

Article on Lactose Intolerance and its Homoeopathic Management

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Abstract:

A person with lactose intolerance struggles to digest significant amounts of lactose due to a genetic deficiency in the enzyme lactase. Homeopathic treatment helps by stimulating the body's natural healing processes, enhancing blood circulation, and boosting metabolism.

Index Terms: Lactase Deficiency, Hypolactasia, Alactasia.

INTRODUCTION

Lactose intolerance is a condition that makes it difficult to digest lactose, a sugar found in milk and several other dairy products. It refers to a syndrome with one or more symptoms upon the consumption of food substance containing lactose sugar.

Lactose is disaccharide that is made up of glucose + galactose molecule.

Lactose is normally broken down into glucose and galactose by an enzyme called lactase, which is produced by cells in the lining of the small intestine. Lack and loss of lactase causes lactose intolerance symptoms.

SYNONYMS:

lactase deficiency, hypolactasia, alactasia.

Worldwide, around 65% of adults are affected by lactose malabsorption. Today lactose intolerance varies widely between regions and ethnic groups.

Lactose intolerance is most common among people of Jewish as well as in African countries and Arab countries.

Lactose intolerance is not an allergy because it is not an immune response but rather a sensitivity to dairy caused by deficiency of lactase enzyme.

Lactose Intolerance vs Milk Allergy	
Lactose intolerance	Milk allergy
A sensitivity	An allergy
Occurs in gastrointestinal system	Triggered by immune system
A sensitivity to milk carbohydrate (lactose)	A reaction to milk protein
Rare in young children	Generally impacts young children; may be outgrown*
Can enjoy milk and milk products with simple management strategies	Should avoid milk and milk products (unless allergy is outgrown)



DAIRY PRODUCTS THAT CONTAIN LACTOSE ARE:

- Evaporated milk
- Milk
- Ice cream
- Greek yogurt
- Condensed milk
- Cottage cheese
- Cheese
- Cream cheese
- Butter
- Whey protein powder etc....

PATHOPHYSIOLOGY

1. Milk digestion begins in acidic environment of the stomach where pepsin starts protein digestion by breaking down milk protein into smaller fragments.
2. Smaller fragments move into small intestine and the smaller fragments of proteins and fats are converted into monosaccharide, amino acid, free fatty acid and many other molecules.
3. In small intestine lactase enzyme is secreted by brush border cell and it hydrolyses lactose into glucose and galactose.
4. The smaller fragments present are absorbed from small intestine into hepatic portal vein.
5. Liver regulates distribution of the blood borne nutrients to rest of the body.
6. as undigested lactose cannot be absorbed by the intestinal epithelium it passes into large intestine.
7. In large intestine the undigested lactose produces gases like hydrogen, methane, carbon dioxide that causes gas and bloating sensation; along with gases short chain fatty acid is produced (acetate, butyrate, propionate) they stay in lumen and are not absorbed by the gut raise the osmotic pressure that attracts water into gut and further produces diarrhoea and other symptoms of lactose intolerance.

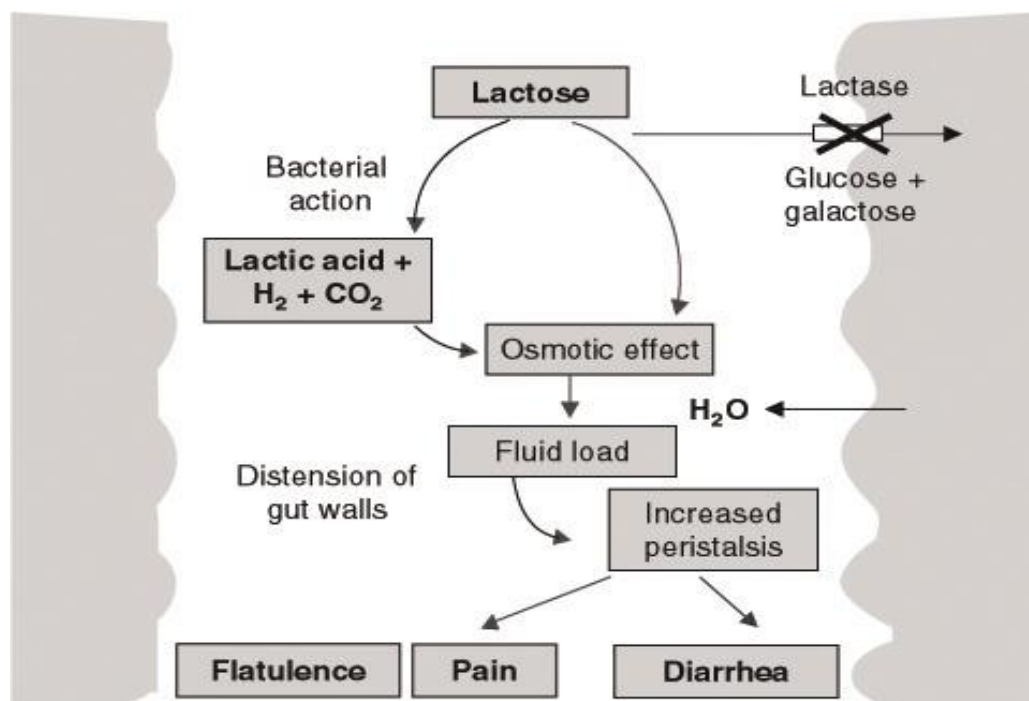
CAUSES:**1. PRIMARY LACTASE DEFICIENCY:**

Primary hypolactasia, or primary lactase deficiency, is genetic, only affects adults, and is caused by the absence of a lactase persistence allele. In individuals without the lactase persistence allele, less lactase is produced by the body over time, leading to hypolactasia in adulthood.

2. SECONDARY LACTASE DEFICIENCY:

Secondary hypolactasia or secondary lactase deficiency also known as acquired lactase deficiency is caused by any injury in the small intestine. This form of lactose intolerance can occur both to infants and adults and is generally reversible

Cause for injury to small intestine are: gastroenteritis, coeliac disease. Chron's disease, ulcerative colitis, chemotherapy, various antibiotics.

**3. CONGENITAL LACTASE DEFICIENCY:**

It is extremely rare autosomal recessive enzyme defect that prevents lactase expression from birth. It means there is complete lack of lactase. Person with congenital lactase deficiency from birth cannot digest breast milk.

SIGN AND SYMPTOMS

Symptoms of lactose intolerance appears after 30min to 2 hours. And severity of the symptoms is according to amount of lactose consumed. Normally 15g of lactose is enough to produce symptoms.

- Abdominal bloating
- Cramps
- Flatulence
- Diarrhoea
- Nausea
- Vomiting

DIAGNOSIS

1. HYDROGEN BREATH TEST:

It is most accurate lactose intolerance test, in this test after overnight fasting; in this test after overnight fasting in morning about 25 grams of lactose is ingested with water. If lactose cannot be digested and it gets fermented and produces gases like methane, hydrogen and carbon dioxide it can be detected from patient's breath by clinical gas chromatograph.

2. STOOL ACIDITY TEST:

This test can be used to diagnose lactose intolerance in infants, for whom other forms of testing are risky or impractical. The infant is given lactose to drink and if it is tolerant lactose gets absorbed from the small intestine and if the infant is intolerant of glucose than lactose reaches the colon.

The bacteria in the stool gets mixed with the lactose and cause acidic stool; stool examination shows less than 5.5 PH.

3. STOOL SUGAR CHROMATOGRAPHY:

Chromatography can be used to separate and identify undigested sugars present in faeces. Although lactose may be detected in the faeces of people with lactose intolerance, this test is not considered reliable enough to conclusively diagnose or exclude lactose intolerance.

4. GENETIC DIAGNOSTIC

Genetic tests may be useful in assessing whether a person has primary lactose intolerance.

TREATMENT

• DIETARY AVOIDANCE:

The primary way of managing the symptoms of lactose intolerance is to limit the intake of lactose to a level that can be tolerated. In individual having lactose intolerance they can also digest some amount without any active symptoms usually it is 12 grams.

There should be temporary avoidance of the dairy products or should have gluten free diet.

• MILK SUBSTITUTE:

Plant-based milks and derivatives such as soy milk, rice milk, almond milk, coconut milk, hazelnut milk, oat milk, hemp milk, macadamia nut milk, and peanut milk are inherently lactose-free. Low-lactose and lactose-free versions of foods are often available to replace dairy-based foods for those with lactose intolerance.

• LACTASE SUPPLEMENTS:

When lactose avoidance is not possible, or on occasions when a person chooses to consume such items, then enzymatic lactase supplements may be used.

• REHABILITATION THERAPY:

Regular consumption of dairy foods containing lactose can promote a colonic bacteria adaptation, enhancing a favourable microbiome, which allows people with primary lactase deficiency to diminish their intolerance and to consume more dairy foods.

HOMOEOPATHIC MANAGEMENT

- 1. AETHUSA CYNAPIUM:** the characteristic symptoms are more marked in brain and nervous system, connected with gastro-intestinal disturbance.
This remedy is widely used in Childrens during dentition, summer complaint, diarrhoea marked due to inability to digest milk.
Cannot tolerate milk in any form; it is vomited out as soon as it is swallowed, after vomiting there is exhaustion and drowsiness.
Ingestion of milk causes green colored diarrhoea that contains undigested food particles.
- 2. CALCAREA CARBONICA:** complaints after taking milk that is acidity of the digestive tract is very prominent.
There is frequent sour eructations, sour vomiting, sour stool.
Perspiration profuse and every discharge smell sour.
There is diarrhoea from milk intolerance and character of stool is white and smelling sour.
- 3. CINA:** it is specially adapted to babies who suffers from worm infection. There is great aversion to mother's milk.
Pt is very hungry and wants to eat all the time soon after full meal.
Character of stool is watery, thin, white coating containing undigested food particles with clean tongue.
Spasmodic pain in abdomen with gnawing sensation and wants to lie down on abdomen to get relief.
- 4. CHINA:** it is indicated for excessive flatulence and belching and bloating.
Inability to digest milk and dairy products with abdominal colic and flatulence getting better by bending double.
There is vomiting of undigested food, of sour mucus.
Excessive flatulence and belching which gives no relief and there is great distention of stomach and borborygmus; sensation as if stomach is full of gas and to get relief patient tries to belch but it does not give any relief.
Each food particles seems to have turned into gas.
There is agonizing pain in the stomach with pinching colic tending patient to bend double to get relief.
Diarrhoea stool loose, painless, fermentation, borborygmus in bowels with passage of offensive flatus and undigested food particles.
- 5. LAC DEFLOTRATUM:** MILK SICKNESS it is most useful and indicated remedy for those who cannot take milk and suffers from gastric trouble, headache from milk intake.
There is vomiting of undigested food, intensely acrid then bitter water like taste.
Intense throbbing headache with nausea and vomiting, blindness along with headache.
- 6. HOMARUS:** it is extracted from digestive fluid of live lobster.
Dyspepsia, sore throat and headache seems to be in combination that may be treated by this remedy.
Condition worse from milk intake; pain in stomach after taking milk; belching, itching all over body.
- 7. MAGNESIUM MURIATICUM:** there is history of indigestion and intolerance of milk. Appetite decreased and bad taste in mouth; eructations like rotten eggs.
Enlargement of liver and bloating of abdomen with yellow coating of tongue.

Characteristic of stool is hard, knotty, passes with difficulty and crumbles at verge of anus, after stool rectum feels sore and painful.

8. NATRUM CARB: there is strong aversion to milk and diarrhoea from taking milk. There is great flatulence and accumulation of gas in the abdomen.

There is ravenous hunger with sensation of emptiness in the stomach. After milk there is diarrhoea and indigestion with sudden call to stool. Stool escapes with force and noise, stool watery and a pulp like substances of orange color appears in the discharges.

9. NICCOLUM: gone empty feeling in epigastrium, without desire for food. Acute gastralgia with pain extending to shoulder.

Diarrhoea and tenesmus after milk.

10. SULPHUR: it is indicated in diarrhoea with sudden urging and has to get out of bed early in the morning.

There is weak, empty gone feeling in the abdomen about 11 am, movement in the abdomen as if of a fetus felt by the patient.

Milk causes diarrhoea early in the morning driving out of the bed as if there is lack of power in sphincter ani, involuntary and painless diarrhoea that contains undigested food particles, whitish, greenish, stool is very much acid and offensive.

Diarrhoea alternates with constipation.

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