

A Case Report on Injection Site Abscess Due to *Staphylococcus epidermidis*

Jiya Thomas

Bapuji Pharmacy College, Davangere, Karnataka, INDIA.

Received: 17-May-2022;

Accepted: 02-June-2022

*Correspondence to:

Jiya Thomas,

Pharm D Intern, Bapuji Pharmacy College,
Davangere-577004, Karnataka, INDIA.

Email.id: jiyakorattikkara@gmail.com

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Published by : OZZIE PUBLISHERS



Abstract

An injection site abscess is a iatrogenic infection commonly caused by micro-organisms like *Pseudomonas*, *Klebsiella*, *Escherichia coli*, *Staphylococcus aureus*, *Staphylococcus epidermidis* etc. *Staphylococcus epidermidis* an anaerobic gram-positive cocci bacteria cause most common nosocomial infection and it leads to serious complications and interprofessional team is required for the management of such infections. Here is a case report of 63 year old patient who presents with injection site abscess due to *Staphylococcus epidermidis*.

Keywords: Injection site abscess, *Staphylococcus epidermidis*.

INTRODUCTION

An injection site abscess is a iatrogenic infection commonly caused by microorganisms like *Pseudomonas*, *Klebsiella*, *Escherichia coli*, *Staphylococcus aureus*, *Staphylococcus epidermidis* etc. most of the cases are fail to document and investigate. Such infections happens through contaminated injectables such as IV drugs, vitamin injection, DPT vaccine, iron dextran, and penicillin injection or mistakes in sterilisation protocol. Those infections having delayed wound healing.^[1-2] *Staphylococci* are the common bacterial pathogen cause infections in skin and mucous membranes of humans and other mammals. *Staphylococcus epidermidis* is the group of coagulase-negative staphylococci (CoNS) and particularly they are most frequently isolated species from human epithelia.^[3] It is an anaerobic gram-positive cocci bacteria cause most common nosocomial infection and it's lead to serious complications and interprofessional team is required for the management of such infecions.^[4]

On examination, patient blood pressure was 150/90 mmHg, pulse rate 80bpm, respiratory rate 16 cpm, temperature was afebrile, L/E inspection shows solitary swelling in the right upper and outer quadrant of right gluteal region, size 4x5cm redness of the skin present. The laboratory reports shows Hb 12.1, TLC 12.860, RBC 4.2, platelet 3.13, HCT 36.3%, RBS 250, urea 26.4, creatinine 0.69, sodium 129.3, potassium 5.69, chloride 98.59. Culture and sensitivity test shows Pus formation and coagulase negative, *Staphylococci*, *Staphylococcus epidermidis* organism was isolated.

On first day, the patient was prescribed with IVF normal saline 100ml/gm, inj. actzone (cefoperazone+sulbactam) 1.5gm BID, inj. pantodac (pantoprazole) 40mg BID, inj. tramadol 100mg BID, inj. sumol(acetaminophen) 1 gm SOS, inj. ondem (ondansetron) 4mg BID, tab. glimepiride and metformin

CASE REPORT

A 63 years old male patient was admitted to surgery department with complaints of pain and swelling in the right buttocks from past 4 days. The swelling was insidious in onset after an injection was given on the right buttock and the size of the swelling gradually increased to the current size was approximately 4x5 cm. pain was insidious in onset and gradually progressive. Patient was aggravates on walking and standing. Patient was having a past history of hypertension since 1 year and type 2 diabetes mellitus since 4 years.

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DOI :
10.5530/amdhs.2022.2.5

1mg+1000mg BID and dressing done daily. On day 3 ensure diabetic protein added and IVF normal saline was stopped. On day 4 inj. actzone and inj. pantodac were stopped. On day 5, patient condition improved patient shifted from ICU to surgery male ward, inj. tramadol, inj. sumol, inj. ondem were stopped and tab. givpep DSR (domperidone + pantoprazole) 40mg BID, tab. tramazac p (acetaminophen+tramadol) BID, inj. ciplox (ciprofloxacin) 500mg BID were added. Same treatment was continued for 5 days. The patient's condition improved after treatment. On day 10 patient was discharged.

DISCUSSION

Injection site abscess due to *Staphylococcus epidermidis* are relatively rare. This skin colonizer has apparently not evolving to cause disease, but it will maintain the benign relationship with its host. It is an innocuous commensal microorganism on the human skin, nowadays *Staphylococcus epidermidis* is seen as an major opportunistic pathogen.^[3] They are most commonly seen coagulase-negative staphylococcus live in human skin and cause nosocomial infections. At natural environment it is usually harmless when it enters to human skin cause virulence acts as a opportunistic pathogen. It enters to the human body through medical and prosthetic devices. *Staphylococcus epidermidis* infections treatment depends on severity and type of the infections and empiric therapy for *Staphylococcus epidermidis* would refer to iv vancomycin then narrowed to beta-lactam antibiotics, duration of treatment depends on clinical presentation of patients. In this present case also patient is treated with beta-lactam antibiotic. Catheter- related infections have high mortality rate and it will cause complications such as sepsis and septic shock.⁴ DRG devi, *et al.*^[1] Shambhavi Singh, *et al.*^[2] NS Madhusudhan, *et al.*^[8] in their case report also *Mycobacterium fortuitum* cause injection site abscess. *Staphylococcus epidermidis* and other coagulase negative *Staphylococci* (CoNS) cause invasive infections in some selected groups of patients. Higher risk groups include preterm neonates, immunocompromised individuals and patients with indwelling medical devices.^[5] Abdurrahman Kaya, *et al.*^[6] recurrent sterile abscess caused by tetanus-diphtheria vaccination it will be treated with corticosteroids. Sunayana M. Jangla, *et al.*^[7] case Injection site abscess caused by non-pigmented strain of *Serratia marcescens* in an immunocompromised patient.

CONCLUSION

Injection site abscess due to *Staphylococcus epidermidis* are relatively rare and it will cause nosocomial infections. *Staphylococcus epidermidis* is a coagulase-negative, gram-positive cocci bacteria. It became infectious once it enters inside the human skin and it leads to serious complications. for much patient's proper care and management is required. It will improve the patient's quality of life and leads to better health of patient.

CONFLICT OF INTEREST

The author declares that there is no conflict of interest

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Cite this article as: Thomas J. A Case Report on Injection Site Abscess Due to *Staphylococcus epidermidis*. Adv. Med. Dental Health Sci. 2022;5(2):18-9.