



## A Case Report of a Female Patient with Pica

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### Abstract

Pica is defined as the repeated and excessive consumption of non-nutritive, non-food substances over the course of 1 month. It can occur secondary to nutritional deficiency or as a form of comfort in people with psychosocial stressors. It is considered as a culturally approved practice and is not always pathological. Here we are reporting a case of a 35 year old female presenting with consumption of cardboard pieces. She was diagnosed to have Xylophagia which is a form of Pica secondary to depression.

**Keywords:** Pica; Depression; Xylophagia; Non-food substance

### Introduction

The central element of Pica is the repeated ingestion of non-nutritive, non-food substance over the course of 1 month, resulting in the need for specialized clinical attention. This type of non-food items vary depending on the patients' age and the availability of different materials. Examples of non-food substances are not limited to but include soil, hair, paper and soap [1].

Pica and rumination disorders were moved from the Feeding disorders of Infancy and Early Childhood section of DSM-IV [2] to the Feeding and Eating disorders chapter of DSM-5 [3]. The prevalence of pica is difficult to establish because of differences in definition and the reluctance of patients to admit to abnormal cravings and ingestion. An incidence of Pica greater than 50% is considered normal in children aged 18 to 36 months. Incidence of Pica is thought to decrease with age; one study has revealed that about 10% of children older than 12 years engage in Pica [4]. Pica has been related to mental and emotional disorders. Stressors such as emotional trauma, maternal deprivation and disorganized family are strongly linked to pica as a form of comfort. In a case report published in The World Journal of Biological Psychiatry, Bhatia "et al." [5] Describes a case of an adult female who had the habit of ingesting chalk only in stressful situations and was diagnosed as having Major Depressive Disorder. According to this article stressful scenarios may induce Pica in some adults and appropriate management of stress may alleviate the symptoms of Pica also [1]. Cases have also been reported in which patients with severe mental handicap have shown worsening of symptoms of Pica during depressive illness [6]. Incidence of Pica has also been linked to iron deficiency, zinc deficiency and certain co-morbid conditions like Kleine-Levin syndrome, mental retardation and schizophrenia. It has been observed in men and women of all ages and ethnicity, but is more prevalent among the lower socioeconomic classes [7]. Another rare form of Pica which has not been much reported is Xylophagia which involves the consumption of substances like paper, pencils, tree barks or other items made of wood. Although most popular form of Xylophagia is the consumption of paper, other forms have also been reported. Here we are reporting a case of Pica secondary to Depression [8].

### Case Presentation

Mrs H, a 35 year old female, Hindu by religion, married with an eight month old male baby, studied till degree, currently not working, belonging to middle socio-economic status family, with no family history and no past history of any psychiatric illness or neurodevelopmental delay. She presented to the psychiatry outpatient department with complaints of consuming paper and cardboard whenever she was alone from the past 2 months. The onset of her symptomatology was eight months into her post-partum period, was of an insidious onset and progressive nature. Every time she unpacked toys for her child, she would repeatedly smell the cardboard boxes and had an intense liking for the same. When alone at home, she felt like tasting those cardboard papers and ate a few pieces. There were no negative consequences the first time she ate a few pieces which further reinforced her interest. Gradually over the course of a week, she also started chewing on the ends of pencils and ice-cream sticks. On certain days she would end up consuming two to three A4 size sheets bit by bit. The

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fear of being caught in the act produced significant distress but when alone it would facilitate aggravated consumption. On further detailed evaluation she reported of low mood consistently for the past 2 months because she felt constrained to her home as she was unable to go for work like she used to previously. She had decreased interest in carrying out daily routine work. She reported that she would feel very tired throughout the day and doing household work was becoming laborious. Previously she used to enjoy going out with her friends and family but since the past two months she always preferred to be alone. She did not feel that it was irrational to consume the paper items and did not find it distressful. She also revealed the truth that this habit of eating cardboard and paper gave her a sense of relaxation and helped her forget her worries. Her physical examination was normal and on MSE she was well kempt and groomed, rapport was established with ease. Her mood was subjectively sad and objectively depressed. There was no thought or perceptual disturbances. Her cognitive functions were found to be normal. Hamilton Rating Scale for Depression was applied and her score was found to be 24. Complete blood count revealed Hemoglobin of 10.8 mg/dl and other blood parameters were within normal range. Urine routine examination, X-ray abdomen, Ultrasound abdomen was found to be normal.

She was diagnosed with Pica secondary to severe depression without psychotic symptoms according to ICD 10 diagnostic criteria and was started on tab Escitalopram 10 mg together with iron supplements. No significant improvement was noted after a period of two weeks. In the next follow up, patient was started on tab Fluoxetine 20 mg that was increased up to 40 mg. Psychoeducation about the nature of her illness was given to her and her family members. Patient was advised behavioral modification. Her psychosocial stressors were addressed and patient was taught relaxation techniques. Patient reported improvement in her low mood and depressive symptoms on further follow-ups in the next two weeks. Hamilton Depression Rating Scale for Depression applied after 2 weeks was found to be 11. She was abstinent from consumption of paper during this time and for the next two months. She also admitted that she is not having the desire to eat those unwanted substances anymore. She was advised for further follow-ups and educated about treatment adherence.

## Discussion

Pica is sometimes a culturally sanctioned practice and may not be pathological always. Although Pica is the most common eating disorder in individuals with developmental disabilities, in this case there was no history of any neurodevelopmental disorder. Although the etiology of Pica is unknown, more recent cases of Pica have been tied to the obsessive-compulsive spectrum disorder [9]. In this patient, there was no history to suggest obsessions as she did not find it irrational or distressful. Numerous hypotheses like psychosocial,

biochemical, cultural, socioeconomic and psychodynamic factors explain the phenomenon of Pica. Deficiencies in iron, calcium, zinc and nutrients including thiamine, niacin, Vitamins B and C have been associated with Pica in children. Pica may be benign but sometimes it may be associated with life-threatening complications [3]. Certain psychosocial stressors have been reported to be significantly associated with pica, including maternal deprivation, joint family, parental neglect, pregnancy, impoverished parent-child interaction, and disorganized family structure. In certain scenarios of ingestion of inedible substances, variable and potentially lethal complications may emerge, depending on the type and amount of material ingested. In this case the patient started the consumption of paper as a stress buster secondary to depression [10]. The fact that the consumption of paper reduced significantly when her mood symptoms improved gave the evidence that it was secondary to depression. In our patient no other adverse effects had occurred and she showed significant response with psychoeducation and anti-depressants.

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