between melanocytoma, oculodermal melanocytosis, and multiple congenital melanocytic nevi.

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Evaluating Patient Discomfort, Anxiety, and Fear Before and After Ranibizumab Intravitreous Injection for Wet Age-Related Macular Degeneration

Ranibizumab (Lucentis) intravitreous injection (IVI) has emerged as a common treatment for wet age-related macular degeneration after 2 international, multicenter, controlled clinical trials, MARINA\(^1\) and ANCHOR,\(^2\) reported positive visual outcome compared with placebo and photodynamic therapy. Despite the therapeutic benefits of ranibizumab, repeated injections are required as often as every 4 weeks. We aimed to study the patients’ perspective of treatment with ranibizumab, specifically pain, anxiety, and discomfort related to the ranibizumab IVI procedure.

Figure 2. Photomicrographs. A, Densely pigmented polyhedral tumor cells (hematoxylin-eosin, original magnification ×400). Inset, Tumor cells infiltrating the sclera (hematoxylin-eosin, original magnification ×200). B, A bleached preparation showing monomorphic cells with small nuclei and abundant cytoplasm (hematoxylin-eosin, original magnification ×400). C, Sheets of dendritic melanocytes, seen infiltrating the sclera (hematoxylin-eosin, original magnification ×200). D, A specimen taken from the skin lesion showing nests of melanocytes infiltrating the dermis and surrounding the skin adnexa (hematoxylin-eosin, original magnification ×200).
our knowledge, there are no reports on this apart from one study investigating patient discomfort on receiving triamcinolone IVI.3

Methods. A validated questionnaire (eFigure; http://www.archophthalmol.com) that covered the levels of discomfort, anxiety, and fear was administered to all of the patients 1 hour before the IVI at the preassessment clinic. The postoperative questionnaire was administered by telephone 2 weeks later by the same investigator. Visual analog scales were used to assess the level of discomfort. The anxiety and fear scales were extracted from the Australian National Survey of Adult Oral Health 2004-2006.4 Exclusion criteria were an Abbreviated Mental Test score lower than 8 and best-corrected visual acuity worse than 6/60. The study protocol was approved by the medical ethics committee of the University of Edinburgh. From February 23, 2008, to June 5, 2008, 100 consecutive patients receiving the IVI were recruited in this prospective survey. Written consent was obtained from all of the patients.

A verbal description of the procedure and fully informed consent were carried out at a dedicated clinic. The anesthesia in this procedure included 1 drop of tetracaine hydrochloride, 1%, at the assessment clinic and 2 drops before draping. Topical povidone-iodine, aseptic technique, and sterile eyebrows draping with speculum insertion were used in the preparation procedure. Then, topical lidocaine hydrochloride was applied on the ocular surface with cotton-tipped applicators for 1 to 2 minutes before IVI. Approximately 0.05 mL of ranibizumab, 10 mg/mL, was administered through a 30-gauge needle.

Results. Of the 100 patients, the male to female ratio was 1.3. The mean age was 79 years. Sixty-six patients (66%) had previous experience with the IVI. Overall, there was a mean improvement of 0.05 logMAR unit of visual acuity at 4 weeks.

The Table summarizes patient responses. The anticipated discomfort was significantly higher than the actual discomfort (P < .001). Fifty-one patients (51%) reported that IVI was less uncomfortable than anticipated, 34 patients (34%) felt the same discomfort as expected, and 16 patients (16%) experienced more discomfort than expected. During the IVI, 62 patients (62%) did not experience any discomfort and 38 patients (38%) felt mild discomfort. Twenty-four hours after the IVI, 70 patients (70%) reported that they did not feel any discomfort at all and 30 patients (30%) felt mild discomfort. Fifty-three patients (53%) reported that IVI was a less fearful experience than they expected. Those who had previously received IVI reported no change in fear or anxiety compared with their previous IVI procedure. Overall, 93 patients (93%) were neither anxious nor fearful after the first IVI.

Comment. This prospective clinical study showed that IVI was less painful than anticipated (P < .001). Patients were also less fearful and anxious after the first IVI (P < .001). These findings were consistent with the previous report by Roth et al1 on triamcinolone IVI. The limitation of our study was that the postoperative survey was conducted by telephone 2 weeks after the IVI. However, reports5-7 have suggested no difference in patient scores when interviews were done by telephone or face to face within 2 weeks after operations. These issues should be addressed in pre-IVI counseling and consent to reassure and inform individuals prior to the procedure. Reducing anxiety and concerns about anticipated IVI-related discomfort or pain is likely to improve the patient experience and compliance with repeated procedures.

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Additional Information: The eFigure is available at http://www.archophthalmol.com.


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