



## Pica in an Adolescent with Attention Deficit Hyperactivity Disorder responsive to Methylphenidate

### Le méthylphénidate comme traitement d'un pica chez un adolescent avec hyperactivité déficit de l'attention

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#### RÉSUMÉ

Nous présentons le cas d'un garçon âgé de 12 ans chez qui les diagnostics de Pica et de TDAH (type combiné) selon les critères du DSM-5 ont été retenus. Un diagnostic antérieur de trouble de l'attachement désinhibé a également été retenu. Nous avons prescrit du méthylphénidate 40 mg par jour. Les symptômes du TDAH et du pica se sont améliorés en 3 semaines avec absence de toute récurrence durant le suivi.

**Mots clés:** Impulsivité, Méthylphénidate, Pica

#### SUMMARY

We report the case of a boy 12-years old diagnosed with Pica and ADHD (combined type) according to DSM-5 criteria. A past diagnosis of disinhibited attachment disorder was also retained. Methylphenidate 40 mg daily was prescribed. The ADHD and pica symptoms improved within 3 weeks. The scholar results improved. The patient didn't engage in any pica behavior during the followship

**Key words:** Impulsivity, methylphenidate, Pica

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## INTRODUCTION

Pica is defined as the persistent eating of nonnutritive substances for a period of at least one month in a developmentally inappropriate and culturally unacceptable manner. Its prevalence is not widely known and its forms are variable. Its etiologies are multiple such as mental retardation, psychotic disorders, sickle cell diseases or nutritional deficiencies (1, 2).

We report a 12-year-old boy with pica and Attention Deficit Hyperactivity Disorder (ADHD). The patient was successfully treated with methylphenidate.

## REPORTED CASE

A 12-years-old boy was referred to our outpatient department for eating clothes for more than 6 years. He was attending the middle school with average scholar results. The patient reported that he used to eat and to chew many nonnutritive substances. This habit began gradually. At first, it concerned clothes, plastic of headphones and mouse wires, the collars, and then plastic caps and finally his fingers' skin. He reported this habit as involuntary happening when he is distracted.

Mother and son reported that, since early childhood, he had symptoms of inattention, impulsivity and hyperactivity. The psychiatric examination did not reveal any obsessive, compulsive, anxiety or depressive symptoms. A personal history of maternal deprivation was reported by the mother. There was no history of pica or other psychiatric disorders among his family members. The Test of Nonverbal Intelligence (TONI-2) revealed above-average intelligence. His medical history was insignificant. His growth and development was normal. Laboratory examinations including complete blood count, serum ferritin, zinc, iron, vitamin B12 and folate levels, and liver, thyroid and renal function tests were normal.

We diagnosed Pica and ADHD (combined type) according to DSM-5 criteria (3). A past diagnosis of disinhibited attachment disorder was also retained. Methylphenidate 40 mg daily was prescribed. His ADHD and pica symptoms improved within 3 weeks. The scholar results improved. The patient didn't engage in any pica behavior during three months.

## DISCUSSION

ADHD is a disorder associating attention deficit, hyperactive and impulsive behaviors (4). It can be associated to different psychiatric disorders like dyslexia, depression or conduct disorders. But ADHD and pica comorbidity was rarely described in the literature before. Only two cases were reported (5, 6).

There has been no suggested link between pica and ADHD. However like it was remarked by Hergüner et Hergüner (6), both have impulsivity as a common point. In addition, the dopaminergic system dysfunction can explain the association of the two diagnosis like for the association of ADHD with obesity and bulimia nervosa (6).

In our case, methylphenidate was efficient on pica like in the two others studies (5,6). Or stimulant reduce impulsivity and increase dopamine levels in the brain (7). Another medication was found to be efficient on pica : the bupropion, a dopamine reuptake inhibitor (8). We can conclude that increasing dopamine levels in the brain decrease pica.

In our work, we report a stability of methylphenidate effect for three months. In the others studies, the improvement of the eating disorder was maintained for six months in a case (6) and for a year for the other case (5).

Further researchs are needed to study the stability of the methylphenidate effect on pica over the time and the absence of a rebound effect.

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