

# Psychiatric Disorders in Prader-Willi Syndrome: a Case Report about Psychotic Symptoms

CASE REPORT

Marta Herrera Durán<sup>1</sup>, Carlos Gómez Sánchez La-Fuente<sup>2</sup>,  
Rocío Reina González<sup>3</sup>

- 1 Médico Psiquiatra. Hospital Clínico Universitario. Málaga.
- 2 Residente de Psiquiatría, Hospital Clínico Universitario, Málaga.
- 3 Residente de Medicina de familia, Hospital Regional Universitario Carlos Haya, Málaga.

## Abstract

**Background:** Psychiatric symptoms are prevalent in patients with Prader-Willi syndrome (PWS), mainly behaviour disorders (temper tantrums and stubbornness) and manipulative behaviour, obsessive-compulsive characteristics in relation with food. True psychosis is evident in young adulthood in approximately 5-10% of patients.

**Aim & Objectives:** Review of psychotic symptoms in patients with a diagnosis of PWS to purpose of a case.

**Methods/Study Design:** A PWS case report with psychotic symptoms treated with Aripiprazole.

**Results/Findings:** PWS patients have an increased risk of psychotic disorder or affective illness with a psychotic component, especially young adult patients and those with the maternal uniparental disomy as opposed to paternal deletion.

**Conclusion:** Behavioural and psychiatric problems interfere the most with quality of life in adulthood. These should be detected early and treated appropriately with parental education and psychotropic medication if it was necessary. Serotonin agonists have been the most successful in reducing temper outbursts and improving compulsivity. Psychosis is treated in a standard manner.

## Contact information:

Marta Herrera Durán.

**Address:** C/ Jalón 31 Blq 10 4A, Málaga, Málaga 29004, Spain.

✉ herreraduran@hotmail.com

## Keywords

Prader-Willi; Psychotic symptoms; Hallucinations; Behaviour disorders; Aripiprazole

Prader-Willi syndrome (PWS) is a complex neurodevelopmental genetic disorder due to paternal loss of imprinted genes on chromosome 15 and characterized by a range of mental and physical findings.

The features of PWS were first documented in an adolescent female by J. Langdon Down in 1887, but the syndrome went unrecognized until 1956 when Prader, Labhart, and Willi reported nine individuals with similar clinical findings.

The incidence is approximately 1/10,000 to 25,000 live births and it occurs in both sexes and all races.

PWS is caused by lack of expression of genes on the paternally inherited chromosome 15q11.2-q13 region. There are three main genetic subtypes in PWS: paternal 15q11-q13 deletion (65-75 % of cases), maternal uniparental disomy 15 (20-30 % of cases), and imprinting defect (1-3 %).

The main phenotypic features include intrauterine growth retardation, neonatal hypotonia and failure to thrive during infancy. Clinical manifestations change with age, and other features such as hyperphagia with food seeking, usually 2 to 3 years old, and progressive obesity, which is related to complications such as cardiopulmonary failure, sleep apnea, hypertension and diabetes mellitus type 2. Short stature, hypogonadism, developmental delay, cognitive disability and behavioural problems become evident.

In the Prader-Willi Syndrome the psychiatric symptoms are fundamentally behaviour disorders and obsessive-compulsive symptoms in relation with food.

A characteristic behavioural profile becomes evident in early childhood, with temper tantrums, stubbornness, controlling and manipulative behaviour, obsessive-compulsive characteristics, and difficulty with change in routine. Lying, stealing, and aggressive behaviour are common.

In addition to the syndrome's characteristic hyperphagia and food seeking, individuals with Prader-Willi syndrome also have increased risks of nonfood, compulsive behaviours. These include skin picking, which is highly prevalent, as well as more variable rates of hoarding, redoing and concerns with symmetry, exactness, cleanliness, ordering and arranging.

They also have an increased risk of psychotic disorder or affective illness with a psychotic component, especially young adult patients and those with the maternal uniparental disomy as opposed to paternal deletion. True psychosis is evident in young adulthood in approximately 5-10% of patients. Behavioural and psychiatric problems interfere the most with quality of life in adulthood.

## Clinical Case

20-year-old woman. Diagnosed with Prader-Willi syndrome with 2-year-old, mother subtype. It presents phenotype corresponding to this syndrome, with obesity, low size, almond-shaped eyes, small head, thin upper lip and small hands and feet. Menarche with 17 years, presented delay in development of secondary sex characteristics. At the age of fifteen was diagnosed with Diabetes Mellitus type II, being treated with anti-diabetic oral since then. It has an IQ boundary, with test of WAIS 65.

Concerned parents described, from age 3, she was a nervous and capricious child with frequent temper tantrums if they contradict her. Presence of hyperphagia with obsessive thoughts and excessive preoccupation with food, search for it and even history of small thefts in supermarkets. She has daytime sleepiness, tending to stay asleep during the day, basically if she takes an activity that she finds boring. With 18 years she initiates tracking in Mental Health by presenting clinic consistent in lability and emotional instability that responds favourably to treatment with fluoxetine 20 mg per day.

Reason for consulting: in the last three weeks she is more anxious and nervous than usual. Sometimes she talks about any inconsistencies and she is scared. She has also a noticeable decrease in the usual hours of sleep in her, not sleeping during the day and presenting conciliation insomnia at night. She refuses to attend occupational day centre, which assists for 5 years.

Psychopathological examination found that the patient has vague and type discriminatory, auditory hallucinations (call her silly and useless), and that this makes her display suspicious and nervous with her surroundings, even with her parents.

It is guideline treatment with 5 mg Aripiprazole per day, plus lorazepam 1 mg every 12 hours (the latter is phased out at 10 days to quit), obtaining remission of psychopathology in 10 days. Currently she maintains such treatment for six months.

The choice of antipsychotic is made according to the organic pathologies of the patient (obesity and type II diabetes), in order to avoid to worsen them with other psychoactive drugs of worse metabolic profile.

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