

Staphylococcus Aureus Septicopyemia and Diabetes

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DOI: <https://doi.org/10.36347/sjmcr.2024.v12i11.028>

Received: 11.10.2024 | Accepted: 18.11.2024 | Published: 25.11.2024

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Abstract

Case Report

Staphylococcal septicemias are serious infections caused by bacteria of the Staphylococcus genus. They are very common and cause various complications such as multi-organ failure which can be fatal. We report the case of a patient admitted for diabetic ketoacidosis revealing staphylococcus septicopyemia with multiple metastatic locations.

Keywords: Staphylococcus septicemia, diabetic ketoacidosis, multi-organ failure, Staphylococcus aureus, immunosuppression.

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INTRODUCTION

Staphylococcus bacteremias are among the most common and serious infections [1]. They pose a diagnostic and therapeutic problem and can prove fatal or develop into complications, especially in cases of immunosuppression [2]. We report the case of a patient admitted for diabetic ketoacidosis revealing staphylococcus septicopyemia with multiple metastatic locations.

OBSERVATION

We report the case of a 56-year-old patient, poorly balanced diabetic for 8 years on ADO. Admitted with diabetic ketoacidosis, with impaired consciousness. The examination found a patient with 14/15 OS, febrile at 39°C with an appearance of Osler's paronychia. The blood tests showed hyperleukocytosis at 22160/mm³ with ANC at 19190/mm³, CRP at 415 mg/l, capillary blood glucose at 3.8 g/L, isolation of Staphylococcus aureus meti-S in 2 blood cultures and ECBU, the presence of 6x9 mm vegetation of the large mitral valve on cardiac ultrasound, bilateral PNA and splenic infarction on abdominal CT. The eye exam revealed bilateral Roth spots. Brain CT revealed micro mycotic abscesses with sterile CSF on lumbar puncture. The patient was treated with insulin and dual antibiotic therapy with a favorable outcome.

DISCUSSION

Staphylococci are gram-positive cocci, very resistant in the external environment. Man is the main

reservoir. Complications of SAU bacteremia are common, especially in immunocompromised people, occurring between 11 and 53% of cases depending on the studies [2]. Diabetes promotes immunosuppression by altering the phagocytic functions of white blood cells. Predictive factors associated with the development of metastatic localizations reported in the literature were delay in administration of appropriate treatment (more than 48 hours), persistent fever for more than 72 hours after the start of antibiotic treatment and high CRP value. The preferred sites of Staphylococcus bacteremia are mainly the endocardium and the bone. This is explained by the formation of septic vascular microthrombi at the level of the initial septic site, their fragmentation under the effect of fibrinolysin and dissemination by blood. The sensitivity of staphylococci is constantly evolving; M penicillins (oxacillin, cloxacillin) are the standard treatment for staphylococci sensitive to methicillin [4]. The duration of treatment depends on the severity and site of the infection.

CONCLUSION

The virulence of staphylococci aureus explains the severity of invasive infections even when the strain is sensitive to all anti-staphylococcal antibiotics. Furthermore, this observation demonstrates that infections correlated with the immunosuppression power of diabetes can be a source of complications that can be life-threatening if adequate care is not established.

Citation: Sara El Ansari, Inas Ouggane, Ahd Ouladlahsen, Latifa Marih, Mustapha Sodqi, Fatima Ihibbane, Hanane Badi, Kamal Marhoum El Filali. Staphylococcus Aureus Septicopyemia and Diabetes. Sch J Med Case Rep, 2024 Nov 12(11): 1960-1961.

Declarations

Consent for Publication: All authors declare that written informed consent was obtained from the patient for publication of this case report.

Ethical Approval: As international standard, written approval has been collected and preserved by the authors.

Availability of Data and Material: All data generated or analysed during this study are included in this published article.

Competing Interests: Authors have declared that no competing interests exist

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