

Mirror-touch synesthesia in schizophrenia, a pathological condition?

Sinestesia espelho-toque em esquizofrenia, uma condição patológica?

La sinestesia tacto-espejo en la esquizofrenia, ¿una condición patológica?

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Abstract

Introduction: The mirror-touch synesthesia is a condition where a touch perception in another person's body induces the person who is observed to feel being touched in the same way. **Case report:** A single 22-year-old man came to the medical appointment in a private psychiatric clinic. Since his adolescence, he refers to auditive hallucinations, pseudo-hallucinations, frequent persecutory delusions, sonorization and insertion of the thought, and synesthesia. Among them it was reported mirror-touch synesthesia, anhedonia, and abulia. The criteria for paranoid schizophrenia were achieved during the examination. **Discussion:** Some evidence

suggests that schizotypy may be associated with mirror-touch synesthesia.

Conclusion: Scientific articles that demonstrate mirror-touch synesthesia as a part of pathology were not found.

Keywords: mirror neurons, mirror-touch synesthesia, psychiatry, psychopathology, schizophrenia, synesthesia

Resumo

Introdução: A sinestesia espelho-toque é uma condição em que uma percepção de toque no corpo de outra pessoa induz a pessoa observada a sentir-se tocada da mesma maneira. **Relato do caso:** Um homem solteiro de 22 anos veio à consulta médica em uma clínica psiquiátrica privada. Desde a adolescência, refere alucinações auditivas, pseudo-alucinações, delírios persecutórios frequentes, sonorização e inserção do pensamento e sinestesia. Entre eles foram relatados sinestesia espelho-toque, anedonia e abulia. Os critérios para esquizofrenia paranóide foram alcançados durante o exame. **Discussão:** Algumas evidências sugerem que a esquizotipia pode estar associada à sinestesia espelho-toque. **Conclusão:** Não foram encontrados artigos científicos que demonstrem que sinestesia espelho-toque faça parte de uma patologia.

Palavras-Chave: neurônios espelho, sinestesia espelho-toque, psiquiatria, psicopatologia, esquizofrenia, sinestesia

Resumen

Introducción: La sinestesia tacto-espejo es una condición en la que la percepción del tacto en el cuerpo de otra persona induce a la persona observada a sentirse tocada de la misma manera. **Informe de un caso:** Un hombre soltero de 22 años acudió a una consulta médica en una clínica psiquiátrica privada. Desde la adolescencia, refiere alucinaciones auditivas, pseudoalucinaciones, frecuentes delirios persecutorios, inserción de sonidos y pensamientos y sinestesia. Entre ellos, se informó de sinestesia tacto-espejo, anhedonia y abulia. Los criterios de esquizofrenia paranoide se cumplieron durante el examen. **Discusión:** Algunas pruebas sugieren que la esquizotipia puede estar asociada a la sinestesia tacto-espejo. **Conclusión:** No se ha encontrado ningún artículo científico que demuestre que la sinestesia tacto-espejo forme parte de una patología.

Palabras clave: neuronas espejo, sinestesia tacto-espejo, psiquiatria, psicopatología, esquizofrenia, sinestesia.

Introduction

2 *Debates em Psiquiatria, Rio de Janeiro, 2022;12:1-6*
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The mirror-touch synesthesia (MTS), first described in 2005 by Blakemore et al. [1], is a condition where a touch perception in another person's body induces the person who is observed to feel being touched in the same way.

The investigation etiology put forward two theories, which try to explain it from the notions of hyperactivity in the frontal-parietal system of motor mirror neurons, with premature sensorimotor activation to specific stimuli, and the damaged representation in the parietal-temporal connection and the medial prefrontal cortex [2, 3].

The diagnosis is exclusively clinical, and the condition is self-reported, reaching 1.6% of the population in general [2, 3].

Schizophrenia is characterized by delirium, hallucination, coarse disorganized speech, disorganized or catatonic behavior, and negative symptoms. Synesthesia is one of the psychopathological changes that may be present in schizophrenia [4].

Case report

A single 22-year-old man came to the medical appointment in a private psychiatric clinic in Porto Alegre, RS, Brazil, brought by your parents because of his suicidal risk. Two years ago, the patient sought psychological assistance to perform a vocational test when he started weekly psychotherapy treatment because of his depressive, anxious and phobic symptoms. After one year, he was diagnosed with Schizoid Personality Disorder.

The patient refers to memories since he was seven years old when he preferred to stay alone, without interactions with classmates or friends. This behavior evolved into isolation in adulthood.

Since his adolescence, he refers to auditive hallucinations, pseudo-hallucinations, frequent persecutory delusions, sonorization and insertion of the thought, and synesthesia. Among them it was reported mirror-touch synesthesia, anhedonia, and abulia.

In addition, the patient presented a historical usage of psychoactive substances since he was 15. He is a smoker, used several antidepressants, and interrupted university studies.

During the initial evaluation, the patient showed himself with a careless appearance, drawing attention to the yellow spots on the ends of the fingers.

The criteria for paranoid schizophrenia according to Diagnostic and Statistical Manual of Mental Disorders Fifth Edition ([DSM V](#)) were achieved during the examination.

The biochemistry examinations and RM skull did not present any alterations.

Initially, it was prescribed Olanzapine 2.5 mg/day, associated with psychotherapy and family management. After 16 weeks of using Olanzapine 25 mg/day, the medication was replaced with 20 mg of Lurasidone up to 160 mg/day for 16 weeks due to the persistence of positive and negative symptoms, assessed by the scores on the Brief Psychiatric Rating Scale – Anchored in addition to metabolic changes. The drug substitution did not achieve a significant clinical response. In the face of refractoriness, the antipsychotic was replaced by clozapine.

Nowadays, he is using Clozapine 700 mg/day + Topiramate 200 mg/day + Aripiprazole 20 mg/day, showing remission of auditive hallucinations, persecutory delusions, mirror-touch synesthesia, and improvement of negative symptoms. His functionality was gradually recovered, mainly dealing with personal care, returning to studies, beginning daily formal work, and better sociability.

Discussion

Several mental disorders present themselves with hallucinations, such as schizophrenia [4]. However, some of these symptoms, such as hallucinations and delusions, may indicate other phenomena, such as synesthesia.

The synesthesia and the hallucinations are subjective conditions beyond the control of the one who presents them. The MTS experience differs from hallucination mainly because it occurs in a secondary way to visual stimuli. On the other hand, hallucinations do not present external stimuli [5]. Some evidence suggests that schizotypy may be associated with MTS.

Conclusion: Scientific articles that demonstrate MST as a part of pathology were not found.

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