c East African trypanosomiasis

East African trypanosomiasis [EAT] was confirmed in two patients admitted to a Johannesburg hospital in December 2018. Both presented with acute febrile illness; rapid progression of illness to multi-system involvement prompted medical evacuation. Both patients required admission to a critical care unit for supportive care and suramin therapy.

Patient 1 was a 24-year-old male working in the Luuano Game Management Area, adjoining the northern boundary of the Lower Zambezi Game Park, Zambia. He self-tested for malaria (negative RDT) after developing a fever, and travelled to Lusaka, the capital, after not responding to empiric malaria treatment. He had a typical trypanosomal chancre. The diagnosis of EAT was promptly confirmed on a peripheral smear; suramin was commenced, and medical evacuation to South Africa was arranged for management of complications of EAT. These included profound thrombocytopenia (platelet count of 16 x 10^9/L) but no bleeding, raised transaminases (3 times normal), acute respiratory distress syndrome (ARDS) requiring nasal oxygen, and some initial confusion. This patient responded very well to treatment, including diuresis, platelet transfusions, and a course of suramin therapy. An examination of the cerebrospinal fluid excluded the presence of central nervous involvement.

Patient 2 was a 24-year-old from the United Kingdom working as a volunteer on an elephant census project in the Vwaza Marsh Wildlife Reserve, Malawi. He developed an acute febrile illness and was seen at a number of clinics over several days; malaria tests were reported as negative. He was treated with antibiotics but deteriorated and was transferred in a critical condition with liver failure (transaminases >100 times normal value), haemodynamic shock (but no definite myocarditis), encephalopathy and seizures, severe lactic acidosis, lower lobe pneumonia and ARDS, disseminated intravascular coagulopathy with bleeding, and renal failure. The patient had a typical trypanosomal chancre on his back, which seems to have been missed during his medical consultations in Malawi. The diagnosis of EAT was confirmed on a peripheral blood smear.

The intense parasitaemia initially seen on admission reduced significantly in response to suramin therapy. Despite ventilatory and inotropic support, dialysis, platelet and clotting factor replacement, the patient's condition continued to deteriorate and he demised. Liver failure, possibly as a result of a period of severe hypotension prior to admission, would seem to have been the major clinical problem.

While malaria is still the most frequent infection to consider, trypanosomiasis must be contemplated urgently in the differential diagnosis of progressive, acute febrile illness in persons living, working or travelling to trypanosomiasis-endemic areas. Both game parks are well-known areas for EAT, especially the Vwaza Marsh Wildlife Reserve in Malawi. A history of tsetse fly bites, the presence of a skin lesion – the trypanosomal chancre (often misdiagnosed as an eschar of African tick bite fever, a spider bite, or cellulitis) – and negative malaria RDTs, should strongly suggest a diagnosis of EAT.

The diagnosis can be confirmed on a peripheral blood smear, but this may not always be done in the setting where the patient is first seen, and repeat smears may be required. While the disease is uncommon, early consideration of this diagnosis is typical, and patients require urgent treatment with suramin and supportive care. WHO-supplied stocks of suramin are available in Johannesburg, South Africa; Harare, Zimbabwe; and Lusaka, Zambia.


Source: Centre for Emerging Zoonotic and Parasitic Diseases, NICD-NHLS; Private Hospital in Johannesburg; johnf@nicd.ac.za

d Dengue fever in returning travellers

Dengue fever is not endemic in South Africa, and therefore local transmission does not occur. Cases seen in the country are from travellers returning from dengue-endemic regions such as South-East Asia, the Western Pacific, the Americas (Central and the northern parts of South America), Central, West and East Africa and the Eastern Mediterranean. Dengue fever was diagnosed in a small number of returning travellers in December 2018 and January 2019.

Dengue fever was confirmed in two patients by PCR, in December 2018. One case was a 50-year-old male from Cape Town who travelled to Mombasa, Kenya, and presented with a 4-day illness characterised by arthralgia, photophobia, fever and headache. The patient also reported maculopapular rash on the face, arm and trunk. The second case was a 54-year-old male from Cape Town who travelled to Somalia, and presented with fever, myalgia, arthralgia and headache. This patient did not report any rash.

Probable dengue cases were detected in three patients by dengue serology. One case was a 20-year-old female from Centurion, Pretoria who travelled to Phuket, Thailand in November 2018. The patient presented with a fever, headache,
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vomiting and a rash on the legs. The second case was a 32-year-old male from Somerset West who travelled to Central America and the Philippines at the end of 2018. The patient presented with headache, fever and a maculopapular rash on the arms and legs. The third case was a 27-year-old male from Durban, who travelled to Vietnam in January 2019 and presented with a fever, severe bone pain and rigors.

Physicians should be alert to returning travellers presenting with fever, rash, arthralgia, myalgia and headache at this time of the year. There is no specific treatment for dengue fever apart from symptomatic management. Mosquito control and prevention of bites are essential in reducing dengue virus infection.

Source: Centre for Emerging Zoonotic and Parasitic Diseases, NICD-NHLS; januszp@nicd.ac.za

2 ENTERIC DISEASES

a An update on cholera and typhoid fever

Update on the cholera and typhoid outbreaks in Zimbabwe

On 6 September 2018, a cholera outbreak was declared in Harare by the Ministry of Health of Zimbabwe. As at 16 January 2019, the cumulative number of cholera cases was 10,680 including 68 deaths. There has been an overall decline in the number of new cases reported per week across the country since the end of December 2018.

There has been a resurgence of typhoid fever in Harare since mid-September 2018. As at 09 December 2018, a cumulative total of 5,159 cases (including 15 deaths) was reported. The weekly incidence reportedly peaked in week 41 (week ending 14 October 2018) and has since been declining gradually.

Cholera in South Africa

Cholera is not endemic in South Africa. Infrequent, sporadic cholera cases are reported and are typically imported (travel-related). The notable exception is the 2008-2009 cholera outbreak which began as a spill-over from neighbouring Zimbabwe. During 2018, five laboratory-confirmed cases of cholera were reported in the country, including imported cases from Zimbabwe. Cases were detailed in previous NICD Communiqués: February 2018, Vol.17(2), October 2018, Vol.17(10), November 2018, Vol.17(11) - can be accessed on the NICD website: http://www.nicd.ac.za/index.php/publications/nicd-nhls-communicable-diseases-communique/archives/ To date, no cholera cases have been reported for 2019.

Typhoid fever in South Africa

Typhoid fever remains endemic in South Africa. Typhoid outbreaks occurred in 2005-2006, but since then the number of culture-confirmed typhoid fever cases annually has remained stable at <150 cases per year. Most cases are typically sporadic, but small clusters and localised outbreaks do occur. Although imported travel-related cases are reported, the majority of cases are locally acquired, reflecting ongoing, albeit low-level, transmission. A recent imported case serves as a reminder to be alert for the disease in travellers from areas with high transmission or current outbreaks. A 19-year-old male who lives in Bulawayo, Zimbabwe, travelled to South Africa for elective orthopaedic surgery. He was admitted on 17 December 2018, but surgery was delayed due to persistent pyrexia (>40°C) with no overt source. Salmonella Typhi (S. Typhi) was isolated from blood cultures collected five days after admission. He received appropriate antibiotic treatment and was discharged on 10 January 2019. No other imported typhoid fever cases linked to the Zimbabwean outbreak have been identified. For the year 2019 to date, two laboratory-confirmed cases (both locally acquired) have been reported.

Alert for healthcare workers

Heightened awareness for possible cholera and typhoid fever cases must be maintained whilst the outbreaks continue in Zimbabwe, and especially so given the current political and economic crisis, which could disrupt outbreak control activities and result in increased travel to South Africa. All suspected cases of cholera and typhoid fever should be investigated and notified immediately to the relevant stakeholders.

Cholera: cholera should be excluded in any patient who develops acute watery diarrhoea with or without vomiting. Stool samples (or rectal swab samples where stool sample collection is problematic) must be collected and submitted with a specific request for cholera testing, in addition to routine MCS requests. If a delay in testing or transport of specimens is anticipated, specimens should be submitted in Cary-Blair transport media. Guidance on sample collection can be found at: http://www.nicd.ac.za/assets/files/Suspected%20cholera_guidelines%20(2_2).pdf. Mild-to-moderate cholera cases may be treated with oral rehydration fluid. Severe cases require admission and intravenous fluid administration. Antibiotic treatment is recommended for patients with moderate to severe dehydration, as it reduces disease severity and the risk of further transmission. Azithromycin is recommended for cases linked to the current Zimbabwean outbreak.

Typhoid fever: Unfortunately, typhoid fever often presents with non-specific features and may mimic many other febrile diseases. Clinical features are protean, and include fever, white-coated tongue, gastrointestinal symptoms (abdominal pain,