

NOTES, CASES, INSTRUMENTS

A STUDY OF TUBULAR AND SPIRAL CENTRAL FIELDS IN HYSTERA*

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Concentrically contracted (or tubular) visual fields are variously regarded as symptomatic of hysteria. Ford¹, May², and Tassman³ have listed such fields as at least suggestive of hysteria. Tasuna⁴ presented 15 cases of hysterical amblyopia, 14 of which exhibited tubular field and Halpern⁵ reported 15 cases of hysterical amblyopia in which the field tracings were usually tubular. May suggested that the spiral field might be included here. In such cases, progressive contraction is noted *during* examination. Beren and Zuckerman⁶ listed spiral fields as being due to fatigue or functional causes, while Peter⁷ and Traquair⁸; were of the opinion that spiral fields occur in neurasthenia rather than in hysteria. Discussion with, medial and psycho logic colleagues mirrored this variation in opinion. The present study was undertaken to contribute further data to the subject.

The normal central field⁹ as tested on a tangent screen at 750 mm. with a 1 mm. white test object extends nasally 26 degrees; temporally, 33 degrees; superiorly, 26 degrees; and inferiorly, 28 degrees. Tubular fields are concentrically contracted with the same isopter distance in all meridians. Their extent is variously estimated up to about 25 degrees. The criterion used in this study was concentric contraction to 15 degrees or less from the fixation point as determined with the tangent screen under the conditions described in the opening sentence of this paragraph.

Of the 193 unselected school children examined, 9 percent exhibited tubular central fields. The median age of these pupils was 9 years, 11 months. The median extent of their tubular fields was 9 degrees, with Q1, 7 degrees, and Q3 10 degrees. The tubular fields chartings exhibited no marked variation with changes in the test distance as normal fields tend to do. One

¹ . Ford, Frank R. Diseases of the Nervous System in Infancy, Childhood, and Adolescence. Springfield, III., Charles C Thomas, 1944.

² May, Charles H. Manual of the Diseases of the Eye. Baltimore, William Wood & Co., 1941

³ Tassman, L S. The Eye Manifestations of Internal Diseases.. St. Louis, C. V. Mosby Co., 1946

⁴ Yasuna, Elton R. Hysterical amblyopia. Amer. Jour. Opth., 1946, v. 29, May, p. 570

⁵ Halpern, H. J. Hysterical amblyopia: Report of Cases. Bull. U. S. Army Med. Dept., 1944, No. 72. . January

⁶ . Berens, Conrad, and Zuckerman, Joshua. Diagnostic Examination of the Eye. Philadelphia, J. B. Lippincott Co., 1946.

⁷ Peter, L. C. Principles and Practice of Perimetry. Philadelphia, Lea & Febiger, 1931.

⁸ Traquair, H. M. An Introduction to Clinical Perimetry. SL Louis, C. V. Mosby Co.. 1940

⁹ . See reference No. 6.

child presented a spiral field but displayed no other evidence of hysteria or neurasthenia.

Forty-four percent of the cases with tubular central fields exhibited amblyopia sufficient to reduce visual acuity to 20/30 or less while 11 percent showed amblyopia with visual acuity of 20/150 or less. Eighty-three percent of the tubular, central-field cases were failing in their school work in one or more subjects. Hysteria was suspected in 77 percent of the cases, and a positive diagnosis of hysteria was made in 33 percent; a provisional diagnosis, in 44 percent. Twenty-three percent of the cases exhibited no other symptom or sign of hysteria.

One of the cases presented a confused picture. This patient was failing in school, exhibited signs of hysteria, including a moderate amblyopia and tubular central fields, but he also had a concurrent illness which might have caused either or both visual impairment and central-field restriction. Unlike the others this patient's field returned to normal very slowly over a period of 14 months, during which time he received remedial teaching as well as therapy for his concurrent illness. It is impossible to determine which condition was responsible for the tubular central fields in this particular case.

Forty-four percent of the tubular central-field cases were rechecked at various intervals averaging 12 months in length. All exhibited central fields of normal size and shape when rechecked except for the single case with concurrent disease.

This study supports the contentions that: (1) tubular central fields occur frequently but not necessarily always in cases of hysteria; and (2) tubular central fields and amblyopia together are frequent but not invariable manifestations of that condition. It is my opinion that both these manifestations when taken together are a more reliable indication of possible hysteria than either one taken alone, since there are diseases which can influence either central fields or visual acuity in such a way as to confuse the picture beyond reliable interpretation. Therefore, when visual acuity measurements and central-field chartings are used in examinations for hysteria, a diagnosis should not be made on the mere presence of either or both of these conditions, although the demonstration of either or both should suggest the possibility of the presence of hysteria.

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