

VISUAL THERAPY IN HYSTERICAL BLINDNESS — A CASE STUDY

SANDRA MARSHALL, BAppSci(Hons)(Orth), DOBA

CAROLYN SHERRIFF, DipAppSci(Orth), DOBA

LEE KENNEDY, DipAppSci(Orth), DOBA

Abstract

A general overview of some of the features and methods of investigating and managing patients with presumed functional visual disorders is presented, together with a case study of such a patient. Following numerous investigations, including psychiatric evaluation, the patient was referred for visual therapy in an attempt to improve his left visual acuity. With much encouragement and intensive orthoptic exercises, over a period of four weeks, the recorded vision in the left eye improved from no perception of light to 6/6.

Key words: Functional visual loss, hysterical blindness, malingering.

INTRODUCTION

The orthoptist may at times be confronted by a patient claiming poor vision but subjective ocular assessment suggests that visual function would appear much better than the patient volunteers. In particular, there may be no clinical aetiology apparent. In such cases, suspicions may be aroused that visual loss is of a functional nature.

In the literature,^{3,5,6} functional visual defects are usually divided into two categories: hysteria and malingering.

Hysteria is a form of neurosis. There is an underlying psychological problem that manifests itself as a physical symptom, in this situation a visual defect. It is a conversion reaction used to escape some intolerable situation. It is a sub-conscious process and even though there may be some form of gain involved, eg. attention, this is not a conscious thought of the patient.^{3,5}

Malingering on the other hand, is the deliberate feigning or exaggeration of illness

and is frequently done for the purpose of a consciously desired end.^{3,6} One particular example frequently cited in the literature is of those wishing to avoid hazardous duties in the military service.^{3,5,7}

However, the dividing line as to where neurosis ends and malingering begins is by no means clear cut.

Kramer et al³ noted various features of the malingerer. They usually tend to be young, in their 20s to 30s, under some pressure especially associated with their employment and there is frequently a preceding trivial ocular incident. They note however, that patients with ocular hysteria "frequently display 'la belle difference'" and the attention that is sought is often of a more emotional nature. The latter patients may show a wider age spectrum, from school age children⁵ to the fourth decade.³

Functional visual defects may occur in one or both eyes and may range from moderate to

Address for correspondence: Orthoptic Department, Clinic 3 — Outpatients, Repatriation General Hospital, Hospital Road, Concord 2139.

complete visual loss. In the case of complete blindness in one eye, in the presence of a normal fundus and normal vision in the fellow eye, there can be only two causes: a unilateral retrobulbar lesion or a functional visual disturbance.⁶

Investigation

In the investigation of such patients, much information may be gained by observation, for example, the patient's mobility and general manner. There are also various tests that may be of specific value. The choice of tests will vary according to the degree of apparent visual loss. There are numerous orthoptic tests that may be used. A positive response on such tests requires reasonably good vision in both eyes, with or without binocularity, and would thus be incompatible with a significant reduction of vision in one or both eyes.

Stereopsis Tests

Positive recognition of stereopsis on tests such as the Titmus and TNO stereo tests, especially for the finer stereoacuity levels, requires reasonably good vision in both eyes (6/12-6/18).^{3,5,6}

Bar Reading

Fluent bar reading with both eyes requires binocularity and reasonably good vision in each eye. In the case of true unilateral visual loss, there would be hesitancy and head movement required to read along a line, as the bar, appearing solid, would partially obscure the print.

Lenses

These are placed in front of the good eye to induce fogging, and vision is then assessed with both eyes open. There are various methods that may be used.

Plus lenses may be used for distance testing with lower lens powers (eg +3.00DS), or they may be used for near with high lens powers (eg +10.00DS). In the former case, normal vision would not be possible at distance for the fogged eye. In the latter case, reading with the fogged eye would be possible only at very close range

(<10cm). If reading continues normally as the print is gradually moved further away, it must be with the affected eye.

Cylindrical lenses may also be used. These are used in pairs of opposite powers eg + and -4.00DC, placed initially at parallel axes and then one cylinder is rotated slightly by 10-15 degrees.

In each of the above situations normal reading at the standard test distances of six metres and one third of a metre respectively, would therefore have to be with the alleged affected eye.

Another method is to place paired lower power (+/-1.00) spherical or cylindrical lenses in front of the affected eye, and then to test the vision monocularly. No actual refractive change occurs in this situation, but the patient may believe that the lenses are improving the vision.

Prism Testing

Prisms may be used horizontally or vertically. A positive prism vergence response with a 4-8 dioptre prism, placed base out in front of the affected eye, would indicate relatively good central vision in that eye. A 4 dioptre prism placed vertically in front of the one eye should induce diplopia and if both eyes are seeing normally, would cause reading to be hesitant.

Synoptophore Response

Appreciation of the smallest, bifoveal slides require vision of approximately 6/12-6/18. The patient may then be questioned about the details on such slides.

Visual Fields

Fields are typically concentrically constricted with all sized targets and do not vary appropriately when assessed at different distances. For example, the field may show no change at all or decrease in size, instead of becoming larger with increasing distance. Patients with ocular hysteria may also show spiralling of the field.

Other particularly useful objective tests include:

Pupillary Reactions

Normal, symmetrical, direct and consensual pupil reactions, especially when there is an

absence of a relative afferent pupil defect (RAPD), would indicate integrity of the pupillary portion of the visual pathway, together with functional retinae. A normal response to this test is particularly significant in the case of claimed unilateral visual loss.

Also, shining a very bright light into the affected eye will elicit a blink response when there is some visual function present. Such a reaction may also be induced in response to some form of visual threat.

Optokinetic Nystagmus

A positive response on OKN testing indicates that vision must be present. This test may be performed with an OKN drum or tape. However, the malingerer may be able to suppress the response. A better method of testing is to use a fairly large swinging mirror, half a metre to two thirds of a metre in diameter, held at near in front of the affected eye. This is a more fixation-provoking test and thus more difficult to consciously suppress.

Visual Direction

Here the patient is asked to look towards their own finger or hand. A truly blind or hysterically blind person will do this with ease. The malingerer will tend to move their eyes around and look elsewhere.

Visual Evoked Potential (VEP)

This test provides a very helpful method of objectively assessing visual function, particularly when patterned stimuli are used. The pattern VEP is primarily a response of the central visual field, particularly the central four degrees.⁴ Thus, the presence of a normal VEP indicates integrity of central retinal/macular function.

The amplitude of the VEP varies with the check size used, being maximal with check sizes of 10-20 seconds of arc^{1,2,4} and decreases with larger and smaller check sizes. Thus, assessing the VEP with a variety of check sizes may be helpful to correlate with the patient's volunteered acuity.

However, it is possible for people to voluntarily alter their VEP and so "fool" the test.² This may be achieved by fixating off-centre, so

that the small sized check pattern is projected onto the peripheral retina where the resolving power is insufficient to produce a normal waveform. It is therefore important to carefully monitor fixation while the test is being performed on this type of patient.

In general, the presence of large amplitude, normal latency responses, especially for small (less than 20 seconds of arc) checks, indicates intact visual pathways. It is important though to remember that even a 10 seconds of arc check is only comparable to 6/60 Snellen vision equivalent, and that the presence of a normal VEP response does not necessarily guarantee normal acuity (i.e. 6/6). However, this test is particularly useful in the case of feigned unilateral visual loss. If the VEP responses are not only normal, but importantly are symmetrical, the visual acuity in the eye in question is probably comparable to the good eye. Responses such as this may be sufficient to end the search for pathology of the visual system.

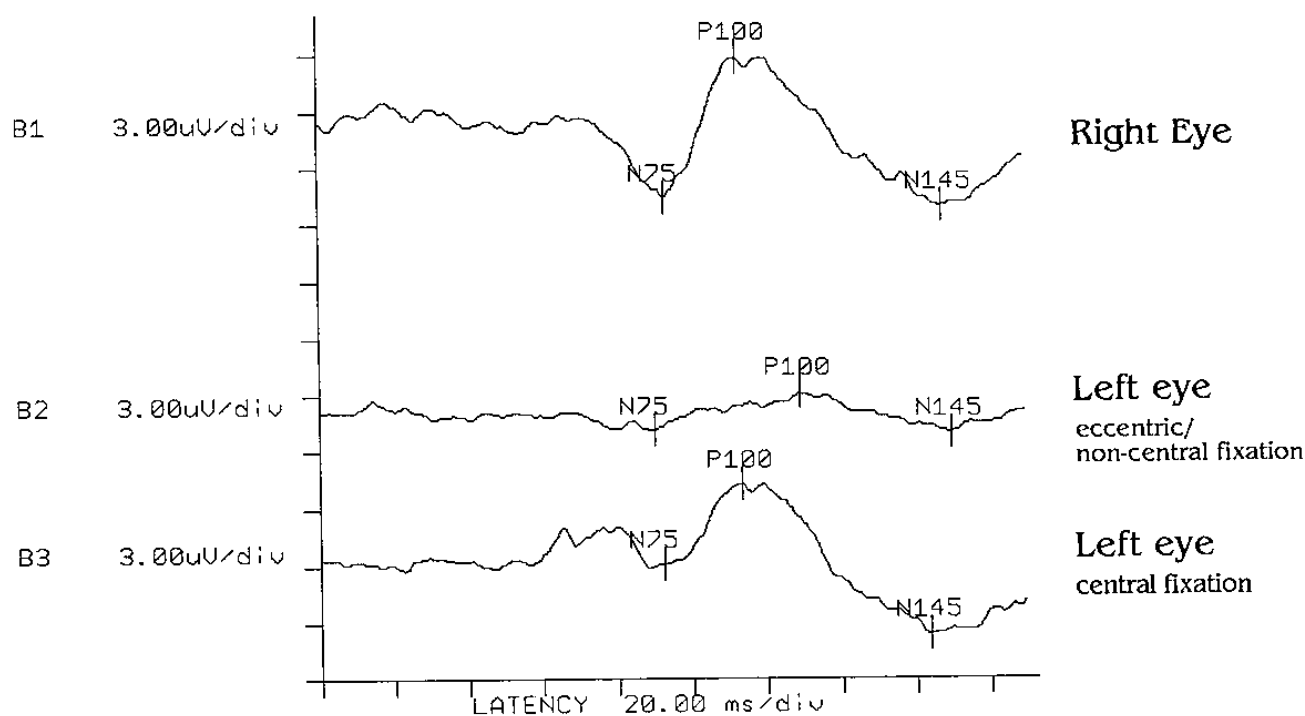
Discussion

With much time and patience, it may be possible to coax some individuals to a point where the vision chart is read quite normally. At times the malingerer, when faced with the fact that vision must be better than claimed, may "come around" with a noticeable improvement in function.

Having determined that vision is better than the patient will admit, there remains the problem of management. It is important to try and establish what the underlying or triggering mechanism could be. It is usually advisable to have the patient undergo a psychiatric consultation, especially in the case of ocular hysteria where there is usually some underlying emotional problem that may be treated successfully with psychotherapy. The results found at the psychiatric evaluation may well direct the entire course of management.³

As orthoptists, we are called upon to investigate these time consuming patients with a view to establishing more definitely that there is indeed a case of functional visual loss. Commonly however, these patients are referred back to the ophthalmologist and possibly on to a

VISUAL EVOKED POTENTIAL



	LATENCIES (ms)			INTERAMPLITUDES (uV)	
	N75	P100	N145	P100	N145
B1	93.00	113.25	168.75	+7.58	-8.03
B2	90.00	129.75	171.00	+2.21	-2.33
B3	92.25	114.00	165.00	+4.45	-8.21

Figure 1: Visual evoked potential

psychiatrist and are lost to follow up. The following case was of interest not only from the investigation point of view, but more importantly, because he was actually referred back to the orthoptists for treatment.

CASE STUDY

An 18 year old Army private, C.G., was referred with a history of loss of vision in his left eye. He reported that during army exercises, following a minor injury to the left eye, he was required to sight his gun and noticed that the vision in his left eye was blurred. Within four days, he stated that he had complete loss of vision. He noted an occasional stinging sensation in the eye but no pain was present on movement of the left eye.

Over the next six weeks, C.G. was seen by two ophthalmologists, a neurologist, two psychiatrists and an orthoptist. Numerous testing procedures were performed, including CT scan and blood tests, with unremarkable results.

Ophthalmological examination revealed an uncorrected vision of 6/4 for distance and N5 for near in the right eye and no perception of light in the left. Slit lamp and fundus examination were normal. Pupillary reactions were normal, both direct and consensual to light and accommodation. There was no evidence of relative afferent pupil defect. OKN responses were normal binocularly and when fixing with the right eye. Testing of the left eye initially revealed a relatively normal OKN response but it then appeared that this was being subjectively

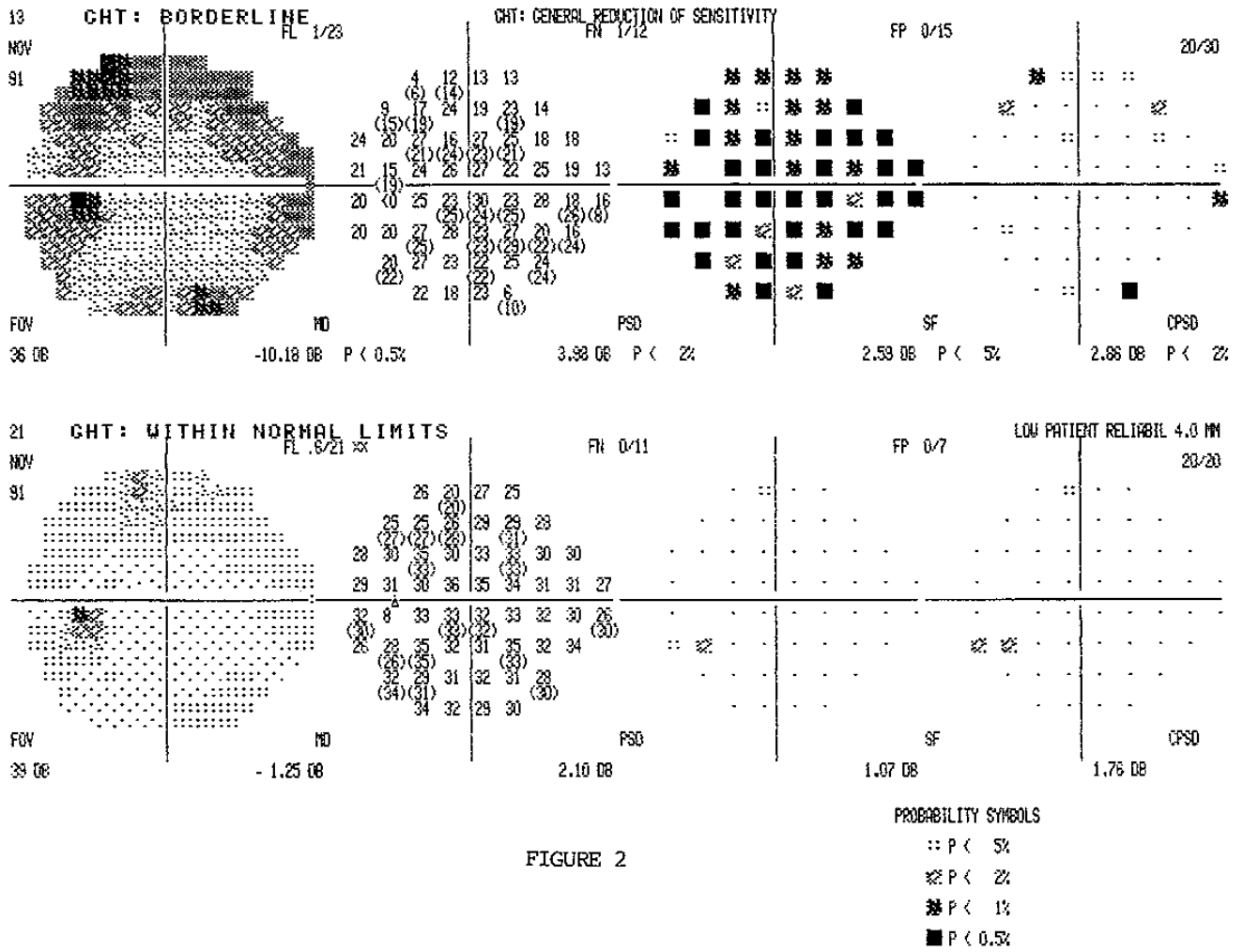


FIGURE 2

Figure 2: Humphrey Field Tests

suppressed. Thus the general ophthalmic examination revealed no ocular aetiology for a complete unilateral loss of vision.

Visual evoked potential (VEP) testing was performed using a variety of check sizes, the smallest of which was equivalent to 6/36 vision (6.5' of arc). The right eye showed normal responses with all checks. The left eye initially showed a barely recognisable VEP waveform, but investigation revealed fixation was off-centre. With encouraged central fixation, normal VEP responses were also elicited with the "blind" left eye with all check sizes, therefore indicating at least 6/36 acuity. It was also

apparent that the VEP responses were symmetrical for each eye, therefore indicating that the left eye probably could see as well as the 6/4 right eye. (See Figure 1)

Reports from several of the people investigating C.G. made comment of his dissatisfaction with army life, and the psychiatrist felt his apparent loss of vision may be part of a conversion disorder.

He was subsequently admitted to hospital for further psychiatric evaluation. It was felt that C.G. had "trapped himself into a corner" and that his only escape was to admit that he could indeed see normally. The psychiatrist felt that visual therapy could provide an opportunity for

his vision to improve. He was subsequently referred for orthoptic treatment.

Being an inpatient, he was seen on a very frequent basis (almost daily). Visual therapy commenced with OKN stimulation and progressed through a series of conventional orthoptic exercises. The latter included convergence exercises, red filter work, stereograms and bar reading. During treatment sessions, he was encouraged to tell of the improvement he was noticing. For example, he reported "tingling sensations" with OKN and as the vision progressively improved that things were "looking brighter now", that he could "see figures now" and that he was "starting to see details". Along with this, the orthoptists made many positive suggestions as to how the vision may be being helped, such as "this exercise should help improve your vision", "colour vision should be coming back now", "can you feel that making a difference?"

In view of the fact that the volunteered left vision was NPL at the beginning of treatment, fields were not initially assessed. Humphrey fields were performed midway through treatment and at the end of treatment. As can be seen in Figure 2 apparent improvement occurred, with a normal field response at his last visit.

From apparent blindness in the left eye, gradual improvement in vision was made over a four week period. When last seen the left acuity

was 6/6, and there was normal stereopsis and colour vision. He was then transferred from hospital to an Army base with the view to a medical discharge.

CONCLUSION

Within our role as orthoptists, our association with functional visual loss patients usually extends only to the investigation and diagnosis stage. A question frequently raised is to distinguish between hysterical blindness and malingering, however, in this patient's psychiatric evaluation, it was interesting that no definite line was drawn between the two. Rarely do we become involved in the subsequent follow-up and treatment of such cases, especially with such notable results.

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