The First Reported Autoimmune Hemolytic Anemic Syndrome with Systemic Lupus Erythematosus Complicated by COVID 19 Infection in Sudan: Correspondence

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ABSTRACT

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Introduction

A series of unexplained cases with pneumonia have been reported in Wuhan, China. The disease has a very similar clinical manifestation of viral pneumonia. After multiple sequences analysis of respiratory tract samples, a novel strain of coronavirus was isolated, and has been named Coronavirus Disease 2019 (COVID19) [1]. Common symptoms include cough, fever, fatigue, and myalgia [2]. Complications include acute cardiac injury, acute respiratory distress syndrome and secondary infections [3], however data regarding cardiovascular involvement due to COVID 19 are less described. Here we describe the first case of autoimmune hemolytic anemic complicated by COVID 19 infection in Sudan. A 57-year-old Sudanese male from River Nile state presented to the Out-patient...
clinics in Almawda Hospital-Sudan in 11 April 2020 with complaint of Pyrexia of unknown origin for 5 months. The condition started at November 2019, with high grade fever, intermittent at the beginning then became continuous, relieved only by paracetamol tablets and associated with profuse sweating. There was also slight weight loss, loss of appetite, nausea, and malaise. On systemic enquiry He complained of generalized joints pain, not associated with swelling, deformity, or restriction of movement, along with generalized fatigability. However, he denied morning stiffness.

There was also severe mouth dryness, no eyes dryness, hair loss, any skin rashes or headache. There was abdominal distention, no change in bowel habits, no night sweats, cough, chest pain, hemoptysis or shortness of breath, no palpitations, dizziness or black outs, no genitourinary symptoms. He had no previous episode of prolonged fever in the past and no history of travel. On examination the patient looked ill, febrile, lethargic, pale, and severely jaundiced. He was not distressed and all of his vital parameters were normal. The cardiopulmonary examination was all normal. Air entry was equal bilaterally, there was no chest deformity, had normal vesicular breathing with no added sounds and normal first and second heart sounds with no murmur. Abdominal examination revealed huge splenomegaly up to the umbilicus, normal liver span, and negative shifting dullness. There were discrete, non-tender, firm enlarged lymph nodes in the cervical and axillary regions. Musculoskeletal examination was normal, there was no swelling, tenderness, restricted movement, or deformity along all of his body joints. There was no skin rash or any bruises, no hair thinning or area of alopecia. No lower limbs edema and peripheral pulses were intact.

After investigations, the patient discovered to have low hemoglobin 6g/dl (normal value 12-16 g/dl), seen by a hematologist and work-up was done including bone marrow aspirate to exclude hematological diseases. His hemoglobin continued to drop despite regular blood transfusion of 1 to 2 bind weekly. Accordingly, a hematological consultation was done for the second time; and clinical examination detected cervical and axillary lymphadenopathy, and huge splenomegaly. His blood tests showed normocytic normochromic anemia with anisocytosis, high ferritin level, increased reticulocytes count and strongly positive direct coombs test. Right axillary lymph node biopsy was taken, which was consistent with chronic lymphadenitis. A Bone marrow aspirate and trephine biopsy was taken and showed reactive bone marrow, highly suggestive of lymphoproliferative disease, accordingly a sample was submitted for flowcytometry which confirmed that the bone marrow is not infiltrated by lymphoma cells. After excluding any possibility of infections such as tuberculosis and brucellosis, and excluding of any hematological malignancies, the patient had any possibility of infections such as tuberculosis and brucellosis, bone marrow is not infiltrated by lymphoma cells. After excluding the sample was submitted for flowcytometry which confirmed that the diagnosis of COVID 19 was made; and a nasopharyngeal swab and throat swab were taken.

An endotracheal intubation was done and the patient died after few hours. The real time PT-PCR result was conclusive to the diagnosis of COVID 19 in the next day. AIHA is a destruction of red cells by autoantibodies, while many cases are idiopathic, others are associated with autoimmune, certain drugs and malignancies. Here we are presenting the first autoimmune hemolytic anaemia associated complicated by COVID 19 in Sudan, despite autoimmune hemolytic anaemia is rarely complicated by infections, but the treatment with immunosuppression effect patient immunity and become more vulnerable to infection. The first reported case of COVID 19 in Sudan by the federal Ministry of health was on 12 March 2020, the infrastructure and the health system in Sudan is extremely fragile not only for COVID 19 infection but to a lot of epidemic diseases, as they been reported by the World health organization. Today on 31 May 2020 the accumulative number of all patients been reported by Sudan Ministry of health is 5026 cases with the mortality rate of 5.2% which is very high.

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This study is been done as collaborative project Between Medical and Cancer Research Institute (MCRI), Nyal, Sudan. And Institute of molecular biology. The case was mange and followed By Dr Ziryab Imad Taha, Rheumatology Department, Haj Al-Safi Teaching Hospital, Khartoum, Sudan.

Patient consent

Written consent has been obtained.

Conflicts of interest

All authors declare there are no conflicts of interest.

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