



# Coexistent Hemifacial Dystonia and Bell's Palsy in a Psychiatric Patient: a Case Report

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## Abstract

Facial dystonia and peripheral facial nerve (Bell's) palsy are essentially different in their etiology and pathogenesis. Combined facial dystonia and Bell's palsy coexisting in the same patient have not been described. Presenting this case we used clinical examination, MRI scan, videotaping of the patient, and chart review. We present a 36-year-old psychiatric patient with simultaneous, bilateral disorders of the face: hemifacial dystonia on one side and peripheral facial nerve on the other. Structural MRI brain imaging was unremarkable except for inflammatory changes within the right facial nerve. At the height of her disorder, the patient's attention was so focused on hemifacial dystonia that she did not notice the contralateral Bell's palsy. Over the next 12 months, her hemifacial dystonia significantly improved under the treatment of neuroleptic, antidepressant, and botulinum toxin injections. Right Bell's palsy regressed spontaneously with residual synkinesis. In the same patient, neuropsychiatric movement disorders may be unrelated to each other. In such a situation, a more obvious disorder should not distract attention and complicate accurate diagnoses despite misdirecting complaints of the patient.

**Keywords** Facial nerve palsy · Dystonia · tardive · psychogenic · Magnetic resonance imaging (MRI) · Movement disorders · Psychiatry

## Introduction

Both neurological and psychiatric diseases can affect facial muscles. Some of these diseases can also lead to contractions or weakness of mimic muscles. In addition, patients with psychiatric diseases may have an unusual variety of facial disorders including psychogenic, drug-induced/tardive, or idiopathic Bell's palsy [1].

Herein, we present a case report involving a patient presenting with simultaneous, bilateral disorders of the face: hemifacial dystonia on one side and peripheral facial nerve (Bell's) palsy on the other.

## Case Presentation

A 36-year-old female paranoid schizophrenic was seen over 2 months in the psychiatric outpatient clinic and treated with slow-release 3-mg paliperidone tablets. Due to a misunderstanding of her psychiatrist's instructions, the patient stopped the medication and, 2 days later, presented at the hospital with complaints of persistent pronounced muscle spasms in her left cheek together with lifting and curvature of the lips and speech and eating difficulties. Diagnosed with psychogenic or tardive facial dystonia, possibly related to the discontinuation of paliperidone, her psychiatrist resumed neuroleptic medication (olanzapine 5 mg q.d.), which failed to lead to any improvement, but did not cause any side effects.

Following a neurological examination, a subtle right facial nerve palsy with the involvement of both the upper and lower facial muscles was identified in addition to the pronounced dystonia in the left half of her face. The weakness of the right orbicularis oculi muscle was observed along with a widening of the palpebral fissure, incomplete eye closure, weak blinking, and loss of the nasolabial fold, which together indirectly accentuated the facial asymmetry ([video segment](#)).

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When looking in the mirror, the patient failed to notice the paresis of her right facial muscles, choosing rather to focus on the spasm of her left side. She had no complaint of facial pain, conjunctivitis, hyperacusis, or ageusia.

A brain MRI confirmed enhanced inflammation of the right facial nerve (Fig. 1) and an unrelated 5-mm extradural aneurysm of the ophthalmic branch of the left carotid artery was also noted as an incidental finding. Other neurological and laboratory examinations including blood and CSF analyses were normal.

After consultation with the psychiatrist, it was decided that initiation of steroid treatment would not be appropriate due to the possible exacerbation of her psychiatric symptoms.

Following discharge, the patient continued on neuroleptics and began anti-depressive treatment. The hemifacial dystonia significantly improved after treatment with onabotulinum (four sessions of 20–30 U Botox every 3 months) without any adverse effects from injections.

Psychogenic dystonia usually appears suddenly, characterized by non-patterned tonic movements often in the lower mimic muscles. It varies in intensity and frequency and can be related to stress [1].

Discontinuation of paliperidone can also provoke withdrawal-emergent dystonia [2]. Tardive disorders including those caused by paliperidone discontinuation are usually irregular, tend to affect the oro-facial region bilaterally, and can extend to nearby parts of the body or generalize [3, 4]. In up to a quarter of all cases of peripheral facial nerve palsy, a non-

idiopathic etiology deriving from infection, neoplasia, autoimmune, or vascular brain diseases can be identified [5]. In the case of our patient, neither an MRI scan nor any other workup including CSF data confirmed any of the abovementioned etiologies and we therefore believe that we witnessed simultaneously distinct neurological disorders on the right and left halves of her face.

## Conclusion

In the same patient, neuropsychiatric movement disorders may be unrelated to each other. A more obvious disorder can distract attention and complicate the diagnosis of a less noticeable abnormality. In this case, the diagnosis was further impeded by the misdirected complaints of the patient.

**Supplementary Information** The online version contains supplementary material available at <https://doi.org/10.1007/s42399-021-00838-y>.

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**Availability of Data and Material** Not applicable.

**Code Availability** Not applicable.

**Authors' Contributions** Y.B. contributed to the conception, execution, design, and preparation of the manuscript. A.M. contributed to the design and review of the manuscript. R.G. contributed to the conception, execution, and review of the manuscript

## Declarations

**Ethics Approval** All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. The authors confirm that the approval of an institutional review board was not required for this work.

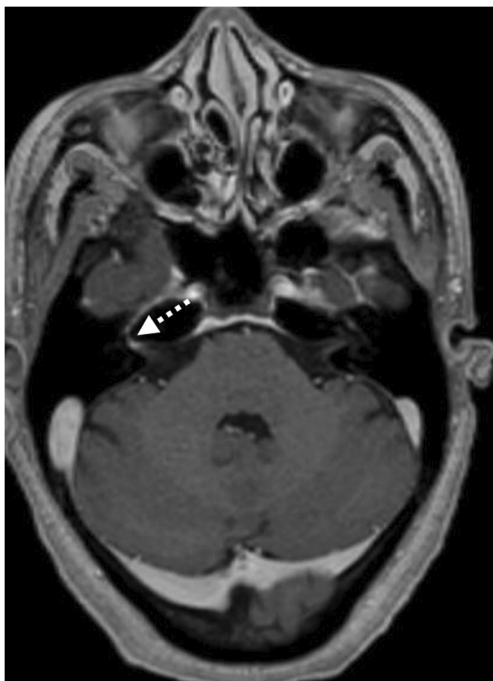
**Consent to Participate** The authors obtained written informed consent to participate from the patient.

**Consent for Publication** The authors obtained written informed consent from the patient to publish her data.

**Conflict of Interest** The authors declare no conflict of interest.

## References

1. Baizabal-Carvallo JF, Jankovic J. Distinguishing features of psychogenic (functional) versus organic hemifacial spasm. *J Neurol*. 2017;264:359–63. <https://doi.org/10.1007/s00415-016-8356-0>.
2. Fernandez HH, Friedman JH. Classification and treatment of tardive syndromes. *Neurologist*. 2003;9:16–27. <https://doi.org/10.1097/01.nrl.0000038585.58012.97>.
3. Omer HM, Thompson AD. The importance of clinical observation: a case of subtle tardive dyskinesia with paliperidone palmitate. *Aust N*



**Fig. 1** Axial T1 MRI with gadolinium, showing linear enhancement along the right facial nerve in the distal internal auditory canal, the geniculate ganglion, and the proximal tympanic segment

- Z J Psychiatry. 2018;52:496–7. <https://doi.org/10.1177/0004867417750758>.
4. Tseng CC, Hu LY, Liu ME, Yang AC, Shen CC, Tsai SJ. Bidirectional association between Bell's palsy and anxiety disorders: a nationwide population-based retrospective cohort study. *J Affect Disord*. 2017;215:269–73. <https://doi.org/10.1016/j.jad.2017.03.051>.
  5. Zimmermann J, Jesse S, Kassubek J, Pinkhardt E, Ludolph AC. Differential diagnosis of peripheral facial nerve palsy: a retrospective clinical, MRI and CSF-based study. *J Neurol*. 2019;266:2488–94. <https://doi.org/10.1007/s00415-019-09387-w>.

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