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## CASE STUDY

# A CASE STUDY ON PANCYTOPENIA AS A CONSEQUENCE OF SEPSIS

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### ABSTRACT

Sepsis is a medical emergency that describes the body's systemic immunological response to an infectious process that can lead to end-stage organ dysfunction and death. Despite significant advancements in the understanding of the pathophysiology of this clinical syndrome, advancements in hemodynamic monitoring tools, and resuscitation measures, sepsis remains one of the major causes of morbidity and mortality in critically ill patients. We are reporting a case of sepsis that presented to us with the features of multiple blisters and high-grade fever later when investigations were done and complete blood count revealed Pancytopenia which is a rare presentation of sepsis.<sup>[1]</sup>

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## INTRODUCTION

Sepsis, now defined as life threatening organ dysfunction due to a dysregulated host response to infection. Globally, the population incidence of hospital treated sepsis in adults is estimated as 270 per 100 000, with overall mortality estimated at 26%. Acquired agranulocytosis is a rare condition with a reported incidence ranging from one to five cases per million population per year. An association with medications can be found in two-thirds or more of the incidents. Neutropenia is usually a result of decreased production or increased destruction. There are a number of medications implicated as potential causes of neutropenia or agranulocytosis, the most definitive medications being those that cause bone marrow suppression. In this case report, we describe the observation of Tazobactam-piperacillin associated agranulocytosis as well as hemolytic/aplastic anemia<sup>[2]</sup>

## CASE REPORT

A 45-Year-old adult male presented in OPD with chief complain of on & off high grade fever since 1 year which was subsided by taking primary medication. Itching in groin region since 1 year, blisters in the groin region 8 month back which was tense and fluid filled. Patient complained of multiple painful blisters on both upper and lower limbs since 20 days which gradually increased in size and busted spontaneously with blood-tinged discharge. Patient also complained of swelling of bilateral lower limb since 10 days.

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The patient is a labour by occupation and is doing so since last 20 years. Patient had no similar complaints in the past. Patient is a non-smoker, non-alcoholic, with no history of hypertension, asthma, diabetes mellitus or any other chronic illness in the past. On examination pallor was present. There was inguinal lymphadenopathy and bilateral pedal pitting oedema. On inspection, there were multiple healing blisters on both upper and lower limbs. On palpation, patient had mild hepatosplenomegaly

## INITIAL MANAGEMENT

Initially patient was started on inj Augmentin, inj diclofenac, tab metronidazole, cap becosule for the management of pain. Vitals of the patient on the admission was- HR- 111/min, BP-116/90 mm of hg, SPO2- 97%, RR-18/min

## INVESTIGATION

### CBC on admission

Hb-9.5, RBC-3.45, HCT-30.1, MCH-27.5, RDW-15.5, WBC-700, N-45, L-50, Platelet-110, ESR-53 Absolute neutrophil count- <350

**Repeat after 2 days:** Hb-7.8, RBC-2.81, HCT-24.9, MCH-27.8, RDW-15.7, WBC-900, N-70, L-26, Platelet-131, ESR-95

**USG of Soft Part:** Multiple pockets of hypoechoic collections with internal echoes seen in muscle and intermuscular plane on anterior and middle aspect of right upper thigh and mid-



thigh; anterolateral aspects of B/L legs. Largest measuring approximately 11.1 x 3.1 x 1.1 cm (22cc) on the anteromedial aspect of right upper thigh. Multiple varying sizes lymph nodes are seen in right inguinal region measuring approximately 3 x 1 cm. Similar collection in the right axillary region measuring approximately 23cc. overlying excessive subcutaneous tissue oedema.

### PERIPHERAL BLOOD FLIM:

RBC- microcytic hypochromic, NRBC- not seen, WBC- decreased, PLATLETS- decreased, no hemoparasite seen, no premature cells seen, TLC count- 1000

### USG WHOLE ABDOMEN

Mild hepatosplenomegaly

### BONE MARROW BIOPSY

No significant findings like metamyelocytes and dry tap; hence myelodysplasia and aplastic anaemia were ruled out.

### MANAGEMENT

Patient was started on inj. Piptaz 4.5 gm, inj. Metronidazole 100ml, inj. diclofenac 75mg, inj. Pcm 1gm, syp lactulose, cap becosule and discharged on oral antibiotics and was advised CBC after 7 days

**CBC AT DISCHARGE:** Hb-9.8, RBC-3.56, HCT-29, MCH-27.6, RDW-14.6, WBC-2000, N-70, L-28, Platelet-160, ESR-40

**CBC AFTER 7 DAYS:** Hb-10.1, RBC-3.76, HCT-30, MCH-27.4, RDW-14.8, WBC-6000, N-72, L-28, Platelet-168, ESR-26

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