# FEEDING AND EATING DISORDERS IN INFANCY/EARLY CHILDHOOD

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## Introduction

### DSM IV TR & V Classification

Feeding and eating disorders of infancy include;

1. **Feeding Disorder of infancy/early childhood(avoidant/restrictive food intake disorder)-**Persistent Symptoms of inadequate food intake.
2. **RUMINATION**-Recurrent regurgitation and re-chewing of food
3. **PICA**-Repeated ingestion of non-nutritive substances.

Feeding disorders portray the interaction between the parent and the chid since children depend upon caregivers and carers for feeding and provision of food.

# PICA (DSM V)

A. Persistent eating of non nutritive, non food substances (Typical substances ingested tend to vary with age and availability and might include paper, soap, cloth, hair, string, wool, soil, chalk, talcum powder, paint, gum, metal, pebbles, charcoal or coal, ash, clay, starch, or ice. The term *nonfood is included because the diagnosis* of pica does not apply to ingestion of diet products that have minimal nutritional content. There is typically no aversion to food in general.) over a period of at least 1 month.

B. The eating of nonnutritive, nonfood substances is inappropriate to the developmental level of the individual.

C. The eating behavior is not part of a culturally supported or socially normative practice.

D. If the eating behavior occurs in the context of another mental disorder (e.g., intellectual disability [intellectual developmental disorder], autism spectrum disorder, schizophrenia) or medical condition (including pregnancy), it is sufficiently severe to warrant additional clinical attention.

# Other Forms of Pica

❖Other forms of Pica include (especially in pregnant adult population);

- Geophagia (Eating of clay)
- Amylophagia (Starch eating)

# Epidemiology

- Rare disorder among children and adolescents
- More common among children with Mental Retardation (MR) (reported in up to 15% of persons with severe MR)
- Affects both sexes equivalently.

# Etiology

- None of the many theories proposed has been universally accepted.
- **Hereditary factors:** A higher than expected incidence of pica seems to occur in relatives of persons with the symptoms.
- **Nutritional Deficiencies**: especially in cravings for non-edible substances are believed to be produced by dietary insufficiencies. E.g Cravings for diet and ice is linked to deficiency in Iron and Zinc. (Remit upon admin. Of the same)
- **Parental neglect:** Theories suggest a compensatory mechanism to satisfy oral needs. (Freudian Theory)

# Diagnostic Criteria

- Consuming non-edible substances after 18months is considered abnormal. Onset is usually between 12-24 months, but incidences declines with age.
- Accessibility and child's mastery of locomotion, resultant increased independence and decreased parental supervision.
- Young children usually ingest paint, plaster, string, hair and cloth, older kids; dirt, stone, paper, animal faecal. (All non-edible).
- Clinical implications can be benign or life threatening depending on what is consumed.

# Diagnostic Criteria Cont'd

- Eating of non-nutritive substances may be developmentally. appropriate for an infant but if it persists till 5 years, it could warrant a diagnosis of pica.
- Risk factors include similar history in mother and a low socioeconomic status.
- In other cultures eating substances as clay may be a sanctioned practice which may not warrant a diagnosis but not the case here.

# Associated features supporting Diagnosis

- Although deficiencies in vitamins or minerals (e.g., zinc, iron) have been reported in some instances, often no specific biological abnormalities are found.
- Pica comes to clinical attention only following general medical complications (e.g.mechanical bowel problems; intestinal obstruction, such as that resulting from intestinal perforation; infections such as toxoplasmosis as a result of ingesting feces or dirt; poisoning from ingestion of lead-based paint).

# Prevalence

- The prevalence of pica is unclear. Among individuals with intellectual disability, the prevalence of pica appears to increase with the severity of the condition,

# Development and Course

- Onset of pica can occur in childhood, adolescence, or adulthood, although childhood onset is most commonly reported.
- Pica can occur in otherwise normally developing children, whereas in adults, it appears more likely to occur in the context of intellectual disability or other mental disorders.
- The eating of nonnutritive, nonfood substances may also manifest in pregnancy, when specific cravings (e.g., chalk or ice) might occur.
- The diagnosis of pica during pregnancy is only appropriate if such cravings lead to the ingestion of nonnutritive, nonfood substances to the extent that the eating of these substances poses potential medical risks.
- The course of the disorder can be protracted and can result in medical emergencies (e.g., intestinal obstruction, acute weight loss, poisoning). The disorder can potentially be fatal depending on substances ingested.

# Diagnostic Markers

- Abdominal flat plate radiography, ultrasound, and other scanning methods may reveal obstructions related to pica.
- Blood tests and other laboratory tests can be used to ascertain levels of poisoning or the nature of infection.

# Differential Diagnosis

- Eating of nonnutritive, nonfood substances may occur during the course of other mental disorders (e.g., autism spectrum disorder, schizophrenia) and in Kleine-Levin syndrome.

- **Anorexia nervosa. Pica can usually be distinguished from the other feeding and eating** disorders by the consumption of nonnutritive, nonfood substances. It is important to note, however, that some presentations of anorexia nervosa include ingestion of nonnutritive, nonfood substances, such as paper tissues, as a means of attempting to control appetite. In such cases, when the eating of nonnutritive, nonfood substances is primarily used as a means of weight control, anorexia nervosa should be the primary diagnosis.

# Differentia Diagnosis Con'd

- **Factitious disorder. Some individuals with factitious disorder may intentionally ingest** foreign objects as part of the pattern of falsification of physical symptoms. In such instances, there is an element of deception that is consistent with deliberate induction of injury or disease.
- **Non-suicidal self-injury and non-suicidal self-injury behaviors in personality disorders.** Some individuals may swallow potentially harmful items (e.g., pins, needles, knives) in the context of maladaptive behavior patterns associated with personality disorders or non-suicidal self-injury.

# Co-morbidity

- Disorders most commonly comorbid with pica are autism spectrum disorder and intellectual disability (intellectual developmental disorder), and to a lesser degree, schizophrenia and obsessive-compulsive disorder.
- Pica can be associated with trichotillomania (hair pulling disorder) and excoriation (skin-picking) disorder. In co-morbid presentations, the hair or skin is typically ingested.
- Pica can also be associated with avoidant/restrictive food intake disorder, particularly in individuals with a strong sensory component to their presentation.
- When an individual is known to have pica, assessment should include consideration of the possibility of gastrointestinal complications, poisoning, infection, and nutritional deficiency.

# Treatment

- No precise treatment for Pica but most approaches are aimed at educ. and behaviour modification, whilst emphasizing psychosocial, environmental, behavioural and family guidance approaches.
- 1st step is determining the cause.
- Exposure to toxic substances as lead must be eliminated, rendered inaccessible or child moved to new surrounding.
- If associated with maltreatment, such should be altered.

# Treatment Cont'd

- Behavioural Techniques that are most rapidly successful seems to be mild aversion therapy or negative reinforcement (e.g a mild electric shock, an unpleasant noise or emetic plug).
- Positive reinforcement, modeling, behavioural shaping and overcorrection treatment have also been used.
- Increasing parental attention, stimulation and emotional nurturance could yield positive results.
- Pica is negatively correlated with involvement with play mats and occurred frequently in low Socio Economic backgrounds.
- In some, addressing Zinc and Iron deficiencies has eliminated the disorder.
- Medical complications as Lead poisoning that develop secondarily to pica must be treated

# Rumination Disorder

- DSM IV TR describes the disorder as an infant's or child's repeated regurgitation and rechewing of food after a period of normal functioning-Usually one month.
- An awareness of disorder is vital so that it is correctly diagnosed to avoid unnecessary surgical procedures. Rumination-from Latin word ruminare-"to chew cud", Greek equivalent of merycism-The act of regurgitating food from the stomach into mouth, re-chewing the food, and re-swallowing it.
- The symptoms last for atleast 1 month and are severe enough to warrant clinical attention.
- Onset is usually after 3 months of age and once regurgitation occurs, food may be swallowed or spit out.

# Rumination Disorder

- Children are observed as straining to bring back the food into their mouths and appear to find the experience pleasurable.
- Failure to thrive is usually the presenting problem BUT not a necessary criterion for the disorder.
- Usually associated with gastrointestinal illness or other general medical conditions as hiatal hernia that result into esophageal reflux.
- Disorder is rare in older children, adolescents and adults.

# Diagnostic Criteria DSM V

**A.** Repeated regurgitation of food over a period of at least 1 month. Regurgitated food may be re-chewed, re-swallowed, or spit out.

B. The repeated regurgitation is not attributable to an associated gastrointestinal or other medical condition (e.g., gastroesophageal reflux, pyloric stenosis).

C. The eating disturbance does not occur exclusively during the course of anorexia nervosa, bulimia nervosa, binge-eating disorder, or avoidant/restrictive food intake disorder.

# Diagnostic Criteria DSM V

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D. If the symptoms occur in the context of another mental disorder (e.g., intellectual disability [Intellectual developmental disorder] or another neuro-developmental disorder),they are sufficiently severe to warrant additional clinical attention. they are sufficiently severe to warrant additional clinical attention.

# Epidemiology

- Rare disorder
- Common among infants between 3months to one year and among children and adults that are MR.
- More common in males, with adults maintaining a normal weight.
- No reliable data on predisposing factors, neither familial patterns is available.

# Etiology

- In Mental Retardation (MR), the disorder may be self-stimulatory behaviour.
- In the non MR, Psychodynamic theories hypothesize various disturbances in the mother-child r/ship. Mothers are immature, involved in marital conflict, and unable to give attention to the baby, resulting in insufficient emotional gratification/stimulation, making baby seek gratification from within.
- Also interpreted as the baby's attempt to recreate the feeding process and provide the gratification that the mother does not avail.
- Overstimulation and tension
- Many ruminants are shown to have gastro-esophageal reflux or hiatal hernia.
- Behaviourists assert that positive reinforcement of pleasurable self stimulation & to the attention the baby receives from others as a consequence of the disorder could be a cause.

# Diagnosis and Clinical Features

- The essential feature of rumination disorder is the repeated regurgitation of food occurring after feeding or eating over a period of at least 1 month after a period of normal functioning.
- Previously swallowed food that may be partially digested is brought up into the mouth without apparent nausea, involuntary retching, or disgust. The food may be re-chewed and then ejected from the mouth or re-swallowed.
- Regurgitation in rumination disorder should be frequent, occurring at least several times per week, typically daily.

# Diagnosis Contd

- Clinicians should rule out all physical causes of vomiting including pyloric stenosis(comes with projectile vomiting and is generally evident before 3 months of age, when rumination has its onset) and hiatal hernia, gastrointestinal congenital anomalies, infections and other medical illnesses.
- It is associated with various MR syndromes in which other eating disturbances as pica are present.
- May occur in patients with other eating disorders as Bulimia Nervosa.
- **Risk factors:** Psychosocial problems such as lack of stimulation, neglect, stressful life situations, and problems in the parent-child relationship may be predisposing factors in infants and young children.

# Course and Prognosis

- Has a high rate of spontaneous remission even without and before diagnosis.
- In infants, as well as in older individuals with intellectual disability (intellectual developmental disorder) or other neurodevelopmental disorders, the regurgitation and rumination behavior appears to have a self-soothing or self-stimulating function, similar to that of other repetitive motor behaviors such as head banging.

# Functional Consequences of Rumination Disorder

- Malnutrition secondary to repeated regurgitation may be associated with growth delay and have a negative effect on development and learning potential. Some older individuals with rumination disorder deliberately restrict their food intake because of the social undesirability of regurgitation.
- They may therefore present with weight loss or low weight.
- In older children, adolescents, and adults, social functioning is more likely to be adversely affected.

# Differential Diagnosis and Co-morbidity

**Gastrointestinal conditions. It is important to differentiate regurgitation in rumination** disorder from other conditions characterized by gastroesophageal reflux or vomiting. Conditions such as gastroparesis, pyloric stenosis, hiatal hernia, and Sandifer syndrome in infants should be ruled out by appropriate physical examinations and laboratory tests.

- **Anorexia nervosa and bulimia nervosa. Individuals with anorexia nervosa and bulimia** nervosa may also engage in regurgitation with subsequent spitting out of food as a means of disposing of ingested calories because of concerns about weight gain.

# Comorbidity

- Regurgitation with associated rumination can occur in the context of a concurrent medical condition or another mental disorder (e.g., generalized anxiety disorder).
- When the regurgitation occurs in this context, a diagnosis of rumination disorder is appropriate only when the severity of the disturbance exceeds that routinely associated with such conditions or disorders and warrants additional clinical attention.

# Treatment

- Usually combination of Education and behavioural techniques.
- Behavioural techniques as squirting lemon juice whenever it occurs can be effective.(most effective, elimination in 3-5 days).
- Evaluating mother-child relationship and guiding her.
- Withdrawal of attention whenever it occurs.
- Treatment of coexisting medical issues.
- Surgery maybe necessary for anatomical abnormalities as hiatal hernia.
- When infants are allowed to eat as much as they can, behaviour is believed to reduce.
- Improvement of child's psychological environment, increased Tender Love and Care from mother/caregiver and psychotherapy for mother or both parents.
- Medication as Reglan, Mellaril, Haldol.

# Feeding Disorder of Infancy

- DSM IV TR, it is a persistent failure to eat adequately, reflected in significant failure to gain weight or in significant weight loss over a period of one month.
- Symptoms not better accounted for by medical condition or by another mental disorder & are not caused by lack of food.
- Onset by the age of 6 years.

## Diagnostic Criteria DSM V

A. An eating or feeding disturbance (e.g., apparent lack of interest in eating or food; avoidance based on the sensory characteristics of food; concern about aversive consequences of eating) a manifested by persistent failure to meet appropriate nutritional and/or energy needs associated with one (or more) of the following:

1. Significant weight loss (or failure to achieve expected weight gain or faltering growth in children).
2. Significant nutritional deficiency.
3. Dependence on enteral feeding or oral nutritional supplements.

# Diagnostic Criteria DSM V

4. Marked interference with psychosocial functioning.

B. The disturbance is not better explained by lack of available food or by an associated culturally sanctioned practice.

C. The eating disturbance does not occur exclusively during the course of anorexia nervosa or bulimia nervosa, and there is no evidence of a disturbance in the way in which one's body weight or shape is experienced.

D. The eating disturbance is not attributable to a concurrent medical condition or not better explained by another mental disorder. When the eating disturbance occurs in the context of another condition or disorder, the severity of the eating disturbance exceeds that routinely associated with the condition or disorder and warrants additional clinical attention.

# Differential Diagnosis

- Factitious disorder or factitious disorder imposed on another.
- Schizophrenia spectrum disorders.
- Major depressive disorder.
- Obsessive-compulsive disorder.
- Anorexia nervosa.
- Specific phobia, social anxiety disorder (social phobia), and other anxiety disorders.
- Autism spectrum disorder.
- Reactive attachment disorder.
- Specific neurological/neuromuscular, structural, or congenital disorders and conditions associated with feeding difficulties.
- Other medical conditions (e.g., gastrointestinal disease, food allergies and Intolerances, occult malignancies).

# Co-morbidity Course and Prognosis

**Comorbidity:** The most commonly observed disorders comorbid with avoidant/restrictive food intake disorder are anxiety disorders, obsessive-compulsive disorder, and neurodevelopmental disorders (specifically autism spectrum disorder, attention-deficit/hyperactivity disorder, and intellectual disability [intellectual developmental disorder]).

**Course and Prognosis:** Infants exhibit disorder within 1st year of life. With early recognition and intervention, they do not fail to thrive. When it occurs later (2-3yrs) growth & development may be affected when it lasts for several months. 70% of kids who persistently refuse food in year 1 continue to have feeding problems in childhood.

# Treatment

- Evaluation of mother-child interaction during feedings.
- Identifying any factors that can be changed to promote greater ingestion.
- Mother is helped to be aware of infant's stamina for length of individual feedings, infant's biological patterns.

*Thank You!*