



Contents lists available at ScienceDirect

International Emergency Nursing

journal homepage: www.elsevier.com/locate/aaen

Case report: A patient with malaria at the emergency department

M. Christien Van Der Linden^{a,*}, Anna (Annelijn) H. Rambach^b, Naomi Van Der Linden^c^a Clinical Epidemiologist, Emergency Department, Haaglanden Medical Center, The Hague, The Netherlands^b Resident Emergency Medicine, Emergency Department, Haaglanden Medical Center, The Hague, The Netherlands^c Centre for Health Economics Research and Evaluation, University of Technology Sydney, Sydney, Australia

1. Introduction

This case describes the delayed presentation of a patient with *Plasmodium Falciparum* (*P. Falciparum*) malaria to the emergency department (ED), and subsequent nursing care. It also discusses the apportion of responsibility for a patient to arrive promptly at the ED, as clinically required, after referral by a General Practitioner (GP). Furthermore, the case discusses the relevance of the patient-physician relationship for determining responsibilities.

A 62 year old lady presented to her GP with a two day history of fevers in the evening. The presentation to the GP occurred on July 13th, 12 days after she had returned to the Netherlands following a 5 day trip to Kinshasa, Democratic Republic of Congo. The patient denied any immunizations received before traveling.

The referral note from the GP provided the following information about the patient's initial visit: 'The patient is nauseous and has vomited once; her blood pressure is 117/62 mmHg, she has a pulse of 100 beats per minute (BPM), and an oxygen saturation of 99% on room air; her throat appears red'. Since the patient had no headache nor peaking fever, no further actions were undertaken by the GP at that time.

Five days later the patient contacted her GP again, now complaining of fever, headache, muscle ache, and fatigue. She had no chest pain or respiratory complaints. The GP visited the patient at home. Physical examination did not detect any abnormalities. The GP ordered lab tests including malaria blood smear and dengue rapid test.

Few hours later, the GP was called by the hospital microbiologist who told him that patients' blood smear was positive for malaria caused by *P. Falciparum*. According to the microbiologist, eligibility for home treatment depended on her clinical signs and symptoms. The patient told the GP that she was feeling sick and tired, so the GP referred her to the hospital ED at 16.30 after he consulted the internal medicine specialist of the day shift. The GP sent a referral note to the ED by fax machine addressed to the consultant internal medicine.

Desk clerk Deanne (name used with permission), who had started her shift at 17.00, noticed at 18.00 that the patient still

had not arrived at the ED. Deanne first called the patient at her home: no answer. To check whether the patient might have gone to another ED, Deanne called all EDs in the city and surrounding cities: the patient had not presented at another hospital. Then Deanne obtained the mobile phone number of the GP who had referred this patient: unfortunately, he was unreachable. Meanwhile, it was 22.00 and Deanne contacted the police to request that they pay a visit at the patients' house. Nobody answered the doorbell. After a brief telephonic discussion between the policemen, Deanne, and the coordinating emergency nurse, it was decided to let the police force the door of the patients' apartment. Policemen found the patient lying unresponsive in her bed. Upon arrival of the ambulance, 10 min later, the patient had regained consciousness. She was transported to the ED resuscitation room, arriving at 01.37 in the night.

2. Patient's medical history

The patient's medical history revealed glaucoma and hypertension, for which she used eye drops and Amlodipine. On more detailed questioning, she stated having had malaria before, when she lived in the Democratic Republic of Congo. She could not remember how often and when exactly she had malaria.

3. Case progression

The course of events are shown in [Table 1](#).

At arrival at the ED, the patient was feverish but alert. Malaria blood smear showed an increased parasitemia of 6.5%. The patient had a mild anemia that did not need transfusion. She was started on intravenous fluids, antipyretics, and oral malaria treatment.

Attention was drawn to the patient at 04.30 after she suddenly became hypotensive and somnolent. Arterial blood gasses did not show any abnormalities. A urine sample was taken to exclude other infections. A chest X-ray revealed no significant infiltrates, although it showed a small consolidation in the most basal field of the left lung that was not present anymore on the chest X-ray the day afterwards. Despite being given 1.5 liters NaCl 0.9%, the patient remained hypotensive. A urinary catheter was inserted to measure urine output. Intravenous malaria treatment and intravenous antibiotics were started. Presumption was made that the patient had a bacterial infection as well as malaria.

* Corresponding author at: Emergency Department Haaglanden Medical Center, P.O. Box 432, 2501 CK, The Hague, The Netherlands.

E-mail address: c.van.der.linden@haaglandenmc.nl (M.C. Van Der Linden), @chris10_vdl (M.C. Van Der Linden)

Table 1
Time-table of events.

Date/time	Setting	Vital signs	Physical examination findings/ Urinary output	Diagnostic tests requested	Results	Actions
July 13th	GP office	BP 117/62 mmHg 100 BPM SpO2 99%	Patients' throat appeared red Swollen glands			No actions taken by GP
July 18th	Home visit by GP		No abnormalities	Malaria blood smear Dengue rapid test	Malaria blood smear positive for <i>P. Falciparum</i> malaria 1.08%	
July 19th, 1.37 h	Arrival at ED, Resuscitation room	38.8 °C BP 111/53 mmHg 123 BPM SpO2 97% Resp 31/min	Alert, feverish, tired Bilateral coarse crackles No pain or enlargement of liver or spleen	Liver function tests Complete blood count Chemistry Malaria blood smear	Hemoglobin 6.3 mmol/L (7.0–9.5 mmol/L) Thrombocytes $71 \times 10^9/L$ (150–400 $\times 10^9/L$) Total bilirubin 37 $\mu\text{mol/L}$ (5–19 $\mu\text{mol/L}$) Blood urea nitrogen 10.3 mmol/L (2.5–7.5 mmol/L) Creatinine 98 $\mu\text{mol/L}$ (50–95 $\mu\text{mol/L}$) Blood glucose 8.4 mmol/L (3.5–7.8 mmol/L) Malaria blood smear 6.5%	IV fluids Antipyretics Oral treatment with Artemether/Lumefantrine
4.30 h	ED	38.8 °C BP 80/40 mmHg 100 BPM SpO2 97% Resp 27/min	Somnolent	Urine sample Chest X-ray Arterial blood gas Urinary catheter inserted	No significant infiltrates on the chest X-ray, although it showed a small consolidation in the most basal field of the left lung pH 7.420 (7.310–7.420); pO2 11.8 kPa (>10.6 kPa); pCO2 4.6 kPa (4.3–6.0 kPa); bicarbonate 22.7 mmol/L (21.0–27.0 mmol/L).	1.5 L NaCl 0.9% 5.00 h: start Artesunate 2.4 mg/kg intravenous Cefuroxime 1500 mg intravenous
7.30 h	Admission at the ICU	BP 80/40 mmHg	Somnolent			Continuous intra-arterial blood pressure monitoring at ICU 2.5 L NaCl 0.9%/24 h Central venous catheter for blood pressure augmentation with Noradrenaline
9.00 h	ICU	37.2 °C BP 82/44 mmHg 94BPM SpO2 99% Resp 27/min	Alert Urine output between 430 h and 900 h: 60 cc			
9.00–11.00 h	ICU	37.4 °C BP 84/43 mmHg 88 BPM SpO2 98% Resp 14/min	Alert Urine output between 9.00 h and 11.00 h: 60 cc			11.00 h: start Noradrenaline intravenous
11.00–13.00 h	ICU	37.8 °C BP 121/62 mmHg 92BPM SpO2 99% Resp 30/min	Urine output between 11.00 h and 13.00 h: 220 cc		Blood glucose 10.4 mmol/L	12.30 h: 4 tablets of Artemether-Lumefantrine
13.00–15.00 h	ICU	39.3 °C BP 132/56 mmHg 106 BPM SpO2 98% Resp 27/min	Urine output between 13.00 h and 15.00 h: 180 cc		Malaria blood smear 4%	
15.00–17.00 h	ICU	39 °C BP 100/54 mmHg 104 BPM SpO2 97% Resp 29/min	Urine output between 15.00 h and 17.00 h: 200 cc		Blood glucose 6.8 mmol/L	

Download English Version:

<https://daneshyari.com/en/article/8556919>

Download Persian Version:

<https://daneshyari.com/article/8556919>

[Daneshyari.com](https://daneshyari.com)