study of over 1,000 eyes in over 500 patients showed that over a 4-year period, mean BCVA decreased about 1 letter per year, which translates to about one Snellen line per 5 years. Only 15% of patients lost at least 15 letters, and 27% lost at least 10 letters over this 4-year study. So, the differences in BCVA are not clinically meaningful for most patients.

A study using the National Eye Institute's Visual Function Questionnaire showed lower vision-related function in 222 patients with Mac-Tel, compared with patients with normal vision. And if you look at QOL, it was reduced in all of these measured domains except for color vision. The most pronounced were near vision, distance vision, role difficulties and, interestingly, mental health.

The study also showed quality of life was worse in older versus younger patients. Women tended to have worse scores compared to men.A progressive trend in poor quality of life, starting with vision better than equal to 20/32, followed by patients who were worse than 20/32 in one eye, and the worst quality of life scores were when visual acuity in both eyes was worse than 20/32.

So, compared to other diseases, like early AMD, glaucoma, dry eyes, or even more severe diseases like cytomegalovirus or acute optic neuritis, patients with Mac-Tel have worse quality of life scores.

A separate study using the Impact of Vision Impairment Questionnaire found that vision and quality of life was twice as high in the control group compared to patients with Mac-Tel, and the most difficult tasks were reading ordinary print and reading labels or instructions for medicines, things that are especially important for older patients.

Dr. Wykoff:
Dean, those are great comments and great observations. Clinically useful. From my perspective, I like to think about scotomas. There's reasonable data to support that as a clinical management question for patients. If patients have areas of scotomas, that's very predictive of future scotoma growth and development, as well as function vision decline.

And specifically, in a longitudinal, retrospective study, once scotomas were found to be present, growth of those scotomas was almost

always present over time, that is in 94% of eyes. But of interest, if patients did not have any identified scotomas at baseline, they had a very low rate of developing scotomas over the observational period. So again, the presence of scotomas in these patients is predictive of future loss and is a critical question for us to think about clinically. We know that these scotomas also correlate with reading difficulties.

Dr. Elliott:
Great point, Charlie. The key take-home message is Mac-Tel causes decreases in quality of life, despite small changes in visual acuity. Basically, functional vision is not equal to visual acuity. You have ellipsoid zone loss, which leads to paracentral scotomas. This causes functional vision loss, and the best assessment of that is reading speed.And when you have functional visual loss, your quality of life is severely impacted.

Dr. Wykoff:
Great summary. Fascinating how our different diseases have better or worse correlations between what we see on exam and imaging with their vision function and visual acuity. I think overall, you've summarized this very well.

That's all the time we have for today. Thank you to our audience for tuning in and thank you especially to you, Dean, for your expertise. Thank you.

Dr. Elliott:
Thank you, Charles.