

**LYMPHADENITIS: CAUSES, SYMPTOMS, DIAGNOSIS, TREATMENT,
LYMPHADENITIS IN CHILDREN****Madaminov Muxammadvali Ikromjon o'g'li**

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Abstract. *Lymphadenitis is a pathology characterized by specific or nonspecific inflammation of lymph nodes. During its development, the enlargement of lymph nodes, pain during palpation and general weakness are observed. The cause of inflammation is infection. The nature of the causative agent and the level of its sensitivity to antibiotics are determined in the analysis of the biopsy sample taken from the damaged nodes. On the background of lymphadenitis, purulent complications — abscesses or adenophlegmons — may develop. Such furnaces must be opened and drained.*

Key words: *Lymphadenitis, Causes, Lymphadenitis symptoms, Lymphadenitis diagnostic criteria, Features of lymphadenitis in children, Lymphadenitis treatment, Lymphadenitis prevention measures and consequences*

**ЛИМФАДЕНИТ: ПРИЧИНЫ, СИМПТОМЫ, ДИАГНОСТИКА, ЛЕЧЕНИЕ,
ЛИМФАДЕНИТ У ДЕТЕЙ**

Аннотация. *Лимфаденит – это патология, характеризующаяся специфическим или неспецифическим воспалением лимфатических узлов. При его развитии наблюдают увеличение лимфатических узлов, болезненность при пальпации и общую слабость. Причина воспаления – инфекция. Характер возбудителя и уровень его чувствительности к антибиотикам определяют при анализе биоптата, взятого из пораженных узлов. На фоне лимфаденита могут развиваться гнойные осложнения — абсцессы или аденофлегмоны. Такие печи необходимо открывать и опорожнять.*

Ключевые слова: *Лимфаденит, Причины, Симптомы лимфаденита, Диагностические критерии лимфаденита, Особенности течения лимфаденита у детей, Лечение лимфаденита, Меры профилактики лимфаденита и последствия*

INTRODUCTION**Stages and classification of lymphadenitis**

The purulent inflammatory process can affect one node or a group of nearby lymph nodes. The following nodes are most often damaged:

1. Side of the ear;
2. Under the jaw;
3. Neck;
4. Underarm;
5. Chow.

Damage to the elbow, knee, deep inguinal and pelvic lymph nodes is less common.

Depending on the type of pathogen, specific and non-specific types of lymphadenitis are distinguished. According to the nature of the course, it is accepted to distinguish between acute and chronic variants of the disease.

Forms of acute inflammation:

Catarrhal (simple inflammation);

Hyperplastic (with active growth of lymphoid cells);

Purulent.

METHOD AND METHODOLOGY

In the initial stages, the enlargement of the lymph nodes occurs. Stable hyperemia (blood accumulation) develops. Serous absorption of nodular tissue is noted. Leukocytes actively migrate to the site of injury and proliferative cell growth begins in the lymphoid tissue. All pathological changes are localized in the capsule. In catarrhal and hyperplastic forms, infectious inflammation can become chronic.

In the further development of the pathology, the lymph node is affected by purulent dissolution with the formation of a purulent focus. Abscess appears (limited pus accumulation in the capsule). Its contents can fall into the area of cells, which leads to the development of adenophlegmon and the spread of the inflammatory process to the surrounding tissues - paralympadenitis.

Important: the ichorosis form of lymphadenitis is the most severe. This is the result of putrefactive decay of the tissue of the node.

RESEARCH RESULTS

Lymphadenitis is usually a consequence of primary septic inflammation. Pathogenic (pyogenic) microflora — streptococci and staphylococci and the toxins they produce migrate from the focus with the lymphogenous route or blood flow. Infectious agents can also enter the lymphatic vessels through injured skin or mucous membranes (contact route).

Primary furnaces can be:

- Bone panaritsii;
- Infected wounds;
- Boils and carbuncles;
- Serous inflammation;
- Abscesses;

Inflammation of bone and bone marrow (osteomyelitis).

One of the common reasons for the development of lymphadenitis is dental diseases, including dental caries. A chronic focus of infection can support the inflammatory process for a long time. Pathology often also occurs against the background of thrombophlebitis.

Diseases that cause specific lymphadenitis:

- Venereal diseases — syphilis, gonorrhea;
- Actinomycosis;
- Tularemia;
- Tuberculosis;
- Pestilence;
- Anthrax.

Please note: in some cases, the primary focus is not found, because it can be eliminated by the time lymphadenitis develops (including by itself).

Inflammation of the lymph node creates a barrier that prevents the further spread of bacteria.

In this pathology, the development of septic complications, which seriously threaten the health and life of the patient, cannot be excluded.

SYMPTOMS OF LYMPHADENITIS

The first manifestations of acute nonspecific lymphadenitis are local swelling and pain in the node. When palpated, its consistency is dense-elastic. Against the background of catarrhal and hyperplastic forms, complaints indicating intoxication of the body are weakly expressed or absent at all. The pain felt when palpating the node is not strong. This pathology is often accompanied by lymphangitis - inflammation of regional lymph vessels.

Manifestation of purulent process:

- High node density;
- Uncertainty of the contours of the focus of inflammation;
- Local hyperemia and edema;
- General weakness;
- Fever and febrile reaction (feverish, hot, sweating);
- Headache;
- Decreased appetite.
- The patient is forced to limit movement in certain parts of the body in order not to provoke an increase in the pain syndrome.

In purulent melting, a symptom such as fluctuation appears (displacement of fluid during palpation of the inflamed area).

Rupture of the purulent capsule with the formation of adenophlegmon is manifested by the detection of scattered dense infiltrate with separate soft fragments.

The presence of crackling during palpation (gaseous crepitation) indicates a purulent form. With the septic dissolution of the node, the symptoms of general intoxication increase sharply - moderate or high fever and tachycardia are detected.

Possible complications of the purulent process:

Thrombophlebitis;

Mediastinitis;

Septicopenia (blood damage);

Formation of lymphatic fistulas (when the abscess penetrates the esophagus or bronchi).

In chronic course, lymph nodes increase in size and gradually become denser. But at the same time, they are clearly separated and do not merge with the surrounding tissue structures. Over time, the lymph nodes do not swell, their own tissue is scarred and replaced by connective tissue.

Serious chronic processes are accompanied by significant swelling, resulting in a violation of lymphatic circulation - edema. Over time, a specific manifestation - elephantiasis is observed.

Specific lymphadenitis also has its own characteristics:

In the gonorrheal form, the testicular nodes are very painful and enlarged;

The tuberculous form provides severe weakness (due to intoxication) and a sharp rise in temperature that can be maintained for a long time, the surrounding tissues are inflamed;

The syphilitic nature of inflammation takes the form of a unilateral process. Lymph nodes resemble a "chain". On palpation, they are loose, non-adherent, and rarely purulent.

DIAGNOSTIC CRITERIA OF LYMPHADENITIS

It is not difficult to notice the development of catarrhal and uncomplicated lymphadenitis. A simple examination, collection of complaints and palpation of nodes allow to make a preliminary diagnosis.

When the pathology is accompanied by periadenitis, as well as adeophlegmon, it becomes more difficult to correctly diagnose the disease, especially when the inflammatory process spreads to the tissues of the chest cavity, behind the abdomen. In such cases, the task of the diagnosing doctor is to find the primary focus, only in this case it will be possible to successfully treat the disease.

DISCUSSION

If tuberculous lymphadenitis is suspected, tuberculin tests and analysis of puncture material should be performed. The goal is to identify the unique giant cells, which are called Pirogov-Langhans cells, after the scientists who discovered them. Characteristic changes are also observed in chest x-rays, especially calcifications. Punctate discharge in syphilitic lymphadenitis requires a study for the presence of treponema (causing agents of syphilis). In order to make a more accurate diagnosis, a collegial examination of patients is carried out involving a narrow range of specialists - venereologists, phthisis doctors and other doctors. Acute lymphadenitis should be distinguished from osteomyelitis, hidradenitis, phlegmonous foci, purulent processes in subcutaneous tissue, atheroma complicated by pyogenic infection. In the general blood analysis, leukocytosis and an increase in ECHT are observed.

To clarify the diagnosis, the following is carried out:

- Biopsy of the node;
- Ultrasound diagnosis of lymphatic vessels;
- Computed tomography;
- MRI of the areas damaged by the procedure;
- X-ray contrast angiography (lymphography).

CHARACTERISTICS OF LYMPHADENITIS IN CHILDREN

Common causes of lymphadenitis in children:

- ENT diseases (tonsillitis, otitis);
- ARVI (including influenza);
- Exudative diathesis;
- Pustular inflammation of the skin (pyoderma);

Specific infections of children (tetanus, scarlet fever, diphtheria).

The main difference of children's lymphadenitis is the rapid onset of the disease, severe course, high body temperature, significant intoxication. If appropriate treatment is not started, the process often progresses to the general form (sepsis).

TREATMENT OF LYMPHADENITIS

Treatment tactics are selected based on the form, stage and other characteristics of the disease.

Conservative therapy includes:

Treatment of the main disease;

Antimicrobial drugs (antibiotics and sulfonamides) are prescribed in the maximum dose after determining the sensitivity of the microbial flora. Antibiotic therapy includes the use of drugs aimed at both nonspecific (staphylococci, streptococci) and specific pathogens (gonococcus, treponema, tuberculin bacilli, etc.);

- Detoxification (Hemodez, Reopoliglyukin, Reamberin);
- Appointment of complex vitamins, including all the main types;

- Physiotherapy - SLEEP;
- Ensuring peace;
- Dieting - limiting salty, fried, smoked products.
- Therapeutic treatment is recommended in case of acute catarrhal lymphadenitis without severe complications.

CONCLUSION

Surgical treatment includes opening the focus, sanitizing the cavity of abscess and phlegmon, draining the wound with local administration of antimicrobial drugs and antiseptics.

PREVENTIVE MEASURES AND OUTCOME FOR LYMPHADENITIS

The outcome of lymphadenitis depends on its form and timely treatment. After the disease has passed, scar tissue may form in the area of the lymph nodes, lymph flow may be impaired, and lymphatic swelling (lymphadema) may develop.

In order to prevent the development of lymphadenitis, it is necessary to treat micro-injuries, wounds, erosive surfaces, dental diseases, throat (angina, pharyngitis), skin (furuncle, panaritis) and inflammatory diseases in a timely manner.

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