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SAVRS statement on medical aids requesting OCT scans prior to authorizing anti-VEGF treatment

It has come to the attention of the South African Vitreoretinal Society that certain medical aids are requesting an OCT (optical coherence tomography) image with retinal thickness prior to authorizing anti-VEGF treatment.

OCT imaging is an important tool in clinical evaluation and is essential in assisting the ophthalmologist to determine, along with other clinical criteria, whether treatment intervals should be continued, extended, discontinued, or whether there is treatment failure of a drug.[1,2] OCT imaging in isolation cannot, however, reliably substitute as a surrogate for visual acuity and the decision to continue or discontinue treatment cannot be made on this parameter alone. This has been shown extensively is several studies, where a modest or poor correlation has been found between retinal thickness on OCT, the volume of subretinal fluid or a pigment epithelial detachment, and functional visual acuity.[3-9] This has been shown to be true for macular pathology in AMD (age-related macular degeneration) and DME (diabetic macular edema).[9,10]

Clinical studies conclude that retinal thickness, when used in isolation, fails to accurately predict outcomes in macular disease.[3-10] There is no evidence to state that treatment can be continued or withdrawn based on an OCT image alone. Visual acuity may stabilize or even worsen over time, but this is the nature of a degenerative condition. The natural history without treatment has been well documented and often leads to legal blindness.

When reviewing the effects of intravitreal anti-VEGF treatment in an eye with neovascular activity, the ophthalmologist takes several factors into consideration:

- Symptoms
  - These include symptoms such as
    - Metamorphopsia
    - Change in visual symptoms
    - New visual symptoms

- Visual acuity
  - Objective visual acuity
  - Subjective changes, which include factors such as quality of vision, change since the last intravitreal injection and contrast in light and dark environments

- Biomicroscopic clinical evaluation of the macula
    - These include clinical factors such as
        - Retinal haemorrhages
        - Exudates
        - Pigment clumping
        - Area of geographic atrophy
        - Intraretinal fluid

- OCT scan
    - An OCT scan is a dynamic investigation. A single slice is insufficient to determine change over time. A typical OCT scan consists of 128 horizontal and 512 vertical slices. Software creates 3-D dynamic scans and graphical changes over time. Intraretinal and subretinal fluid may or may not change the retinal thickness[3-10] and clinical interpretation is required by an ophthalmologist who is trained to interpret these images, as a pigment epithelial detachment will increase overall thickness, but is not treated unless it is fibrovascular.

- Ancillary investigations
    - Fluorescein angiography
    - OCT angiography
        - These tests are performed at the discretion of the treating ophthalmologist, when the presence or location of leakage is required to guide management, or when there is an unexplained response to treatment

The South African Vitreoretinal Society Scientific Advisory Committee concludes that a retinal thickness scan and visual acuity cannot be used in isolation to determine treatment response, and to make decisions on whether treatment should be continued or discontinued.

Medical aids are strongly advised not to request this information to decide whether they will or will not fund treatment, as there is no evidence to support this.

Conclusions:

The Academic Advisory Committee of the SAVRS would record the following points:

1. Treatment of exudative AMD, Diabetic Macula Oedema and Retina Vein Occlusion with VEGF inhibitors by intravitreal injection is the international current standard of care. Treatment with this class of agent has dramatically reduced visual loss associated with the natural history of these chronic diseases.
2. Although the use of the OCT scan is a mandatory investigation in treating patients with VEGF inhibitors, it should be emphasized that numerous clinical features should be considered in addition to the OCT result.
3. The OCT scan should only be interpreted by an ophthalmologist who is trained to consider the images in correlation with the clinical picture.
4. Clinical studies have shown that macular thickness measurement by OCT and visual acuity, when taken in isolation, fail to adequately predict outcome in this class of treatment
5. Other investigations like fluorescein angiography or OCT angiography may be indicated to assist in making a decision about treatment.

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Yours Sincerely
The AAC (Academic Advisory Committee) of the SAVRS