

**Multiple abdominal abscess at insulin injection site a rare experience in present scenario**<sup>1</sup>RC Negi, Assistant Professor, Deptt. of Medicine IGMC, Shimla (H.P.)-India<sup>2</sup>Megha Chauhan, Junior Resident, Deptt. of Medicine IGMC, Shimla (H.P.)-India<sup>3</sup>Anuj Kumar Gupta, Senior Resident, Deptt. of Medicine IGMC, Shimla (H.P.)-India<sup>1</sup>Subhash, Assistant Professor, Deptt. of Medicine IGMC, Shimla (H.P.)-India<sup>3</sup>Sanjeev Kumar, Senior Resident, Deptt. of Medicine IGMC, Shimla (H.P.)-India<sup>4</sup>Prem Machhan, Associate Professor, Deptt. of Medicine IGMC, Shimla (H.P.)-India<sup>5</sup>Jatinder Mokta, Professor, Deptt. of Medicine IGMC, Shimla (H.P.)-India**Corresponding Author:** RC Negi, Assistant Professor, Deptt. Of Medicine IGMC, Shimla (H.P.)-India**How to citation this article:** RC Negi, Megha Chauhan, Anuj Kumar Gupta, Subhash, Sanjeev Kumar, Prem Machhan, Jatinder Mokta, “Multiple abdominal abscess at insulin injection site a rare experience in present scenario”, IJMACR-September – October - 2021, Vol – 4, Issue - 5, P. No. 136 – 138.**Copyright:** © 2021, RC Negi, et al. This is an open access journal and article distributed under the terms of the creative commons attribution noncommercial License 4.0. Which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.**Type of Publication:** Case Report**Conflicts of Interest:** Nil**Abstract**

A 66 years male diabetic with coronary artery disease presented with fever and multiple abdominal wall sinuses. Pseudomonas was isolated from the pus. He was treated with broad spectrum antibiotics and improved. Precautions should be taken to prevent the infection at insulin injection site.

**Keywords:** Insulin, injection, abscess, sinuses**Introduction**

Abscess at insulin injection site is rarely seen in present scenarios. The causative agent responsible for development of abscess are multiple, but staphylococcus aureus is the most common organism isolated from abscess site<sup>1</sup>. Abscess at injection site will lead to discontinuation of insulin therapy<sup>2</sup>. We report a case who presented with multiple abdominal abscess at insulin injection site caused by pseudomonas aeruginosa

**Case Report**

A 66 years male with T2DM with coronary artery disease with post CABG WITH post permanent pacemaker insertion presented with fever and multiple anterior abdominal wall sinuses with discharge of pus. He was on insulin therapy since 2011. Patient was diagnosed as covid-19 positive 2 week's back and hospitalized in dedicated covid-19 hospital. He received basalog insulin and low molecular weight heparin subcutaneously in anterior abdominal wall during stay at covid-19 hospital. He developed multiple anterior abdominal wall abscesses at injection sites. Incision and drainage were done at covid-19 dedicated hospital. On examination he was febrile and hemodynamically stable. On systemic examination chest and CVS was normal. On abdominal examination multiple sinuses with discharging pus were seen, as given in picture. The attendant of patient had noticed the abscesses

developed at the injection of site of insulin before incision and drainage was done. The low molecular weight heparin was not given at the same site where insulin injection was given. Laboratory investigation results RBS-366 mg /dl, Hb-10.8 gm%, TLC-10 thou/micro litre, ESR-30 mm/ 1hr, platelet count-3.73 lac, RFT- B. Urea-14mg/dl s.cr.-0.8 mg/dl, LFT- AST-69, ALT-28, ALP-739, protein total-5.3 gm/dl, albumin 2.4g/dl, s.ca 7.8 mg/dl, Phosphorus-2.6 mg/dl, electrolytes Na-133 meq/L K-4.51meq/L, Cl-98meq/L. Serum qCRP-45mg/dl and urine routine examination revealed glucose and protein. Culture sensitivity of pus from sinuses revealed Pseudomonas resistant to all the drug tested. He was managed with piperacillin-tazobactam and linezolid. He responded to these antibiotics and improved.



Picture showing multiple sinuses in abdominal wall

### Discussion

Abscess at insulin injection site is rarely encountered in present scenario. There may be various causes of abscess at insulin injection sites but most common cause of septic abscess is staphylococcus aureus<sup>1</sup>. The staphylococcus is most commonly observed causative agent in skin infection.

In present case cause of abscess was pseudomonas infection which was resistant to all antibiotics tested. The abscess at insulin injection site contributes to discontinuation of insulin therapy which further aggravates the control of infection. Katherine Finucane et al demonstrated mycobacterium chelone as cause of abscess at insulin injection site<sup>3</sup>. Mycobacterium chelone is fast growing atypical mycobacterium. Partha Pratima Chakraborty et al isolated mycobacterium as cause of abscess at insulin injection site in anterior abdominal wall<sup>4</sup>. Insulin injection site should be rotated daily and part should be cleaned with simple water and soap. There should be no dirt at injection site while injecting insulin, which may cause infection. Repeatedly injecting insulin at one site may lead to lipohypertrophy resulting erratic and delayed absorption of insulin. There are very few published reports of abdominal abscess at insulin injection site in literature. So, we thought to publish this rarely encountered complication of insulin therapy.

Learning points:

- 1 Insulin injection site may be portal of entry for infection from skin
- 2 Local anterior wall abdominal abscess may lead to disseminated infection
- 3 Infection and abscess promote discontinuation of insulin therapy
- 4 To prevent insulin injection site infection, the site should be wash with simple water and soap, before injecting insulin.
- 5 For most important is creating awareness of patient about technique of insulin injection.

## References

1. Finucane K, et al. Insulin injection abscesses caused by *Mycobacterium chelonae*. *Diabetes Care* 2003; 26:2483–4.
2. Richardson T, Kerr D. Skin related complications of insulin therapy: Epidemiology and emerging management strategies. *Am J Clin Dermatol* 2003; 4:661–7
3. Finucane, BMBCH1, Phil Ambrey, MRCP2, Shalini Narayan, MRCP3, Clive B. Archer, MD, PHD3 and Colin Dayan, FRCP, PHD4, *Diabetes care* 2003 Aug;26(8): 2483-2484
4. Partha Pratima Chakraborty1, Mandira Chakraborty2, Soumya Dasgupta2 docparthapc@yahoo.co.in, <http://dx.doi.org/10.1136/bcr-2016-218054>