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*CLINICAL CASE*

# Cellulitis Developing After Intramuscular Metamizole Injection A Case Report

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**ABSTRACT**
If the suitable technique is not used in intramuscular injection applications and the injection area is not detected correctly, complications may be observed. Our patient was given intramuscular Metamizole in his house and then he had cellulitis with necrosis area. Following an antibiotic treatment by Cefuroxime and Fucidic Acid, tissue defect was primarily covered with gluteal muscle skin flap. Cellulitis development after Metamizole injection is not common still potential side effects should be considered before prescription.

**KEY WORDS:** Intramuscular, Cellulitis, Metamizole.

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**INTRODUCTION**
Parenteral injection applications are generally used to provide faster effect of the medicine or in cases where the oral form is irritating [1]. When the suitable technique is not used in intramuscular (IM) injection applications and the injection area is not detected correctly, complications such as nerve injuries, abscesses, infection, tissue irritation, periostitis, muscle fibrosis and contracture, necrosis and gangrene, IM hemorrhage and pain may be observed [2,3]. Metamizole is one of the strongest non-opioid analgesic drugs used in both human and veterinary medicine [4]. It is a derivative of Aminopyrine 4-methylaminoethanosulphate and is also known as dipyrone. In our article, we will cover a cellulitis case which developed after IM metamizole application.

**CASES REPORT**
A 81-year-old male patient was admitted in our family health center in February 2016. He was given IM Metamizole in his house since he had muscle-joint pains. He was admitted to us on the 4th day after injection. Two or three necrosis areas with the dimensions of 1-2 x 1 cm and subcutaneous hematoma were present in the right gluteal area in his examination (Image-1). Thigh movements were painful. Other systemic aspects were normal. The patient was given IM analgesic once a week in average many times before and Metamizole was also among them, but this was the first time the patient had such a complaint. The patient who didn't have DM or insulin resistance was taking antihypertensive (Perindopril + Indapamid) treatment with HT diagnosis. Also he had undiagnosed joint-muscle pains and was using medicines such as Diclofenac, Dexketoprofen and Metamizole IM and orally without medical advice. USG was made in the patient transfered to general surgery and he was evaluated for cellulitis and resorbed hematoma, daily medical

dressing and control were recommended. He was admitted to us on the 17th day after injection. Necrosis area was larger when he arrived (Image-2) and consultation was made with plastic surgery. The necrosis area of the patient was debrided and he was admitted to us again on the 21st day after the injection, there was an infective appearance in the wound and tissue loss and pain had increased (Image-3), cefuroxime IM + fucidic acid pomade were started and he was transferred to plastic surgery again.


**Images 1-4:** The process of occurrence and treatment of cellulite

Blood count of the patient re-evaluated by plastic surgery was normal, he had no metabolic problems, PT-aPTT, INR measurement was normal and he was operated on the 29th day after the injection.

10 x 8 cm tissue defect in the right gluteal area was debrided under local anesthesia and was primarily covered with gluteal muscle skin flap and the patient who didn't have any complications during and after the operation was discharged with recommendations. In the follow-ups, it was learned that the complaint was over and it was observed that the wound place started to recover (Image-4).

## DISCUSSION

Although information on the pathogenesis of cellulitis is unsatisfactory, there is a different skin lesion considered to constitute an entrance for bacteria causing cellulitis and trauma in the clinical history of the patients in general. Gram-positive bacteria, mainly Staphylococcus aureus, are responsible for the infectious complications developing after IM injection [5]. A needle with appropriate thickness and length should be applied in the appropriate area to minimize side effects [6]. Metamizole has severe hematological adverse effects, the most important of which are agranulocytosis and aplastic anemia [7]. It shouldn't be used as an antipyretic in children due to many side effects. In some countries (e.g. Sweden, the USA, Japan, the UK, Australia and Iran), metamizole has been withdrawn from the market. IM applications prescribed widely by doctors in daily practice should not be tried unless necessary and a chance should be given to oral treatment.

IM treatment should be applied in closest health institution if considered appropriate. Cellulitis development story after metamizole injection is not common in literature. Potential side effects should be considered before prescription.

## AUTHORS' CONTRIBUTIONS

The participation of each author corresponds to the criteria of authorship and contributorship emphasized in the Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly work in Medical Journals of the International Committee of Medical Journal Editors. Indeed, all the authors have actively participated in the redaction, the revision of the manuscript and provided approval for this final revised version.


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Declared none.


## PATIENT CONSENT

Written informed consent was obtained from the patient for publication of this case report.

## COMPETING INTERESTS

The authors declare no competing interests.

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