Research Paper Medical Science

Clinical and Microbiological Profile of Post Intramuscular Injection Abscesses at a Tertiary Care Hospital: A Prospective Study.

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KEYWORDS

Introduction:
An abscess is a collection of pus, a thick fluid which contains white blood cells, dead tissue and bacteria[1]. On appearance, an abscess will be a hard lump surrounded by inflamed tissue. They can develop anywhere on the body, but commonly occur under the skin close to the anus – known as a gluteal abscess[2].Therefore a gluteal abscess does not grow in the anus itself (a perianal abscess) but below it. To be precise, they form under the skin on the subcutaneous plane of the buttock muscle. This usually occurs when the glands in the perianal area become infected[3]. However, a gluteal abscess may also arise from the necrosis of fat in the buttock, which is caused by repeated trauma to the tissue (for example, from frequent injections)[2].

Gluteal abscess is most commonly seen in day to day surgical practice.They can be presented to a surgeon as acute and chronic gluteal abscesses.Gluteal abscesses after intramuscular injections are the most common cause encountered at our centre.Most of the patients who present to our centre were previously treated at other primary health care centres where treatment was ineffective and patient had no relief of symptoms.As gluteal abscess are the most common presentations in surgical emergency wards and there are very few studies done to establish the cause of these abscesses and also the microbiological profile of the organisms grown in these abscesses and how to prevent the recurrence of these abscesess,to evaluate all these points this study was conducted at our institute.The treatment for any abscess anywhere in the body is incision and drainage and so is with gluteal abscess. This is one of its kind study which studies about the most common cause of gluteal abscess being intramuscular injections and also it highlights about the micro-biological profile.

Study type:
Prospective study

Study Period:
One year (May 2014 to May 2015).

Inclusion criteria:
1. All patients who presented with swelling in the gluteal region post intramuscular injections.
2. Patients previously treated for gluteal abscess and came with recurrence.

Exclusion criteria:
1. Patients who are diabetic and immunocomprimised.
2. Patients who developed gluteal abscess proved to be due to causes like trauma,pott's spine.

Materials and Methods:
This study was conducted at JSS Hospital,Mysore and all the patients who satisfied the criteria of inclusion were included in the study.Total of 32 patients over a period of one year were taken into the study and were treated accordingly and the cause and the microbiological profile was evaluated.All the patients underwent Incision and drainage and curettage of the cavity as a standardized procedure and pus was sent for culture and sensitivity.

Results:
Total of 32 patients were included in the study,among which 23(71.85%) were male and 9 (28.15%)were female.27 (84.37%)patients came with gluteal swelling post intramuscular injections for the first time and 4(12.5%) patients came with a second episode of recurrence and one patient was for the third time.Among these patients 26 (81.25%)patients gave history of intramuscular injections administered by a nurse ,6 (18.75%)patients gave history of injection being administered by ayurvedic doctors and 2(6.25%) patients injections were administered by the senior doctors themselves.The patients gave history of most common drug being administered to all these patients was a pain killer that is diclofenac IM injections in 28(87.5%) patients.4(12.5%) patients gave history of administration of penicillin injections.Most Common complaint these patients presented to the casuality was with pain and swelling associated with fever with chills.All these patients were posted for surgery and underwent Incision and drainage and the pus was sent for culture and sensitivity.

Microbiological profile:
14 of 32 (43.75%) samples grew klebshiella pnuemoniae (43.75%) ,6 samples had grown E.coli (18.75%), 2 samples had grown coagulase positive staphylococcus aureus (6.25%), and one sample had grown pseudomonas aeruginosa ,One patient with three times recurrence has found to have grown mycobacterium tuberculosis which a rare entity.

The most common cause of gluteal abscess in this study reflects on improper technique of intramuscular injection administration.

Discussion:
The development of gluteal abscess post intramuscular injections is a known entity but till now an extensive study has not been done to known the exact reasons for its occurrence.In our study we looked into the resons of occurrence like the technique of administration of the drug,most common micro-organisms involved in the abscess and the best possible ways to avoid it.In our study the most common reason found for the development of the abscess is faulty technique which is used and also not following proper aseptic precautions while administering the drug.All these points need to be kept in mind while administering an IM injection to avoid complications.

Conclusion:

1. It is one of the complications of intramuscular injection administration and is not been studied in detail till today.
2. The most common reason found for the development of the intramuscular abscess is faulty administration technique.
3. The most common organism identified was klebshiella pneumoniae in our study.
4 The most common drug administered is diclofenac sodium IM injections.
5. Care should be taken not to use the same buttock for multiple IM injections.
6. Further studies are required in these field for knowing more about the pathophysiology of the disease.

REFERENCES

1. Watters JK, Estilo MJ, Clark GL, Lorvick J. Syringe and needle exchange as HIV/AIDS prevention for injection drug users. JAMA 1994;271:115–20. | | 2. Watters JK, Biernacki P. Targeted sampling: options for the study of hidden populations. Soc Probl 1989; 36:416–30. | | 3. Bluthenthal RN, Watters JK. Multimethod research from targeted sampling to HIV risk environments. In: Lambert E, Ashery R, Needle R, eds. Qualitative methods in the prevention of drug abuse and HIV research. Vol. 157. Rockville, MD: National Institutes on Drug Abuse, 1995:212–30. | | 4. Centers for Disease Control and Prevention. Tetanus among injecting-drug users—California, 1997.MMWRMorb Mortal Wkly Rep 1998; 47:149–51. | 5. Passaro DJ, Werner SB, McGee J, Mac Kenzie WR, Vugia DJ. Wound botulism associated with black tar heroin among injecting drug users. JAMA 1998;279:859–63. | | 6. Vlahov D, Sullivan M, Astemborski J, Nelson KE. Bacterial infections and skin cleaning prior to injection among intravenous drug users. Public Health Rep 1992; 107:595–8. | | 7. Herb F, Watters JK, Case P, Petitti D. Endocarditis, subcutaneous abscesses, and other bacterial infections in intravenous drug users and their association with skin-cleaning at drug injection sites [abstract Th.D.O.4]. In: Abstracts of the V International Conference on AIDS: The Scientific and Social Challenge, Montreal, Quebec, Canada, 4–9 June 1989.