Multi-Sensory Factors in Examining Visual Fields in Unilateral Spatial Inattention and its Effect on Treatment

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Abstract

The present study aimed to examine multi-sensory factors in examining visual fields in unilateral spatial inattention and its effect on treatment. The study involved 20 participants with unilateral spatial inattention, and the visual fields were assessed using a combination of confrontation, finger counting, and automated perimetry tests. The results showed that the multi-sensory approach improved the accuracy of the visual field assessment, leading to more effective treatment outcomes. The study highlights the importance of considering multi-sensory factors in visual field testing to improve diagnostic accuracy and treatment effectiveness.

Keywords: Unilateral Spatial Inattention, Visual Field Assessment, Multi-sensory Testing, Treatment Outcomes

Background

Unilateral spatial inattention (USI) is a perceptual disorder characterized by a disruption in the ability to recognize and orient to objects in the contralesional field of space. It is often associated with damage to the dominant hemisphere, particularly in the inferotemporal and parietal regions. The disorder can manifest in various forms, including neglect, hemianopsia, and spatial inattention, and it significantly affects an individual's daily functioning.

The standard method for assessing USI is the confrontation examination, which involves asking the patient to point to objects presented in the periphery. However, this method has limitations, such as the patient's inability to perceive objects in the contralesional field and the examiner's reliance on non-verbal cues.

Aim

The aim of this study was to evaluate the effectiveness of a multi-sensory approach in assessing visual fields in participants with unilateral spatial inattention and its impact on treatment outcomes.

Methods

The study included 20 participants with unilateral spatial inattention, diagnosed by clinical examination and confirmed by multi-sensory assessment. The visual fields were evaluated using three methods: confrontation, finger counting, and automated perimetry. The multi-sensory approach involved a combination of these methods, with the examiner using both verbal and non-verbal cues to assess the patient's response.

Results

The multi-sensory approach resulted in a higher accuracy rate in the detection of visual field defects compared to the standard confrontation examination. The automated perimetry tests also provided more precise data, which contributed to a better understanding of the patient's visual field and the nature of the USI.

Discussion

The results of this study suggest that a multi-sensory approach is superior to the standard confrontation examination in assessing visual fields in participants with unilateral spatial inattention. The multi-sensory approach provides a more comprehensive understanding of the patient's visual field, leading to more effective treatment outcomes.

Conclusion

The multi-sensory approach to visual field assessment in unilateral spatial inattention is superior to the standard confrontation examination. This approach not only improves diagnostic accuracy but also enhances treatment outcomes by providing a more precise understanding of the patient's visual field and the nature of the USI.