آغا خان یونیورسٹی

THE AGA KHAN UNIVERSITY

PakSurg-1

A NATIONAL COLLABORATIVE

Superficial or Deep Surgical Site Infection

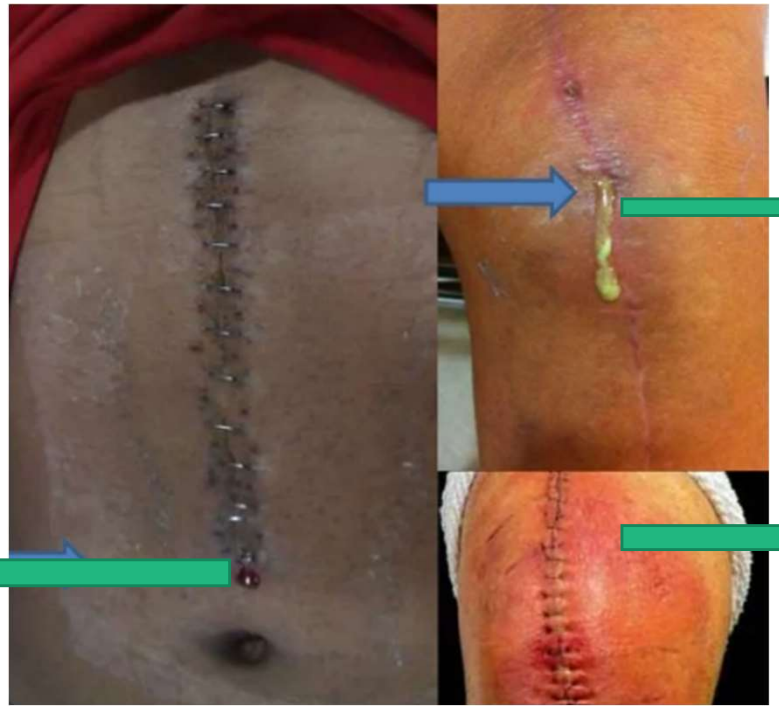
PakSurg 1 will use the 2008 Center for Disease Control definitions of surgical site infection (SSI)*. According to these, the patient should have **at least one** of the following to meet the criteria for SSI:

- Purulent drainage from the superficial or deep (fascia or muscle) incision but not from within the organ/space component of the surgical site(s).
- Deliberate opening or spontaneous dehiscence of incision along with at least one of: localized swelling; pain or tenderness; heat; redness; fever (≥100.4 F).
- Abscess within the wound (detected clinically or radiologically).

*Horan TC, Andrus M, Dudeck MA. CDC/NHSN surveillance definition of health care–associated infection and criteria for specific types of infections in the acute care setting. American journal of infection control 2008; 36(5): 309-32.

Is this superficial surgical site infection?

YES!



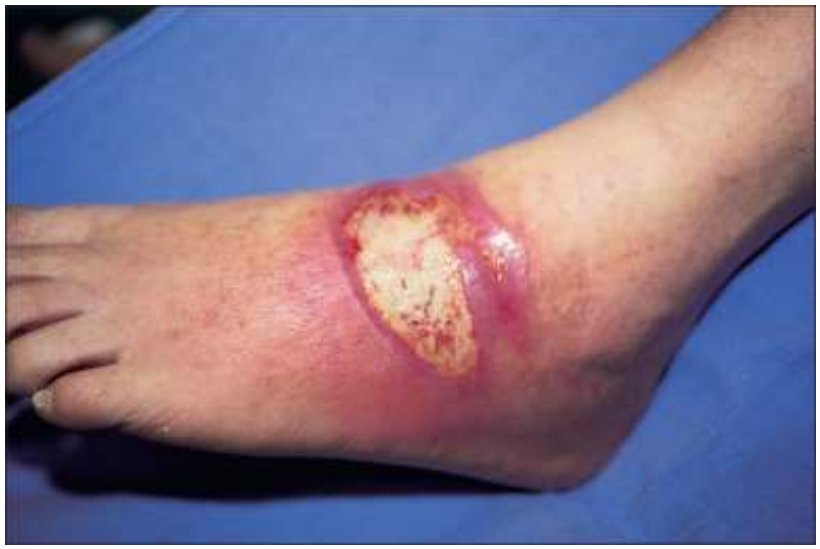
Purulent Discharge

Erythema

Wound Dehiscence

Is this superficial surgical site infection?

A patient presents with a burn injury to the dorsal surface of the foot. After 7 days of the burn injury, the patient present to the ER with burn site looking like this:



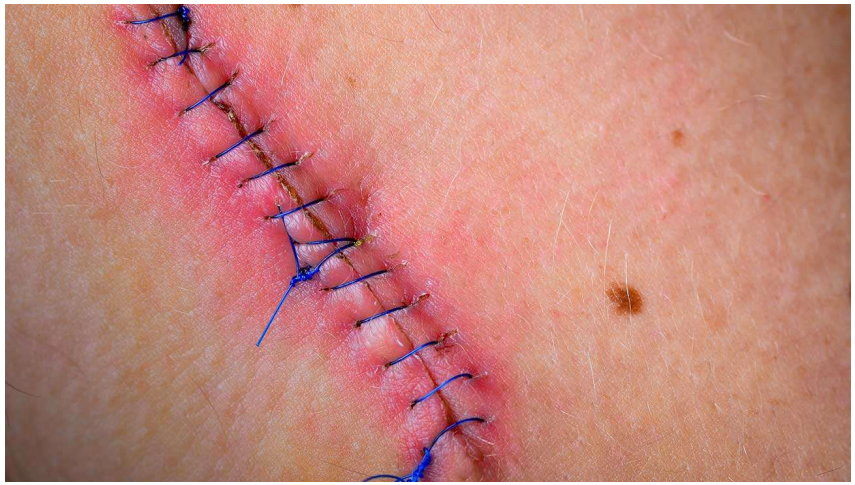
This isn't SSI because it is in a burn patient, and not after a surgery.

NO!

Is this superficial surgical site infection?

You are seeing a patient with an abscess that formed due to infection of sutures.

A stitch abscess alone is minimal inflammation and discharge confined to the points of suture penetration, which does not qualify as SSI as the signs and symptoms are more generalized in SSI rather than being confined to suture sites.



NO!

Superficial or Deep Surgical Site Infection

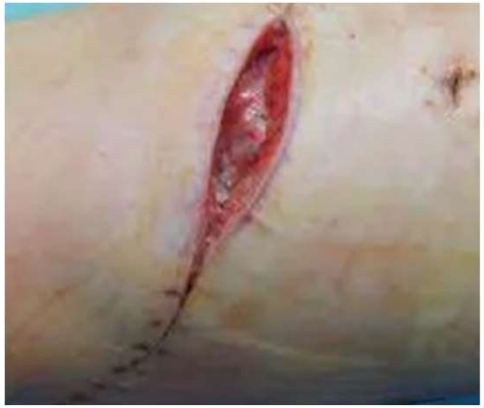
Do not report the following conditions as superficial or deep SSI:

- Stitch abscess (minimal inflammation and discharge confined to the points of suture penetration).
- Infection of an episiotomy or newborn circumcision site.
- Infected burn wound.

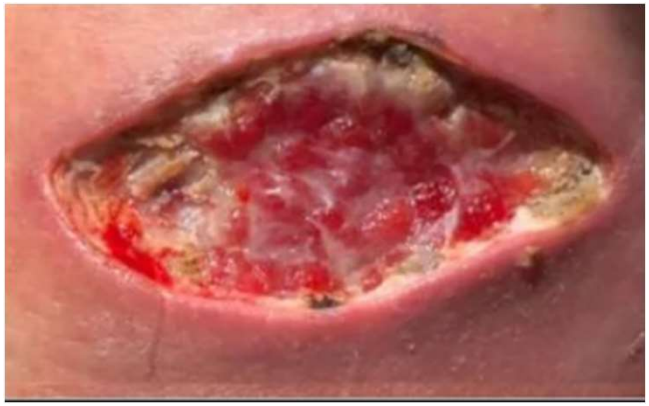
Deep Surgical Site Infection

- Report infection that **involves both superficial and deep incision sites as deep incisional SSI**.
- Report an **organ/space SSI that drains through the incision as a deep incisional SSI**.

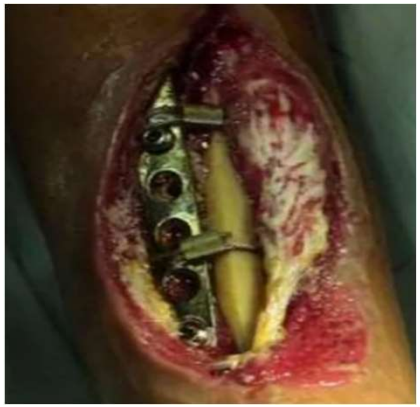
Are these deep surgical site infections?



Yes – there is wound dehiscence and purulent discharge in this infection.



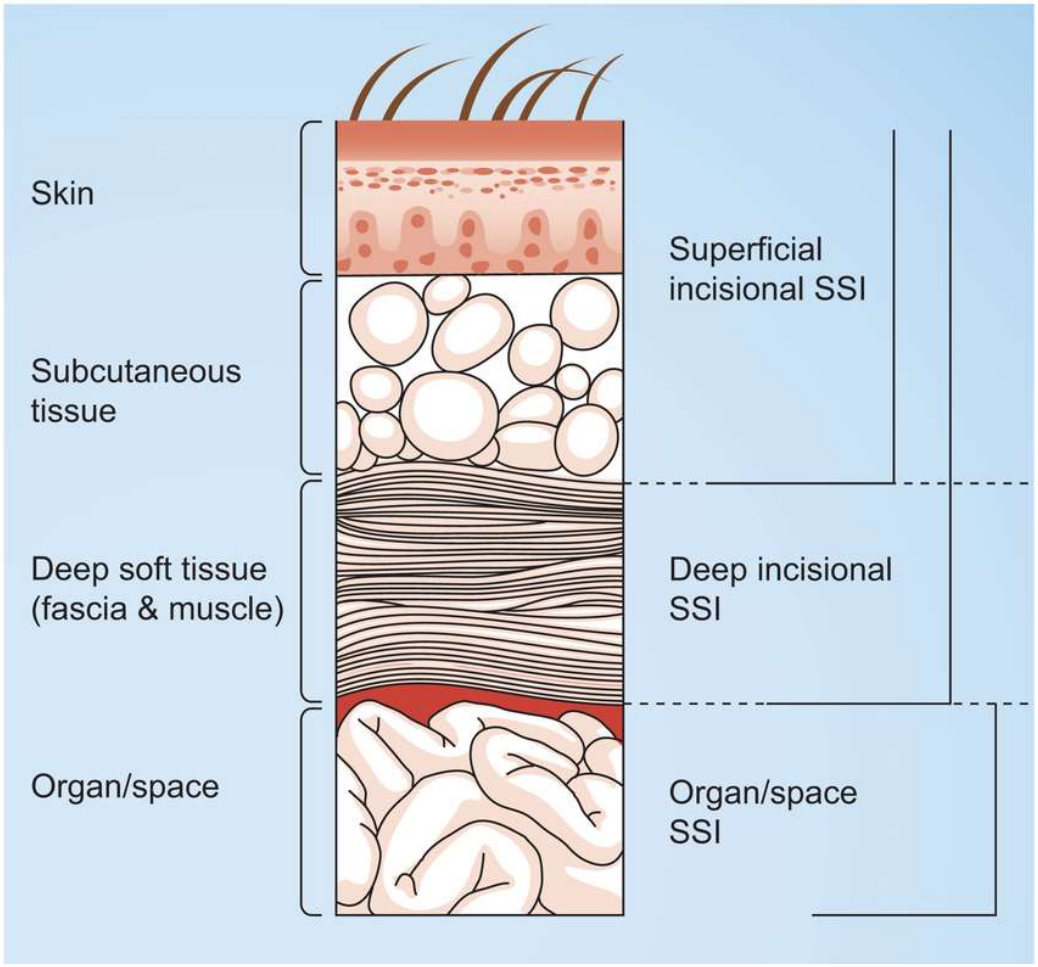
Yes – there is wound dehiscence, purulent discharge and erythema.



Yes – there is wound dehiscence and graft material present here.

Organ space infection

- Infection occurs **within 30 days after the operation** if no implant is left in place or within 1 year if implant is in place and the infection appears to be related to the operation, and:
- Infection involves **any part of the anatomy (e.g., organs or spaces), other than the incision**, which was opened or manipulated during an operation with **at least one of the following**:
  - Purulent drainage from a drain that is placed through a stab wound into the organ/space.
  - Organisms isolated from an aseptically obtained culture of fluid or tissue in the organ/space.
  - An abscess or other evidence of infection involving the organ/space that is found on direct examination, during reoperation, or by histopathologic or radiologic examination.
  - Diagnosis of an organ/space SSI by a surgeon or attending physician.


Skin
Subcutaneous tissue
Deep soft tissue (fascia & muscle)
Organ/space
Superficial incisional SSI
Deep incisional SSI
Organ/space SSI

SOME IMPORTANT DEFINITIONS

ASA CLASSIFICATION

ASA Classification	Definition	Examples
ASA I	A normal healthy patient	Healthy, non-smoking, no or minimal alcohol use
ASA II	A patient with mild systemic disease	Mild diseases only without substantive functional limitations. Current smoker, social alcohol drinker, pregnancy, obesity (30<BMI<40), well-controlled DM/HTN, mild lung disease
ASA III	A patient with severe systemic disease	Substantive functional limitations; One or more moderate to severe diseases. Poorly controlled DM or HTN, COPD, morbid obesity (BMI ≥40), active hepatitis, alcohol dependence or abuse, implanted pacemaker, moderate reduction of ejection fraction, ESRD undergoing regularly scheduled dialysis, history (>3 months) of MI, CVA, TIA, or CAD/stents.
ASA IV	A patient with severe systemic disease that is a constant threat to life	Recent (<3 months) MI, CVA, TIA or CAD/stents, ongoing cardiac ischemia or severe valve dysfunction, severe reduction of ejection fraction, shock, sepsis, DIC, ARD or ESRD not undergoing regularly scheduled dialysis
ASA V	A moribund patient who is not expected to survive without the operation	Ruptured abdominal/thoracic aneurysm, massive trauma, intracranial bleed with mass effect, ischemic bowel in the face of significant cardiac pathology or multiple organ/system dysfunction
ASA VI	A declared brain-dead patient whose organs are being removed for donor purposes	

SURGICAL WOUND CLASSIFICATION

Class I ***Clean***	An uninfected operative wound in which no inflammation is encountered and the respiratory, alimentary, genital, or uninfected urinary tract is not entered. In addition, clean wounds are primarily closed and, if necessary, drained with closed drainage. Operative incisional wounds that follow nonpenetrating (blunt) trauma should be included in this category if they meet the criteria.
Class II ***Clean-contaminated***	An operative wound in which the respiratory, alimentary, genital, or urinary tracts are entered under controlled conditions and without unusual contamination. Specifically, operations involving the biliary tract, appendix, vagina, and oropharynx are included in this category, provided no evidence of infection or major break in technique is encountered.
Class III ***Contaminated***	Open, fresh, accidental wounds. In addition, operations with major breaks in sterile technique (e.g., open cardiac massage) or gross spillage from the gastrointestinal tract, and incisions in which acute, nonpurulent inflammation is encountered are included in this category.
Class IV ***Dirty-infected***	Old traumatic wounds with retained devitalized tissue and those that involve existing clinical infection or perforated viscera. This definition suggests that the organisms causing postoperative infection were present in the operative field before the operation.

WHO SURGICAL SAFETY CHECKLIST

Surgical Safety Checklist

World Health Organization | Patient Safety
A World Alliance for Safer Health Care

Before induction of anaesthesia

(with at least nurse and anaesthetist)

Has the patient confirmed his/her identity, site, procedure, and consent?
- ☐ Yes

Is the site marked?
- ☐ Yes
- ☐ Not applicable

Is the anaesthesia machine and medication check complete?
- ☐ Yes

Is the pulse oximeter on the patient and functioning?
- ☐ Yes

Does the patient have a:

Known allergy?
- ☐ No
- ☐ Yes

Difficult airway or aspiration risk?
- ☐ No
- ☐ Yes, and equipment/assistance available

Risk of >500ml blood loss (7ml/kg in children)?
- ☐ No
- ☐ Yes, and two IVs/central access and fluids planned

Before skin incision

(with nurse, anaesthetist and surgeon)

- ☐ **Confirm all team members have introduced themselves by name and role.**
- ☐ **Confirm the patient's name, procedure, and where the incision will be made.**

Has antibiotic prophylaxis been given within the last 60 minutes?
- ☐ Yes
- ☐ Not applicable

Anticipated Critical Events

To Surgeon:
- ☐ What are the critical or non-routine steps?
- ☐ How long will the case take?
- ☐ What is the anticipated blood loss?

To Anaesthetist:
- ☐ Are there any patient-specific concerns?

To Nursing Team:
- ☐ Has sterility (including indicator results) been confirmed?
- ☐ Are there equipment issues or any concerns?

Is essential imaging displayed?
- ☐ Yes
- ☐ Not applicable

Before patient leaves operating room

(with nurse, anaesthetist and surgeon)

Nurse Verbally Confirms:
- ☐ The name of the procedure
- ☐ Completion of instrument, sponge and needle counts
- ☐ Specimen labelling (read specimen labels aloud, including patient name)
- ☐ Whether there are any equipment problems to be addressed

To Surgeon, Anaesthetist and Nurse:
- ☐ What are the key concerns for recovery and management of this patient?

This checklist is not intended to be comprehensive. Additions and modifications to fit local practice are encouraged.

Revised 1 / 2009

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