A CONTINUING PROBLEM: AXILLARY TUBERCULOUS LYMPHADENITIS – A CASE REPORT

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АКСИЛАРНИЯТ ТУБЕРКУЛОЗЕН ЛИМФАДЕНИТ – ПРОДЪЛЖАВАЩ ПРОБЛЕМ. ОПИСАНИЕ НА СЛУЧАЙ

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Summary: Axillary tuberculous lymphadenitis is rare and generates case reports. Our case had right axillary mass and pain at admission. Multiple fixed right axillary lymphadenopathies were found. They were excised. Antituberculous therapy was given. No recurrence was seen in postoperative three years.

Key words: Tbc, axillary lymphadenitis, breasts, antituberculous therapy

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Резюме: Аксиларният туберкулозен лимфаденит е рядко срещано състояние, което принадлежи по-скоро към казуистиката. При нашия случай по време на хоспитализацията бяха налице формация в дясната аксила и болка. Установена беше множествена десностранна аксиларна лимфаденопатия. Засегнатите лимфни възли бяха ексцизирани и беше приложена антитуберкулозна терапия. Не беше наблюдаван рецидив през трите години след операцията.

Ключови думи: туберкулоза, аксиларен лимфаденит, противотуберкулозно лечение

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Axillary tuberculous lymphadenitis is rare. Microorganisms penetrate into the infected area during primary infection and enter the hilar lymph nodes. If the infection is under control, other lymph nodes are not generally infected. However, if the infection is not under control, bacterial spread can occur. Areas of spread generally heal, but infection may be latent for years or decades until caseification occurs or microorganisms proliferate. We present herein a case of axillary tuberculous lymphadenitis [4, 14].

UO is a 56-year-old female. She had a *Mycobacterium tuberculosis* infection 10 years previously. The patient who has taken pulmonary tuberculosis therapy, had healed without a sequel. She had a right axillary mass and pain at admission in May 2005. Multiple fixed, enlarged right axillary lymph nodes were palpated on physical examination, and confirmed by ultrasonographic examination. The breasts were normal bilaterally and the left axilla was not involved. No reason related with relapse of tubercolosis infection has been determined. No sequel has been determined on the control thorax computerized tomography. Mammography did not disclose additional abnormal findings. Tumor markers, a hemogram, biochemical parameters, and a PA pulmogram were normal on preoperative evaluation.

Surgery was performed in May 2005 under general anesthesia. Lymphadenopathy was noted

intraoperatively at levels 1 and 2 in the right axilla. The largest lymph node was 3.5 cm in diameter. All enlarged lymph nodes were excised.

Pathologic evaluation was consistent with caseified granulomatous lymphadenitis (figure 1). After the axillary lymph nodes of our patient had been excised, antituberculosis therapy had been performed for 9 months. During 2 months, isoniazid (INH), rifampicin, morphozinamid, ethambutol therapy and followingly, isoniazid and rifampicin therapy for 7 months had been given to our patient. She was followed until June 2008. Serial ultrasonograms and physical examinations were obtained and no recurrences were evident. Mild edema occurred in the right arm. The right axillary pain which existed preoperatively resolved postoperatively.

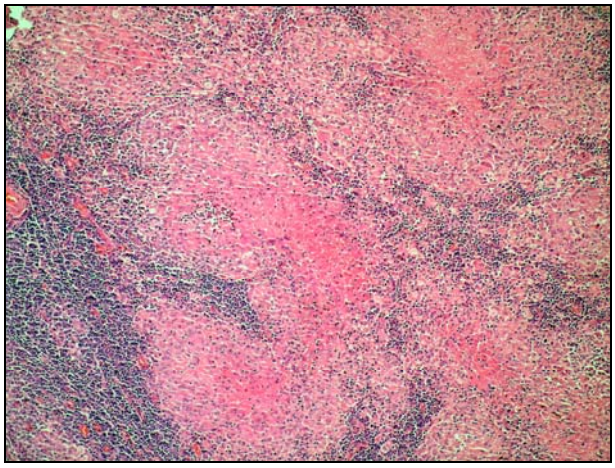


Figure 1. Necrotic granulomatous inflammation in lenfoid tissue (HE X 100)

Axillary lymphadenopathy occurs in benign and malignant disorders. Anamnesis, physical, and radiologic examinations, biopsies (fine needle aspiration biopsy and incisional or excisional biopsies), testing for tumor markers, and microbiologic cultures may help to reach a definitive diagnosis. Anamnesis is important; tuberculous anamnesis must be considered [8, 13].

Tuberculosis (TB) can be found as *primary*, *postprimary (secondary)* and *extrapulmonary* tuberculosis.

Primary infection: Primary infection is caused by exposition to the microorganisms in the air, which originate from an active pulmonary tuberculosis patient. Microorganisms reach alveoles (most commonly in the middle or lower zones of lungs), reproduce in alveolar macrophages intracellularly and are distributed to hilar and other regional lymph nodes by lymphatics asymptomatically and subsequently to other sides by blood flow. M. tuberculosis continues to enlarge for 2-12 weeks in some of these regions until cellular immunity is provided in immunocompetent host. In this period, granulomas are produced and enlargement of microorganisms is restricted, but they are not killed. As a result, dormant organisms can reactivate. Averagely in 5% of normal hosts, primary infection can not be restricted and clinical disease appears fastly or in first 2 years. In the other 95%, the primary infection is under control or stays subclinically.

Postprimary (secondary) infection: *Postprimary reactivation infection:* In 5% of immunocompetent people, by endogenious reactivation of a previous dormant focus which had been produced after primary infection, clinical disease occurs. Continuously high oxygen pressure places are the ones which are preferred for reactivation. These are superior lung segments (except anterior), kidneys, bones and CNS.

Postprimary exogenous reinfection: The protection following the previous infection is ineffective, an even the immunity of immunocompetent patients can disappear in time. Frequency of exogenous reinfection can change due to risk of infection. Postprimary TB with low risk is almost totally a reactivation disease. But reactivation tuberculosis is frequent in people infected with HIV and can cause meaningful ratios of adult patients where high tuberculosis ratios exist on earth.

Extrapulmonary tuberculosis: After penetration into the organism through the respiratory route, M. tuberculosis can settle and multiply in any organ during the primary infection, before development of the specific immune response. After this, tuberculous bacilli can multiply at any time when there is a decrease in the host's immune capacity to restrain the bacilli in their implantation sites. The extrapulmonary disease generally has an insidious presentation. Extrapulmonary forms are miliary tuberculosis, pleural tuberculosis, lymph node tuberculosis, renal tuberculosis, tuberculosis of the central nervous system, osteoarticular tuberculosis, other extrapulmonary localizations (eye, skin – lupus vulgaris, genital, and digestive tract).

Lymph node tuberculosis: The preferential localization is the anterior cervical lymph node chain with little predominance of the right side chain. Initially, lymph nodes grow slowly, and are painless and mobile. Later on, as their volume increases, they tend to coalesce and some develop fistulas [1, 3, 6, 9].

Antituberculosis treatment has two main objectives. First, there is a need to rapidly kill those bacilli living extracellularly in lung cavities, which are metabolically active and are dividing continuously; this

is required in order to attain the negativization of sputum and therefore to prevent further transmission of the disease. Second, it is necessary to achieve complete sterilization and elimination of those bacilli replicating less actively in acidic and anoxic closed lesions, and to kill semi-dormant bacilli living intracellularly in other host tissues, otherwise these bacilli may persist and will be responsible for subsequent TB relapses. INH is the drug with the highest activity against rapidly dividing bacilli, whereas RIF (rifampicin) and PZA (pyrazinamid) have the greatest sterilizing activity against bacteria that are not dividing. These reasons, along with the prevention of drug resistance, support the use of a combination therapy for the treatment of TB [1, 2].

The current short-course treatment for the complete elimination of active and dormant bacilli involves two phases:

1) *Initial phase*: Three or more drugs (usually isoniazid, rifampicin, pyrazinamide and ethambutol or streptomycin) are used for two months, and allow a rapid killing of actively dividing bacteria, resulting in the negativization of sputum.

2) *Continuation phase*: Fewer drugs (usually isoniazid and rifampicin) are used for 4 to 7 months, aimed at killing any remaining or dormant bacilli and preventing recurrence [2].

To look for acid-fast bacilli, a Mantoux test may be needed for diagnosis. Intranodal macrocalcifications may be found in cases of tuberculous lymphadenitis on mammogram. Contrast-enhanced CT imaging may also be performed. Biopsy of enlarged axillary nodes may be necessary to determine the etiology of the lymphadenopathy [10, 12, 14, 15].

Some authors advocate short-term chemotherapy (9 months) consisting of rifampicin, isoniazid, and ethambutol, which give excellent results without surgery [5].

Axillary lymph nodes must be excised with no contamination and, in our opinion, optimum therapy includes antituberculous chemotherapy after surgical excision [7].

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Постъпила за печат на 8 май 2008 г.