Scholars Journal of Medical Case Reports (SJMCR) **ISSN 2347-6559 (Online)**
Abbreviated Key Title: Sch. J. Med. Case Rep. **ISSN 2347-9507 (Print)**

A United of Scholars Academic and Scientific Society, India

Giant Tuberculous Abscess of the Pelvis and Thigh Muscles In a Young Man

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Article History
Received: 02.03.2018
Accepted: 07.03.2018
Published:30.03.2018

DOI:
10.36347/sjmcr.2018.v06i03.008

Abstract: Tuberculous muscle abscess is considered to be a rare tuberculous disease, especially in the absence of associated osteoarticular involvement. This is usually promoted by immunosuppression, immunosuppressive therapy, and a history of muscle trauma the aim of this study is to evaluate the rarity of a giant, isolated intramuscular tuberculous abscess collection and to highlight its management peculiarity. This study reports a case of giant tuberculous abscess. This is a 36 year old young man with localization in the right thigh with intra pelvic extension. Cytobacteriological examination and culture in the LOWENSTEIN and JENSEN environment confirmed the diagnosis, the patient underwent a surgical drainage associated with anti-bacillary medical treatment for 10 months, and the evolution was favorable. Muscular-skeletal abscesses must be mentioned in front of any abscessed musculoskeletal collection in any immunocompromised patient living in a country endemic for tuberculosis, and to make the diagnosis, it is essential to gather all the arguments in favor, as well clinical as biological in order to take care of them with the adequate way and to avoid the complications.
Keywords: Tuberculous muscle, immunosuppression, immunosuppressive therapy.

INTRODUCTION

Tuberculosis is a common pathology in the endemic areas and under developed countries, this disease is not exceptional in developed countries, in the immigrants or the immuno-compromised subjects. Tuberculosis is characterized by frequency and polymorphism of the extra-pulmonary localizations which represent on average 10 to 20% of cases. Muscular involvement is rare, its prevalence being evaluated between 0.01 and 2%and its occurrence without associated bone lesion, as is the case with our patient, is even rarer [1]

We present a case of massive tuberculosis abscess of the psoas iliac muscle extended along the muscular compartments of the thigh without any associated bone lesions

CASE REPORT

This a 36-year-old patient, a prisoner since one year, who shared the cell with five other inmates, one of them had a history of pulmonary tuberculosis with a notion of treatment interruption ,who was hospitalized for a right thigh swelling evolving since three months accompanied by night sweats and a weight loss of 10 kilograms

The examination had found an apyretic patient, in fairly good general condition. The entire right thigh was occupied by a non-inflammatory, non-puffing, painless fluctuating mass exceeding 30 centimeters on its major axis; the ultrasound had objectified the presence of a homogeneous hypo-echogenic collection in under aponevrotic space inside the thigh and extending upwards in intra-pelvic. Computed tomography showed a well-defined hypo-dense, fusiform mass, with limited periphery enhancement after injection of contrast medium, this mass was localized in sub fasciotic measuring 40 cm / 15cm and extending from the psoas muscle (Figure 2). up to outer vast muscle and quadricipital below (Figure 1). The biological assessment revealed the presence of an inflammatory syndrome with CRP at 40 and a sedimentation rate at 10

The mass surgical exploration discovered an under aponevrotic abscess, with yellowish content (Figure 3). The intervention consisted to a surgical drainage of the collection that occupied the anterior and the posterior compartments of the right thigh and which extended through the muscular interstices up to the sacrum behind and the pubis in front.

The Anatomo-pathology study confirmed the existence of epithelio-giganto-cellular granulomas with

caseous necrosis. This surgical treatment was completed by medical treatment, so the patient was put under anti-tuberculous quadritherapy (Rifampicin, Isoniazid, Ethambutol, and Pyrazinamide) for 2 months relayed by dual therapy with Rifampicin and Isoniazid for 10 months. The operative follow-up was simple with a favorable evolution.

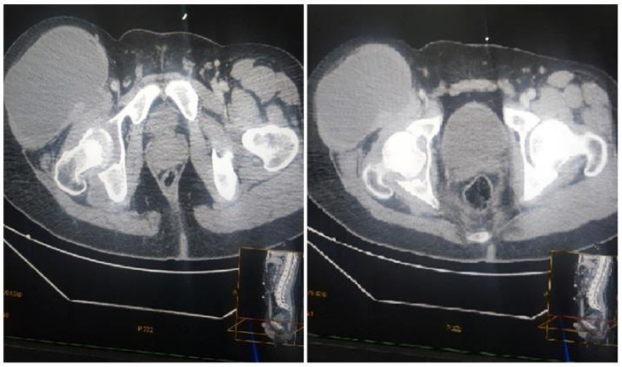

Fig-1: Tuberculous abscess isolated from the muscles of the right thigh without involvement of subcutaneous tissue

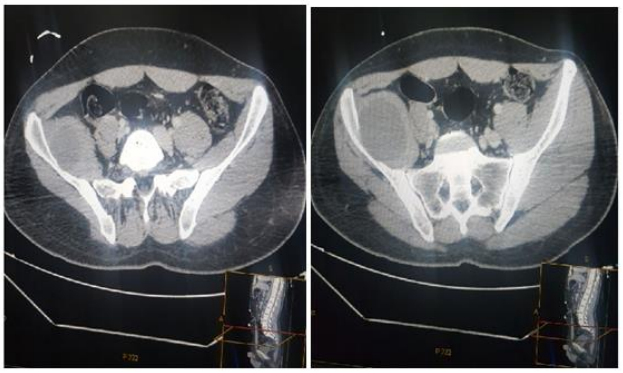

Fig-2: Extension of the tuberculous abscess towards the intra-pelvic muscular compartment by the achievement of the psoas muscle

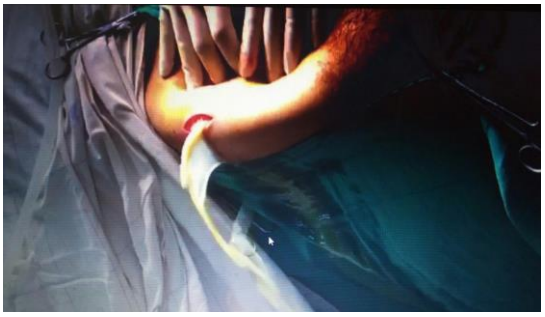

Fig-3: Surgical drainage of the tuberculous abscess showing the yellowish pus

DISCUSSION

Tuberculous abscess of the psoas and thigh muscles considered as a muscular tuberculous disease is rare, especially in the absence of associated osteoarticular involvement [2], the overall percentage of musculoskeletal TB (tuberculosis) is about 3% of all TB cases [3], This soft tissue involvement is usually promoted by immunosuppression, immunosuppressive therapy, vascular collagen disease, and a history of muscle trauma[4,5]. So, it was reported in many studies that the muscular injury create tissue alterations capable of either locally fixing a tubercle bacillus or waking up a quiescent home [6].

It is also reported that Muscular involvement by tuberculosis is more frequent in men aged between 30 and 50 years old [7], and in people with a history of tuberculosis or tuberculous contagion [8].

Tuberculous muscle abscess is characterized by its progressive and non-aggressive onset, which sometimes explains its diagnosis at a late stage in the form of a giant cold swelling without inflammatory signs, accompanied or not of lymphadenopathies of the abscessed region [7], it is often accompanied by an infection of the adjacent osteoarticular compartment [3]; In our patient, the results of both ultrasonography and CT confirmed the isolated nature of muscle involvement without bone and subcutaneous lesions, so, Isolated tuberculous muscle abscesses have been reported in the following muscles: the biceps brachia, the right rectus femoris, the psoas ,the rectus abdominis, and the gluteus maximus as well as the sub masseteric space [9].

Biologically, muscle tubercular abscess is sometimes associated with a moderately elevated inflammatory syndrome: namely sedimentation rate and CRP, but in most cases these are normal. The intra-dermal reaction to tuberculin, although it has not been performed in our patient, is often positive [6].

At the time of surgical drainage, the yellowish pus sample is sent to the bacteriology where a direct examination with ZEIHL staining and a culture in a specific medium called LOWENSTEIN and JENSEN for 3 to 4 weeks confirm the presence of tubercle bacilli [10], while the histo-pathological examination on the different samples allows to highlight epithelio-giganto-cellular follicles with caseous necrosis.

Surgery alone of the TB abscess is not enough; its main role is collection flattening and limits its extension not only locally but also in the nearby compartments, it must be followed by anti-bacillary medical treatment (INH, RIF, EMB and PZA) in order to permanently eradicate the pathogen. A study conducted by “the American Thoracic Society, Centers for Disease Control, and Infectious Diseases Society of America” has shown that anti-bacillary agents cannot infiltrate a TB abscess, so it is mandatory to drain the abscess for anti-tuberculosis treatment to be effective[11].

CONCLUSION

Muscular-skeletal abscesses must be mentioned in front of any abscessed musculoskeletal collection in any immunocompromised patient living in a country endemic for tuberculosis, and to make the diagnosis, it is essential to gather all the arguments in favor, as well clinical as biological in order to take care of them with the adequate way and to avoid the complications

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