



## Functional Disorders Of The Digestive Organs In Children Of Early Age. Intestinal Colic

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### Referat

The goal is to focus the attention of doctors in medical practice on intestinal colic, which is common in children of early age, to increase their knowledge in this area by introducing them more broadly.

The article describes intestinal colic, reveals its epidemiology, classification, etiology, pathogenetic factors, clinical appearance, diagnosis, differential diagnostics based on Roman criteria and modern recommendations, and provides dietary treatments, healing Milky mixtures and other treatments.

**Keywords:** children, functional disorders of the digestive organs, intestinal colic, diagnosis, treatment.

The next oshkozon-intestinal system disorder that is most common in children is intestinal colic (colic), which is a condition that is observed with a child's irritability, crying from pain, lasting 3 hours a day, no less than 3 times at 1 Week. The onset of this condition is at 2-3 weeks of the child's life, and the climax goes away in the second month, slowly at 3-4 months.

The typical vakti of intestinal colic is characterized in the evening. The beginning and end of the sled suddenly begins, without the reasons of Hecht kandai. The incidence of intestinal colic is up to 20% -70%. The etiological reasons for the long-term study of intestinal colic from karamas remain unknown. For intestinal colic, crying out of pain, redness of the face, forced posture of the child, bending the legs to the belly, tortuous discharge of gas and garbage are characteristic. Relief is observed after defecation. The child's appetite is good, while physical development is appropriate for the age of ham intestinal colic in parents arouses anxiety. Ham is observed uniformly if the child is in a natural or artificial hunt. Observations have shown that the smaller the child's body mass and gestational age, the more intestinal colic is observed.

Intestinal microflora plays a large role in the occurrence of “colic” in recent years. So, in this functional disorder in children, it is characterized by a change in the composition of microbiota in the intestine, an increase in conditionally-pathogenic microorganisms, and a decrease in the flora of chymoya - Bifidobacteria and aeksa lactobacilli. An increase in proteolytic anaerobic microflora mycdoras causes cytotoxin gases to become soluble. In children, increased intestinal colic often increases the amount of inflammatory protein – calprotectin.

Clear of the day when the child screams when there is pain in the abdominal area cries for a long time and in the evening, clenched hands in the case, bend the legs to the belly, in which gas accumulates, constipation as a result, pain in the abdomen may appear. His faces in the form of discomfort, rest is observed in the abdomen. From pain then gas and feces may come. There are many specific causes of abdominal pain that do not allow you to identify all the time. Its origin is explained in different ways: hypersensitivity of the nervous system, immaturity of the digestive system, allergy to food, violation of the method and norm of feeding, etc.



Reasons for the origin of intestinal colic feeding the child its dependence on character has been scientifically proven, with breast milk intestinal colic was 17% when fed and 41% when fed artificially.

### **Epidemiology**

In infants, intestinal colic occurs on average 20% (2). Around 20-30% of children under one year of age and 12-20% are found in older children [3]. Intestinal colic in infants is the same in boys and girls who are in natural and artificial nutrition - 50-70% were recorded[6]. Lactase deficiency, the causative agent of intestinal colic in early - lying children, accounts for 70% of purulent diarrhoea. According to our data, intestinal colic and other FIB were found in 33-39% of cases of infants(2021).

### **Etiology of intestinal colic**

The causes of the origin of intestinal colic can often depend on the mother and the child.

#### *1. Mother side:*

- obstetric Anamnesis (toxicosis during fetal period, chronic
- presence of diseases, complications of childbirth, injuries, miscarriage
- stay, the first child in the family, a single woman, women over 35, etc.k.).
- family relationships: family unrest, social insecurity of the fetal woman, psychoemotional state of the surrounding people, emotional lability of the mother in stressful situations, etc.
- eating disorders of the nursing mother, especially the high consumption of sweets (nuts, sugar) and animal fats.
- violation of nutrition techniques: fast breastfeeding of the child, more feeding than meyeri in natural and artificial nutrition, improper preparation of dairy mixtures.
- • a woman's bad habits (smoking, taking drugs).
- • Maternal diseases (metabolic syndrome, migraine, diabetes mellitus, chronic diseases, infection, etc. diseases).
- • Violation of the rules of care (swallowing air, introducing complementary foods early or late, overheating and so on.)

#### *2. From the side of the child:*

- Insufficiency of nerve control and motor function of the gastrointestinal tract.
- Dyskinesia of the esophagus, small and large intestine.
- OIT morphofunction deficiency.
- Enzymatic immaturity (transistor, relative lactase deficiency, absence of sucrose, oxyl, fat dressing will be khazim).

Predisposition factors by the child: increased intestinal permeability in the first 3-4 months; impaired intestinal microbiome deficiency of beneficial bacteria and oligosaccharides, increased Escherichia coli; flatulence; decreased activity; lack of melatonin and increased serotonin; high levels of motilin and ghrelin in the blood.

- Mol suti oqsiliga sensibilizatsiya.
- Keser kesish bilan tug'riqlar.

Intestinal colic in children is divided into primary and secondary types according to the reasons of origin:

Causes of primary (functional) intestinal colic: bald birth and morphofunctional immaturity of the child, rapid absorption of the child; dysbacteriosis in the child, flatulence, constipation, diarrhea: the connection of the mother's psyche with the intestinal colic of the child; lack of progesterone in the mother (McOmber ME, Shulman RJ Curr Opin pediatrician., 2007); improper feeding of the mother, causing gas formation coming products (sugar, Baker and b.).



Causes of secondary intestinal colic: lactase deficiency, celiac disease, mucovissidosis, mole milk allergy, intestinal infections, enterocolitlare

**Intestinal colic pathogenesis**

In the intestine, many small gas bubbles form a foam along with mucus in the intestinal wall, in which gas leakage and absorption are disrupted in the entire intestinal system and pain is generated by the expansion of the intestinal wall. Several theories have been recommended in the development of intestinal colic: gastrointestinal disorders t.; psychomotor development t.; psychosocial disorder t.; intestinal sac - early form of migraine; genetic predisposition t.

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It's all about the accumulation of gas bubbles in the intestines!

Changes such as dysbacteriosis, impaired absorption of nutrients, micronutrients, vitamin synthesis, and derailment of immune mechanisms occur as a result of disruption of the intestinal microbiome (maintenance of the normal microflora of the intestine with the body in maintaining human health) caused by gas formation in the intestines.

**1. Clinical picture**

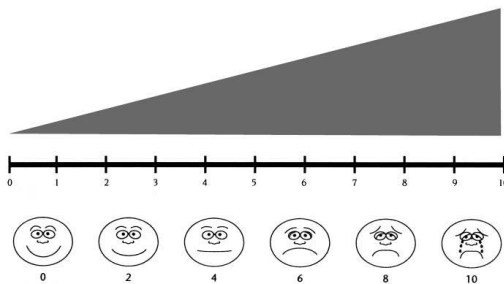
A number of scales have been recommended in the pain assessment:

1. Pain assessment scale in children under 5 years of age [8].

Crying in points	no	0
	Mean cry	1
	Strong cry	2
Facial structure	Calm/ or laugh	0
	Lip contraction	1
	Lip and eye blur	2
Body state	Quiet	0
	Mandatory	1
	Tense	2
Leg position	Neutral	0
	Legs creep	1
	Tense	2
Action activity	Simple	0
	Moderate annoyance	1
	Intense restlessness	2

Assessment of the sum of points: 0-No pain, 3-5 points-moderate pain, 6-10 points-intensive pain

2. Criteria for intestinal colic in infants (Wessel, Cobb, Jackson, Harris, & Detwiler (1954).



Wong-Baker verbal scale pain: - weak, - moderate, - strong



- intolerable

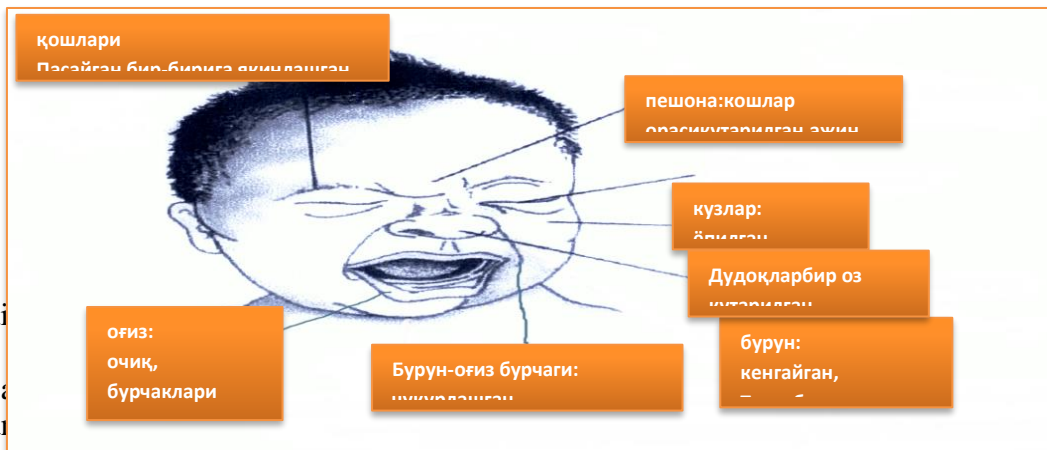
Intestinal colic-begins at 2-3 weeks of a child's life, peaks at 6 weeks of age, goes to decline after 8 weeks, disappears after 2-16 weeks.

Intestinal colic is a nervous crying snoring.

There is a “rule of three” for a child to cry in pain: the child cries for more than 3 hours a day; cries for more than 3 days a week; cries for more than 3 weeks a month.

In early-aged children, the clinical signs of intestinal colic are different, they are as follows: in children under 4 months of age, pain is observed, especially at 3-4 weeks; groin; frequent abdominal rest; mandatory condition-redness of the face, tingling in a position with legs bent to the abdomen; baby crying begins suddenly mainly in the evening and lasts more than three hours; ; usually intestinal colic passes after 3-4 months, sometimes it can also last a lot.

In infancy, intestinal colic can be detected on the child's face based on specific symptoms. When an intestinal colic is observed in a child, it is characteristic that he cries without opening his eyes for several days, in which the mouth is constantly open and four-cornered in shape, the eyebrows are close together, the wings of the nose are enlarged. The infant's response to pain is shown in the figure below. Eyebrows reduced, converging; between eyebrows raised, wrinkled; eyes closed; wings of the nose enlarged; nose-throat angle deepened; mouth open, corners sharpened; sweating of the palms, dilation of the eyelids.



Infant pain

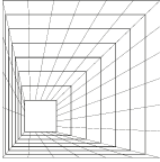
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tachycardia, tachypnoe, increased blood pressure, increased intra-cerebral pressure, blood clots in the cerebral ventricles, increased muscle tone, superficial breathing, redness or pallor, sweating of the palms, enlargement of the autumn ventricles.

We would like to pay attention to this by parents and specialists involved in child education, so that when a child cries for a long time, there is naturally an increase in intra-cerebral pressure. In recent years, the emergence of certain apparatus in medical diagnostics (for example, exoencephalogram, neurosonogram) has led to cases of hyperdiagnostics, which in turn cause a number of problems. This method of examination, carried out by neuropathologists, indicates that more than 90% of children who resort to crying have an increase in intra-cerebral pressure and are being treated with various medications. An increase in real intrauterine pressure is only observed in postpartum injuries, hydrocephalus, minor diseases such as acute inflammation of the cerebral palsy (meningitis). So it is advisable that we look for the cause of the child's crying not from the “brain”, but from the “intestine”, since, in the intestinal colic, brain pressure also increases. It is enough to identify and eliminate the cause that calls intestinal colic in a timely manner, it is important to remember that drugs that soothe and improve brain function are of no use at all and even harmful.

**Intestinal colic may be observed in the following major neurological conditions:**



1. High excitability syndrome

*Symptoms:* restless movement, sleep disorders, high excitability, agitated crying, pathological movements, vomiting, colic, constipation, sucking and swallowing disorders, tongue oropharyngeal muscle hypertension

*Recommendations:* Organization of the agenda and nutrition; organization of proper nutrition; selection of "healing mixtures"; making sure that the child receives enough food (assessment of physical development, weight control); negation of somatic and surgical diseases.

2. Gipertenzion-gidrotsefal syndrome

*Symptoms:* excitability, nausea and vomiting, pathological growth of the dizziness, dilation of the ligaments and sutures, (tension and pulsation of the large ligaments during sucking and crying in babies is a physiological condition!).

*Recommendations:* agenda and organization of nutrition, organization of proper nutrition, selection of "healing mixtures", denial of infectious diseases (meningitis); occlusion hydrocephalus (complications of intra-cerebral blood flow); somatic pathologies (pylorostenosis, FB).

**Diagnosis of intestinal colic**

The child's mother records in the "crying diary" the duration of the child's crying, depending on food and other reasons.

The diagnosis of intestinal colic is based on the following clinical symptoms: usually colic appears in the first weeks of the baby, intensifies at 2-3 months, disappears at 5 months; the time of the formation of a colic in the evening; the main sign of colic is strong and prolonged crying; groin; frequent abdominal rest; forced colic-facial redness, tingling with legs bent to the abdomen; ; the pain attack occurs when eating and after.

- Laboratory tests: caprogram, lactase deficiency detection and additional examinations are carried out; blood and urine clinical thallium; stool latent blood examination; stool kalprotectin examination;; blood biochemical taxilies (liver transaminases, alkaline phosphatase,  $\gamma$  - glutamyltranspeptidase, amylase, s-reactive protein); ultrasound examination (UTT), esophagogastroduodenoscopy, colonoscopy; breath hydrogen tests with lactose.

- A neurologist's assessment for the detection of infantile spasms.

- Detection of staphylococcal infection in the mother.

**Differential diagnostics**

Characteristic signs for acute diseases of the abdominal organs are: recurrence of vomiting; increased abdominal rest; increased abdominal pain; severe weakness, apathy, pallor; cold sweating; arterial hypotonia; trembling arrhythmia or tachycardia; fever; tshetkin-Blyumberg symptom; tension of the muscles of the anterior abdominal wall; fainting during defecation (a sign of internal bleeding from the abdomen), dysuria, and oliguria.

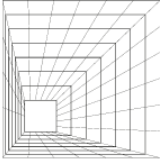
Intestinal colic in a baby should be distinguished from the following diseases: food allergy, gastrointestinal form; lactase deficiency; diseases of the central nervous system (increased cranial pressure); intestinal infections; evstaxeitis, otitis; differentiation from acute surgical diseases in "emergency symptoms" (intestinal invagination, pinched hernia, intestinal obstruction, developmental abnormalities).

**Treatment of intestinal colic in infants [1,7].**

Treatment of intestinal colic can also extend for a long time it is possible that functional intestinal colic should be distinguished from acute abdominal diseases (intestinal invagination, intestinal infection, yevstaxeitis, otitis).

Children infected under one year old treatment of intestinal colic skirts

1-etap-conducting psychological application and comprehension work; 2-etap-Purchase treatment; 3-etap: a). Nomedicamentdosis treatment: healing massage, water treatments,



musicotherapy, aromatherapy, aeroionotherapy; b). Medicamentous treatment (contains simethicone preparations, probiotics, lactase).

What to do with intestinal colic?

First of all, dietary treatment methods are used for mother and child.

When eliminating intestinal colic, there are no guaranteed methods of treatment other than time, patience, decisiveness.

Diet foods for mother in intestinal colic:

*Possible:* foods with organic acid (yogurt, juices, black bread, vegetable oil, vegetables, cereals, wholemeal, legumes, minced meat.

*Parchez* treatment for a nursing mother in a colic.

*Limited to:* conditer products, bakers, sugar, sweets; tannin-catching foods (tea, coffee, cocoa); porridge: Manny, rice, legumes; milk(raw and unpartered), sweet curd paste and cheese, kisel; some vegetables(onions, cabbage, tomatoes, potatoes, pumpkin, corn, turnips, rediska, chesnok, sweet peppers, garlic); spicy and fried foods, meat and fish stew, any hot bread, overeating; fresh fruits (pears, apples, grapes, pomegranates, dates).

Normalization of the state of the mother psychoemotional, treatment of the main diseasesoary.

Recommendations for the child: analgesics are not recommended; to reduce pain: drink 0.3-1 ml of 20-40% glucose; stop breastfeeding, hold the baby vertically and rub his belly with stroking, water treatments, warm the abdomen, follow the diet.

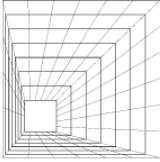
*In artificial and mixed nutrition:* a child is recommended modern highly adapted milk mixtures ("NESTOGEN" 1,2,3,4; "NUTRILON" 1,2,3). Often, sour-adapted milk mixtures are introduced into baby food ("sour NAN", sour NUTRILON). Special milk mixtures with adapted hypoallergenic (e.g. "NAN anticolica", "NAN lactose-free", "NAN troynoy comfort", "NUTRILON comfort") are recommended as directed by the doctor; when ineffective, children with intestinal colic are given dairy mixtures in which their protein is partially hydrolyzed, lactose - reduced pro-and prebiotics are enriched (*NAN troynoy comfort.*)

Using all methods to calm the child when it is suspected that the child cries due to pain - alla say, vibrate, speak slowly and similar activities.

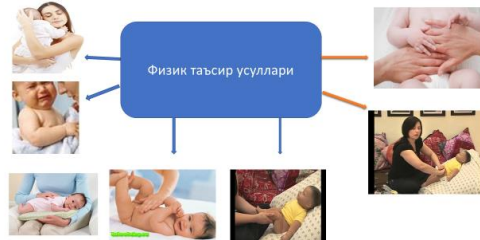
The recommendations of Russian specialists in abdominal pain are as follows: when a child hurts his belly, he must be calmed down by hitting his stomach, and his mother's shoulder with your palm, saying: "Do not bother at all, it will pass." In this, it is important not to disturb the child, but to calm his mother. Initially, it is necessary to determine whether the pain is in the child's body, or in the womb, when treating it, it is necessary to focus on relaxing the whole organism and especially the abdomen.

There are several ways to relax abdominal tension:

- to move the various pleasant abdominal and lumbar muscles
- to offer bringing games; to raise the child in the neck, to keep him free and firm; to hug the child with a clasp close to you, in which the child will feel you with his skin.
- Walk straight. In this, alternating with three different directions, the upper-down heel and the paw are walked on the tip, which calms the child.
- Replacing someone who looks after the child. The child calms down quickly, especially if the father carries a child with a stomach ache in his arms.
- "State of football". In this case, the tone of the baby's abdominal muscles decreases and the pain subsides if you pinch the baby with your body with your elbow, hugging the belly behind him, and tilt his head forward.
- The child is put on a crying State for 10-15 minutes. After that, lay the child around, refer to the doctor's doctor if the child does not calm down further.
- It is also advantageous to move the child, especially the infant, by holding it from the back and neck area rhythmically throwing it 60-70 times a minute from top to bottom;



- Move your legs alternately, like a "bike" movement, with the child bending his legs to his stomach, holding the ankle joint;
- Another way to reduce the tension of the child's body and abdominal muscles is to keep the child sitting close to your body from behind when you pinch, the muscles of the body and abdomen relax, and the pain subsides.
- In a large diving ball inflated by air, you lay the child with his belly and move it round in front and back. In this you hold the child with your hand.



- *Pressing pain.* On the pillow, the child is laid with a belly, in which the child's legs should hang; pressure on the abdomen will calm the child. In the second method, laying out under the abdomen by placing a grellka or a bottle wrapped in a towel with warm (not hot) water will speed up the release of excess gas in the intestines, and the child will sleep well.
- "Father's Palm". The child's father gently caresses the abdomen with his paws, placing the palm of his hand on the child's belly. Warm hands reduce tension in the baby's womb;
- Rub. To empty the colon and drive away gases, aim to rub in the form of the opposite of the Latin letter "U". Apply hot oil to your hands and rub your abdomen in a circular position. Rub the rub from the left side of the abdomen from top to bottom, similar to the letter "i" - this will ensure that the gases go down. Then, continue the scrubbing to resemble the circular letter "L", as a result of which the gases move out of the colon. On the last hem, rub in the direction of the entire abdomen in the form of the opposite of the Latin letter "U". The result will be good if you continue to rub with the child sitting on your knees and clenched with his legs to your body;
- Hot baths. The use of hot general and local baths on the feet in reducing abdominal muscle tension in reducing abdominal sores that occur in children will work well.
- Laying the child on a heated sheet, rubbing the abdominal area.
- Keeping the child in a vertical position.
- Achieve the release of gases by moving the child's legs.
- Holding the child in the abdominal area for 20 minutes, with the mother's hand heated by rubbing against each other. This method is the most effective method and allows you to calm 90% of children.

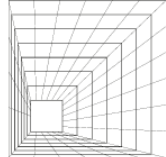
**Lactase deficiency is a dietary treatment for intestinal colic.**

*In natural ovulation:* gross methodological error – breast milk ban; maximum maintenance of breast milk; mixing breast milk with lactase preparations; breastfeeding after milking the previous milk “too much breast”; when breast milk is less, part is reduced and replaced with a lactose-free NAN mixture; the mixture is introduced for 2-3 days.

*In artificial ovulation:* if a violation is caused by a lack of lactase, the child is gradually prescribed a lactase-free mixture. Lactose-free NAN sutldi mixtures are used; kasha and vegetable porridge are prepared with the addition of dairy-free mixtures.

**Medicamentous treatment in intestinal colic**

When the above methods do not work, the following medicamentous treatment is performed on the intestinal colic in consultation with the doctor:



*In lactase deficiency:* lactase enzyme (Easy Col) - 3000 Yed, 750 Yed (1/4 capsule) per 100 ml of milk. Each breastfeeding is mixed into less milked milk or milk mixture (10-15 ml), stored for fermentation for 5-10 minutes and given to the child before meals.

*In flatulence:* simethicone (Espumizan, Clozim, Colicvel) is recommended; as an adsorbent: Smecta, Cholestyramine; in severe flatulence: prozerine 0.04-0.08 mg/kg, m/o 2-3 times a day; probiotics; phytochoy: chives water, chamomile tincture, cumin, mint, fennel fruit, essential oil.

*In the case of a pain attack* - a gas-releasing tube is put, glycerin suppositories or healing hookah are made.

### **What to do when Staphylococcus is detected in breast milk?**

*Having a staphylococcal infection* in the mother calls the mother sensitization in herself and in the child's body, which is caused by "small" staphylococcal infections and intestinal colic.

*At the first eTap* - the mother is sanitized with antibiotics of the cephalosporin group, after 2 days breast milk is repeatedly checked for sterility; antistaphylococcus immunoglobulin is performed.

*In the second eTap* - sinbiotics are used in the treatment of the mother – bacterial preparations (acidophilus, bifiform); immunomodulators; anatoxin with Staphylococcus is carried out according to the scheme.

*For the child:* when a lingual Staphylococcus is detected in the child, adapted milk mixtures are recommended if artificially fed (NESTOGEN 1,2,3; NAN sour); along with the treatment of the mother, the child is given a bacteriophage with Staphylococcus; probiotics are recommended after treatment with bacteriophage.

#### *An example from practice:*

*Uktamova M. 19 days. From Urgut district. Curated 7.08.2021. Tug. Weight 4300 g. No. 3 since the mother from Day 1 in the nursery had little milk and gave a milk mixture, kandai milk mixture? his mother does not know the name. From the 12th day, the child was observed discomfort, spinning, and the child was given navvot and biscuits. At 1 Week, the child was calmly spinning, fever, Corinne tincture was observed.*

*Akhvoli middle ogir, t - 37,5, aksa beats, autumn is closed, crying lasted 6 days, a corinally infused child is forced, legs and arms are bent mouth open, abdomen is rested, combed in palpation, painful, after arrival, the child calms down, discomfort increases when fed, the skin is marbled, the legs are slightly cooled(similar to white hyperthermia), the inside is foamy, liquid, urine separation is accelerated..Takshxis: Orvi. Functional intestinal disorder, intestinal colic.*

*Muolaja: bolani qorniga onasi qo'lini 20 min ushlab turdi., bola gaz chiqardi va tinchlandi.*

*Recommendation: to breastfeed the mother, to breastfeed the child only with breast milk. espumizan, paracetamol, viferon.*

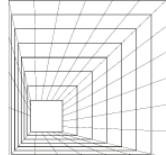
### **Conclusion**

1. Important treatment factors for digestive organ functional disorders are identifying the cause, trying to eliminate them, or influencing noninfection and infectious factors such as comorbid functional disorders.
2. Such an event leads to the complete elimination of functional disorders and the elimination of polyprogamy.

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