MEGA JOURNAL OF CASE REPORTS

Case Presentation

Compiled Date: August 30, 2023

Anterior Cervical Lymph Node Tuberculosis: About A Case at the CHR of Saint Louis (Senegal)

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Summary

Introduction: lymph node tuberculosis is a frequent presentation of extrapulmonary tuberculosis. Anterior cervical tuberculosis is rare and poses a diagnostic problem due to its poor clinical presentation. We report a case of anterior cervical localization.

Observation: A 21-year-old female patient was admitted to the ENT department of the Saint Louis regional hospital for an anterior basi-cervical mass for 1 year, accompanied by intermittent fever. Questioning revealed no any medical history of tuberculosis. Clinical examination revealed a painless basi-cervical swelling, approximately 2.5 cm long, with skin opposite a fistula scar. Needle puncture yielded 3cc of frank pus. HIV serology was negative. Chest X-ray was normal. Cervical ultrasound revealed a 21x 06 mm subcutaneous liquid mass (necrotic adenopathy) and a normal thyroid. GeneXpert testing of the pus was positive. An antituberculosis treatment was instituted and the course was favourable, with complete remission in 6 months.

Conclusion: Any recurrent collected adenitis should suggest a diagnosis of tuberculosis, especially in endemic areas, hence the value of GeneXpert.

Keywords: Anterior cervical tuberculosis; GeneXpert; Anti-tuberculosis drugs

Introduction

Tuberculosis (TB), a common granulomatous disease caused by Mycobacterium tuberculosis, remains a major cause of morbidity and mortality particularly in developing countries [1]. The impact annual new cases are 9 million, with an estimated mortality of 1.7 million. Approximately one-third of the world's population is infected with bacillus, and over nine million new cases of tuberculosis appear in the world every year [2]. In

Tunisia, where tuberculosis is still endemic, over 2,000 new cases of tuberculosis are diagnosed every year. Extra pulmonary forms account for 30 to 35% of reported cases of tuberculosis **[3].** Ganglionic tuberculosis is the most frequent form **[3,4].** Cervical localization is predominant (75%) **[3].** However, we report a case of anterior cervical localization, which remains a challenge for otolaryngologists, due to its rarity and varied presentation. It is either missed or often misdiagnosed as an acute malignancy or an acute infectious condition, unnecessarily delaying diagnosis.

Medical Observation

This was a patient FW, 21 years old, female, fish seller, received on December 24, 2019 at the ENT department of the Saint Louis regional hospital for basi-cervical mass evolving for 1 year, accompanied by intermittent fever. Questioning revealed no notion of contagious infection, nor any medical history of tuberculosis. Clinical examination revealed a painless anterior basi-cervical swelling, about 2.5 cm long on the long axis, with skin over the fistula scar **(Figure 1).** A needle puncture yielded 3cc of frank pus. HIV serology was negative. Chest X-ray was normal. Cervical ultrasound revealed a subcutaneous liquid mass of 21x06 mm (necrotic adenopathy) and a normal thyroid. The GeneXpert of MTB-Rif pus was positive. Antituberculosis treatment was initiated with a therapeutic regimen of 2RHZE/4RH by three tablets a day for 6 months and the evolution was favorable with complete remission **(Figure 2).**

Figure 1: Demonstration of painless anterior basic-cervical swelling, about 2.5 cm from the long axis, with skin next to the fistula scar.

Figure 2: 6-month follow-up with complete remission of the anterior cervical swelling.

Discussion

Extra-pulmonary tuberculosis has become a major public health problem, over the past two decades, it occurs mainly in the head and neck region, with cervical tuberculous adenopathy being the most frequent form **[5].** Tuberculosis remains endemic in Senegal. However, its incidence is clearly declining as a result of the major efforts made by the public authorities to combat the disease particularly in its pulmonary localization, which is responsible for its contagiousness. The extra-pulmonary form is no exception to this rule. Nevertheless, it is recrudescence **[6].** The 2017 study by Diop M.M and al **[7]** in Senegal noted a 12.7% prevalence of extra-pulmonary localization. Worldwide, WHO **[8]** reports 14% of extra-pulmonary forms among all tuberculosis cases without pulmonary involvement. The frequency of PET throughout the world varies according to study duration and study population. However, it remains underestimated, as the diagnosis is based in the majority of cases on presumptive arguments. What's more, it mainly affects the young male population in the midst of socio-economic activity **[6,7].** As in our study, a girl, a merchant with a precarious lifestyle, but with a particular female gender. This predominance among young people has also been reported by other authors in Africa **[9,10,11],** who found an average age respectively an average age of 34.5; 28 and 33.8 years. In addition, it can occur any age **[12].** On the other hand, other authors in Africa **[13,11,14],** reported a female predominance with sex ratios of 0.5, 0.46 and 0.7 respectively. According to Zang and coll **[15],** the female gender represents one of

the main risk factors identified, as predisposing to extra pulmonary tuberculosis, in addition to black race and HIV infection. In addition, origin from endemic countries, poor socio-economic conditions, communal living, drug addiction, tuberculosis reactivation after primary infection in the elderly (50-70 years) or in immunocompromised or immunocompromised people also lead to an increase in tuberculosis cases **[16].** In the literature, it has been described that, on questioning, the notion of tuberculosis contagion or tuberculosis infection in 22% and 16% of cases respectively **[17,18].** However, our patient had no notion of contage, or medical history of tuberculosis, which is identical to the study by DOUMBIA-SINGARE K and al **[12],** in 2015 in Mali. Clinically, a painless swelling fistulized anterior basi-cervical, about 2.5 cm, accompanied by nocturnal fever. Clinically, the diagnosis of tuberculosis is often difficult. It relies on a thorough history and a complete physical examination, which presents as a painless, fluctuating adenopathy over 3 cm in diameter **[16].** On the other hand, it is important to know the difference with thyroid tuberculosis, which is rare, with an incidence 0.4%, probably because thyroid tissue is relatively resistant to tuberculosis infection **[19].** It can also present as an anterior cervical abscess form of an anterior cervical abscess, as was the case in our study. aspiration of the swelling, to perform a Gene Xpert of the pus, unnecessary delays are avoided. It is very important to differentiate tuberculosis from other granulomatous diseases such as de Quervain's thyroiditis and sarcoidosis, in which corticosteroids are used, which can otherwise aggravate patients with tuberculosis **[1].** Chest X-rays should be systematically requested in order to search for concomitant pulmonary localization **[20],** which was nevertheless found to be normal in our patient. In our case, cervical ultrasound had visualized a subcutaneous liquid mass 21x 06 mm (necrotic adenopathy) and a normal thyroid. It is therefore particularly vital to distinguish anterior cervical lymph node tuberculosis from thyroid nodules, and from the acute infectious state in this site in order to avoid unnecessary surgery or inappropriate treatment.

Imaging plays an essential role in ENT tuberculosis, confirming the diagnosis and define the extent of the lesion. Ultrasound, CT scan or MRI can be performed, depending on the site of the lesion and the patient's financial situation. In a case of tuberculous thyroid abscess, a hypoechoic mass is usually visualized on ultrasound **[1].** GeneXpert has considerably revolutionized the diagnosis of tuberculosis in general and particularly extra pulmonary, with good sensitivity (79.3%) and specificity (90.4%) **[21].** In our patient, GeneXpert of pus MTB-Rif was positive, enabling us to make a rapid diagnosis of tuberculosis in the anterior cervical lymph node tuberculosis within 48 h, and to institute antituberculosis treatment with a therapeutic regimen of 2RHZE/4RH by three tablets a day for six months and the evolution was favorable with complete remission. According to World Health Organization (WHO) recommendations, the total duration of treatment is 6 months, i.e., 2RHZE/4RH **[12].** Various studies in the literature and international recommendations (notably those of the Centers for Disease Control and Prevention and the French Council of Public Health) point out that a six-month course of treatment is as effective as a longer course of treatment for tuberculosis outside the neuromeningeal localization **[22].** However, the duration of treatment is still debated, with no consensus on the optimal duration of treatment. This is variable according to location and differs from one practice to another. Further studies are needed to establish a consensus and standardize the duration of treatment for extra-pulmonary localizations such as pulmonary tuberculosis **[6].** In Senegal, a National Tuberculosis Control Program (NTP) has been in place since 1985, for the management of free and decentralized charge in health districts.

Conclusion

Tuberculosis is more prevalent in developing countries. Any recurrent adenitis should suggest a diagnosis of tuberculosis, especially in endemic areas, hence the interest of making the GeneXpert of pus, which has considerably revolutionized the diagnosis of tuberculosis in general and extra pulmonary tuberculosis. Cure is possible with proper medical treatment.

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Citation of this Article

DIALLO OA, TALL H, NDOUR N, SYNAYOKO A, TINE FB, DIALLO AO and DIALLO BK. Anterior Cervical Lymph Node Tuberculosis: About A Case at the CHR of Saint Louis (Senegal). Mega J Case Rep. 2023; 6: 2001-2006.

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