

## Functional Visual Disturbance due to Hysteria

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A 23-year-old male complained of loss of peripheral visual field and everything having purple shadows in the afternoon. This had lasted for 3 years but he had paid little attention to the symptoms. Investigations, including visual acuity, intra-ocular pressure, pupil reflex, and anterior and posterior segment of the eyes, were normal. He denied ocular pain, history of head injury, epilepsy or related family history. The Goldmann perimeter and tangent screen examinations showed a bilateral constricted tubular visual field defect within the central 10° and steep margins. Tracing his past social history, he had been in jail for 3 months. He also complained his work was hard and caused him tension. The visual symptoms were a functional disturbance, not an organic disorder. We diagnosed him with hysterical functional visual disturbance. Hysteria, or conversion disorder, has long been a puzzling and fascinating problem in psychology and ophthalmology. The mechanism and reasons for hysteria are still not clear. The tangent screen is useful in diagnosis. The constricted tubular, spiral or star-shaped visual fields with steep slopes are specific findings in hysteria. We suggest that ophthalmologists should treat patients with psychogenic symptoms, using suggestion, patience and reassurance. (*Chang Gung Med J* 2007;30:87-91)

**Key words:** hysteria, Goldmann perimetry, tangent screen, constricted tubular visual field.

Hysteria is a rare and difficult disease to diagnose. Its other name is conversion disorder and it has long been a puzzling and fascinating problem in psychology and ophthalmology. A conversion reaction is a sensory or motor dysfunction. A precipitating stress is the major factor in conversion reactions. Stresses described include trauma, fear, illness and failure at work. Hysteria takes its place between organic disease and malingering, differing from the first in its absence of a known structural pathology and hypothesized psychogenic origin, and differing from the latter in its absence of a conscious elaboration of the disease.<sup>(1)</sup> The question of whether or not a patient with hysterical visual impairment can or cannot “see” is still unresolved. Previous reports only mention that constricted tubular or star-shaped visual fields were specific findings in hysterical

patients. This report attempts to describe a hysterical patient with three special types of visual field defect and purple chromatopsia, all of which have not been reported together so precisely before in other articles. We will also discuss how to manage patients with hysteria and its prognosis.

### CASE REPORT

A 23-year-old male was brought to our clinic by his father. He complained of loss of peripheral visual field and everything being covered with a purple shadow after 4 o'clock in the afternoon everyday. These symptoms had lasted for 3 years. He denied ocular pain, history of head injury, epilepsy or related family history. Investigations, including visual acuity, intra-ocular pressure (IOP), pupil reflex, ante-

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rior and posterior segment of eyes, primary eye position and color test, were normal. The Goldmann perimeter showed bilateral constricted visual fields within the central 10° and steep margins.

We arranged for a tangent screen examination the next day. The patient was very cooperative and understanding about the procedure. In the tangent screen test, the patient presented abnormal visual fields as follows (Table 1). First, a normal patient will present a wider visual field from central to peripheral than from peripheral to central. In contrast, our patient presented with a smaller visual field from central to peripheral (Exam 2 in Table 1) than from peripheral to central (Exam 1 in Table 1); we call this inversion of the fields.<sup>(2)</sup> Second, a normal person will present a wider visual field with change in testing distance, like a cone-shaped visual field. This patient presented no change in width of the visual field with change in testing distance (Exams 1, 3 and 4 in Table 1), like a constricted tubular visual field. Third, there is a smaller visual field with a red target (Exam 5) than with a white target (Exam 1). These 3 special types of visual field presentations could not be explained by organic disease. The neurological survey, including skull films, computerized brain scanning and visually evoked cortical potentials (VEP), was normal.

Tracing his past social history, he was an ad-let designer previously. Unfortunately, he was in jail for 3 months about 3 years ago due to his friend's mistake and circumvention. After he was discharged from prison, he could not look for a good job so he became a printer. He complained that his work was boring, difficult and was not going smoothly, and then the strange visual symptoms occurred. Although these symptoms persisted for 3 years, they did not affect his work and so he paid little attention to them, similar to a special phenomenon called "la belle indifference".<sup>(1)</sup> We diagnosed him with a case of functional visual disturbance due to hysteria.

## DISCUSSION

Functional eye signs and symptoms are a common and challenging part of neurological diagnosis.<sup>(3)</sup> Hysterical signs represent the patient's conception of disease.<sup>(4)</sup> The diagnosis depends on history and examinations. Most patients receive extensive neurological tests, including computerized brain scanning, to exclude organic disease. Identification of spurious ophthalmic complaints is one of the most difficult clinical areas. These patients present special behavior to unconsciously avoid stress including problems in visual acuity, visual fields, eye movements and

**Table 1.** The Results of Tangent Screen Test (30 Degrees)

Exams	Target size	Target color	Distance from patient to target	Target moving direction	Results	
					L.E.	R.E.
Exam 1	5 mm	White	1 m	P to C		
Exam 2	5 mm	White	1 m	C to P		
Exam 3	10 mm	White	2 m	P to C		
Exam 4	2 mm	White	1/2 m	P to C		
Exam 5	5 mm	Red	1 m	P to C		

**Abbreviations:** Exam: examination; m: meter; P: peripheral, C: central; L.E.: visual field of left eye; R.E.: visual field of right eye.

pupillary abnormalities. Patients with hysterical neuro-ophthalmic complaints have little or no insight into their infirmity, and they display a singular lack of concern over their quite incapacitating symptoms (la belle indifference).<sup>(1,2)</sup> The malingering patient usually can be found to have some type of primary gain for the infirmity. Our patient gave little attention to his visual field defects. The mechanism and reasons for hysteria are still not clear.

Krill et al.<sup>(5)</sup> reported on a heterogeneous group of subjects with ocular conversion symptoms. These patients showed fluctuating visual acuity, tubular visual field defects, central scotoma, abnormal dark adaptation and atypical response to color vision analysis. Hysterical patients with chromatopsia are rarely seen; erythropsia and xanthopsia have been reported. In our case, the patient complained that everything had a purple shadow and this has never been reported before. We could not explain why our patient had purple color vision. We performed extensive neuro-ophthalmic examinations, including computerized brain scanning, to exclude organic diseases. We suggest that this is a presentation of hysteria but long-term follow-up is needed. A variety of stresses contribute to the onset of symptoms. Some obvious factors include ocular or central nervous system disease, trauma and an emotional crisis, such as being out of a job.

It has been known that the tangent screen and Goldmann perimetry are useful in the diagnosis of hysteria.<sup>(6)</sup> The tangent screen is the most flexible apparatus for testing the visual field and thus is the most useful for eliciting characteristic responses in patients with functional field loss. Patients with retinitis pigmentosa, glaucoma, bilateral optic nerve lesions, chiasm lesion, bilateral radiation lesions and malingering may have restricted visual fields. Contraction of the visual fields, described in the 1860s as a sign of hysteria, remains the most common functional field defect.<sup>(4)</sup> Our case of cylindrical constricted tubular visual fields, rather than cone-shaped, is a special feature of hysteria. Inversion of the fields is another characteristic psychogenic disturbance.<sup>(2)</sup> In normal people, if a test object is moved toward fixation from the periphery, the field will be somewhat smaller than if the same test object is moved outward from fixation. In contrast, in a patient with hysteria this tendency may be reversed. Other visual field abnormalities, including spiral,

helical or star-shaped fields are also important in hysteria.<sup>(6,7)</sup>

Schlaegel and Quilala<sup>(8)</sup> pointed out that the size of the tubular fields were constant in hysteria on successive examinations. Yasuna<sup>(9)</sup> found that the fields of those with hysteria were constricted to 5 to 35 degrees on the tangent screen and marked by very steep slope margins.<sup>(10)</sup> Our patient also had good reproducibility of results after our procedures. On the other hand, a poor reproducibility in visual field may be seen in patients with malingering. The hysterical patient believes in the illness and cooperates with even the most rigorous examination. The malingeringer is afraid to be examined, and does everything possible to avoid examination and thus discovery. In general, the hysterical visual field may remain surprisingly constant in size, shape and margin steepness from one examination to the next. The fields of malingeringers, however, can change dramatically over short periods of time.

Barris et al.<sup>(11)</sup> reviewed 45 patients diagnosed with visual field or visual acuity losses secondary to hysteria. Thirty-three percent of these patients had visual field defects only, 62% had both visual field defects and visual acuity defects, and 5% had only visual acuity defects. After organic disease was ruled out, all were given a timetable for recovery, 78% of these patients showed improvement or were normal.

The long-term follow-up and prognosis of hysterical visual impairment have been reported.<sup>(12)</sup> Sletteberg et al.<sup>(13)</sup> reported most patients felt that their visual function was now good. The younger patients appeared to have a better prognosis than the older ones.<sup>(11)</sup> The various prognostic reports available show a span from almost immediate cures to those going on for many years. Some cases had some sort of functional disability after physical cure but usually recovered in a matter of days or weeks. However, some cases continued for years. Although patients with functional visual symptoms do not have a resectable lesion or a treatable infection, they have a real problem. We suggest that ophthalmologists should treat patients with psychogenic symptoms, using suggestion, patience and reassurance.

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## 歇斯底里症之功能性視覺障礙

賴慧群 林耕國 楊孟玲 陳賢立

23 歲男性，主訴已有三年之久完全無法看到周邊景物，及所見事物均呈紫色。檢查病患結果為：兩眼視力正常，皆為 1.0。眼壓、瞳孔對光反射、眼前葉及眼底都正常，兩眼辨色力正常，無斜視。病患亦否認有眼痛、頭部外傷、癲癇、高血壓及糖尿病等病史，無特殊家族史。Goldmann 視野計檢查結果呈現：只有中央 10 度的縮小視野。作 Tangent screen 檢查，在變換各種大小及顏色不同的視標，結果顯現為縮小的管狀視野，其形狀為柱狀體而非錐狀體。觀察病人對其病情及預後並不特別關心，且病患的工作壓力頗大。綜合上述，此為功能性而非器質性之視野障礙，我們診斷是歇斯底里症。歇斯底里症又稱為轉化症，是因個人心理不安之衝動和慾望，經轉化作用表現在身體的障礙。在使用視野檢查以診斷歇斯底里症時，需預先排除器質性疾病，並與詐病作鑑別診斷。而 Tangent screen 視野檢查，在鑑別器質性及精神性病因而方面，扮演重要角色。歇斯底里症這類病人的視覺障礙為縮小的管狀視野，通常病人在其所能見的視野之內視力正常，超過此範圍之外則全盲。到目前為止，仍無合理及肯定之學說證據來解釋，歇斯底里症為什麼會產生周圍全盲的管狀視野。醫師在面對這些病人時，需要給予支持、信心，治療上以溫和地建議方式，耐心地對待病人。(長庚醫誌 2007;30:87-91)

**關鍵詞：**歇斯底里症，Goldmann 視野計，Tangent screen 視野檢查，管狀視野。

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