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Tuberculous Arthritis of Knee Joint: A Case Report.

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ABSTRACT

Tuberculosis is a worldwide global disease, At Infectious state complications with Mycobacterium tuberculosis have increased level in occurrence, and in skeletal and intra-articular infections proceeds to affect patients and pose a challenging in diagnosis to both physicians and orthopaedicians. so, the clinical presentation that overlaps with other several infections and non-infections disease. As the non-specific clinical presentation which, overlaps with several infectious and non-infectious diseases, and the potential period of this bacteria that prolong to many years after the primary infection, subsidise to diagnosis and delayed treatment. Due to lack of the disease, physicians have to intensify the key of suspicion for the diagnosis of tuberculosis in joints (in recurrent cases). Pyrexia of unknown origin poses a task to clinicians with differential diagnosis. PCR demonstrated much higher sensitivity and specificity, so assisting early conclusions on management of assumed extra pulmonary TB. In our case recurrent illness of a knee joint, which was confirmed by PCR to be due to M.tuberculosis.

Keywords: Tuberculosis, arthritis, Anti tuberculous drugs.

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INTRODUCTION

Tuberculosis is an infectious disease entailing enormous mortality and morbidity. WHO, in 2014, 9.6 million exactly infected with TB and 1.5 million died [1]. Hence, the importance of rapid and accurate diagnosis cannot be undermined to ensure early, appropriate treatment. Early detection of tuberculosis is still based on demonstration of acid-fast bacilli (AFB) secretion and samples. Culture method is the reference method, but long incubation time may cause delay in diagnosis, treatment and response to empirical anti-tubercular therapy alone. In such cases, PCR has been widely used as a Diagnostic tool.

PCR – useful in amplifying M-TB DNA, pcr for the use of trial of anti-tuberculous treatment(ATT) for confirming diagnosis [2]. The aim of this case study was to evaluate the use of PCR in the detection of M-TB DNA in synovial fluid in patient present with diverse clinical presentation were tuberculous arthritis suspected. PCT demonstrated much higher sensitivity and specificity, thereby facilitating early therapy decisions for suspected extra pulmonary TB.

Clinical Presentation

A 45-year-old woman was admitted to our orthopaedics department, presenting with fever for 3 weeks' duration. Pain, swelling and difficulty in walking in left knee – for past 9 months. Fever for 3 weeks duration. Significant weight loss was reported. Based on clinical picture and investigation reports, patient was put on Anti – tuberculous drugs. Patient showed marked improvement within 2 weeks. No relevant past and family history, a post-menopausal woman, Not a known case of DM/ HTN/ TB/BA/EPILEPSY.

General Examination

Patient obese, conscious, oriented, febrile, no (pallor, icterus, clubbing, paedaledema, lymphadenopathy).

LOCAL EXAMINATION

LEFT KNEE: - Minimal swelling, tenderness elicited, restriction of movements +.

VITALS: -BP- 130/90mmhg.

PR-76 beats / min.

Temperature-100°F.

RR-22/min.CBG-80mgs/dl.

Investigation were done

Routine blood: - TC-9600/cu.mm,

DC- N-65, L-34, E-1.

ESR- (one and half hour)- 25mm, (one hour)-50mm.

Mantoux test – 14mm (positive).

X-ray chest – normal study. X-ray knee – Arthritis.

Synovial fluid – Grams stain few pus cells seen, no organism. AFB stain negative.



Figure 1: Mantoux test – 14mm (positive).

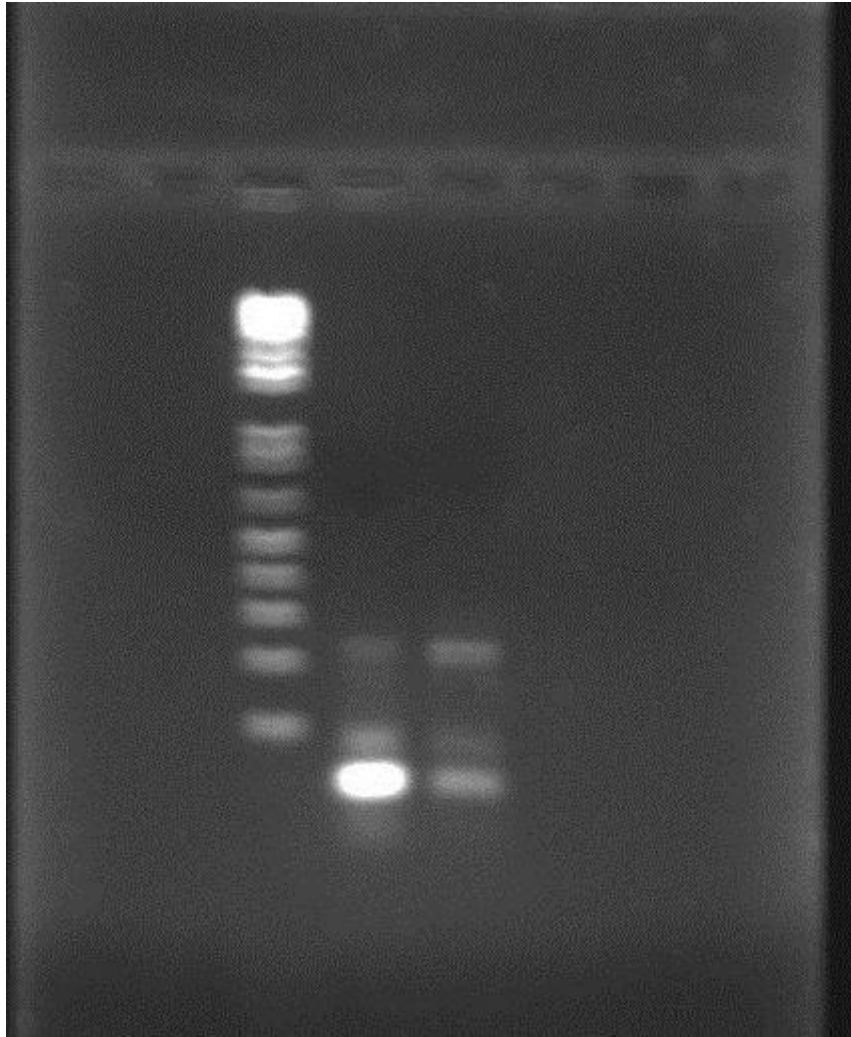


Figure 2: Fluid for TB PCR – POSITIVE.

CONCLUSION

PCR appears to be valuable in establishing the diagnosis of TB, among patients with pyrexia, in the absence of any clinching evidence of detection as it gave a definite diagnosis concordant with response contrasted to only one of these by culture. Emphasis should be given to TB as a common cause of pyrexia of unknown origin in highly endemic regions. Detecting this treatable cause of pyrexia of unknown origin more promptly and precisely would assist physicians in better management of pyrexia of unknown origin patients and limit TB transmission to assist the control of tuberculosis.

DISCUSSION

Pyrexia of unknown origin poses a diagnostic challenge to the clinicians with a different diagnosis as varied as neoplastic and infection disease. Conventional culture methods can usually detect *Mycobacterium tuberculosis* in 2 to 3 weeks, In some cases – it requires upto 8 weeks of incubation. This rapid PCR assay detects *Mycobacterium tuberculosis* complex DNA directly from Conventional culture methods can usually detect *Mycobacterium tuberculosis* in 2 to 3 weeks, although up to 8 weeks of incubation may be required in some instances. The rapid PCR assay detects *Mycobacterium tuberculosis* complex DNA directly from respiratory specimens and other specimens without waiting for growth in culture and, therefore, the results are available the same day the specimen is received in the laboratory.

Pcr demonstrated much higher sensitivity and specificity, thereby facilitating early therapy decisions for suspected extra pulmonary TB. In our study, the positive PCR result in combination with pyrexia of

unknown origin was taken as a sign of disease in progress and was treated successfully with anti-tuberculous regimens (ATT).

Though tuberculous arthritis occurs in mono articular and insidious onset, chronic joint pain, minimum sign of inflammation, weight bearing joints (knee). In synovial type of arthritis local pain, swelling with restriction of movements of the affected area. Hence, patient has typical above clinical symptoms and signs. Based on clinical picture and investigation report, ESR– Raised, Mantoux test – Positive, X-ray (knee) –Arthritis, PCR – positive for tuberculosis. Diagnosed as tuberculous arthritis of left knee

Treatment and Outcome

In our study, patients was put on Anti-tuberculous drugs. Patient was discharged, later patient showed marked improvement within two weeks.

Finally she fugitive from the most fatal tuberculous infection by the degree of the treatment and success depends on the tuberculous infection, magnitude of the infection, the host's health and the infection site.

REFERENCES

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