

Fever – Common symptom with uncommon Diagnosis in UK Primary Care – A Case report

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Abstract

A case study presenting with fever with an uncommon diagnosis in UK Primary Care.

Key words: fever, rare diagnosis, delayed onset falciparum malaria infection

Introduction

Fever is one of the common presenting symptoms in Primary health centers with a wide range of differential diagnoses including malaria.

It is crucial, especially in Primary Care, to undertake a detailed history including careful examination and appropriate investigations where available. It is also important to keep the rare differential diagnoses in mind in order to diagnose and treat patients efficiently. However, due to limited investigations in primary care it is necessary at times to refer patients to secondary care in cases of uncertainty of diagnosis and for further management and monitoring.

Delayed falciparum malaria infection is a rare occurrence, which can lead to delayed diagnosis and treatment. In this case report, we described a patient who presented with delayed falciparum malaria infection, which was not detected until 190 days after travelling to endemic area i.e. India.

The following case highlighted the significance of proper history taking, especially travel history and keeping rare diagnoses in mind even when a patient presents with a common symptom.

Malaria prevalence in the UK

In 2019, 1,719 cases of imported malaria were reported in the UK (1,626 in England, 58 in Scotland, 25 in Wales and 10 in Northern Ireland), 2.1% higher than reported in 2018 (N=1,683) and 6.6% above the mean number of 1,612 cases reported annually from 2010 to 2019. Fifteen deaths from malaria were reported in the UK in 2019, which is an increase compared to the previous 10 years with an annual average of 6 deaths. Fourteen deaths in 2019 were from falciparum malaria.

Fever – with rare diagnosis of delayed onset falciparum malaria

A Case report from UK Primary health center:

A 42-year-old male presented to a primary care center in UK with a history of fever, chills, and fatigue for 2 days. He denied having any symptoms of cough and cold, and there was no sore throat or earache. He also denied any urinary or bowel symptoms. Pt did not have significant past medical or surgical history, and he was not taking any regular or over the counter medicines. He was a smoker and did not drink alcohol.

On examination, the patient was found to be febrile with a temperature of 39.3°C and had no other significant findings on detailed clinical examination. His BP was 125/70, pulse 110/min regular, O₂ saturation on room air 98%, respiratory rate 20/minute. Urine dip didn't show any signs of infection.

As his clinical examination didn't suggest a source of infection, history was re-visited; he had travelled to India more than 6 months ago. We suspected it was a case of possible malaria, i.e. delayed infection due to falciparum malaria. We suggested blood tests including full blood count, urea and creatinine, liver function tests, blood cultures and blood smear. He was referred to hospital inpatient treatment.

In hospital the lab investigations showed hemoglobin 110, WBC 3.5, platelets 137, LFT's and U&Es were normal and blood film for malarial parasite was +ve. The patient was put on intravenous quinine therapy for the treatment of falciparum malaria. His fever subsided after 24 hours of treatment and his parasitemia decreased significantly on repeat blood smears; blood culture was negative for any growth. He was subsequently switched to oral artemether-lumefantrine combination therapy and was discharged from the hospital after completing a 7-day course of treatment. The patient was advised to return if he developed any further symptoms.

Discussion

This patient with a common presentation of fever and rare diagnosis was interesting as well as challenging due to the initial normal examination and after more than 6 months history of travel to a malaria endemic area.

It is a reminder that even with common presentations e.g., fever, the diagnosis can be rare and not straightforward. The primary care physicians play a vital role in narrowing down the diagnosis by taking a proper history and detailed clinical examination and onward referral if symptoms do not match clinical presentation.

The key learning point from this case was the travel history learned during the consultation which prompted the clinician to investigate further, keeping in mind the possibility of a rare condition such as delayed onset falciparum malaria infection. \

Falciparum malaria

It is a serious and potentially life-threatening disease caused by the protozoan parasite *Plasmodium falciparum*. The incubation period for falciparum malaria is usually between 7 to 14 days, but in rare cases, it can be longer. Delayed falciparum malaria infection is a rare occurrence, which can lead to delayed diagnosis and treatment. The exact mechanism of delayed onset is not well understood. Quinine is the drug of choice for the treatment of severe falciparum malaria and Artemether-lumefantrine combination therapy is recommended for the treatment of uncomplicated falciparum malaria. In this case, the patient's clinical response to intravenous quinine was excellent, and he completed a full course of oral artemether-lumefantrine therapy without any adverse effects.

Conclusion

Delayed falciparum malaria infection is a rare occurrence, but it can lead to delayed diagnosis and treatment. Physicians should have a high index of suspicion for malaria in patients with a history of travel to endemic areas and classic symptoms of the disease, even if the initial blood smear is negative. Prompt diagnosis and appropriate treatment are essential for the successful management of falciparum malaria.

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