

A CASE STUDY OF GLUTEAL ABSCESS IN DIABETIC PATIENT AFTER INTRAMUSCULAR INJECTION OF NUTRITIONAL SUPPLEMENTS

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ABSTRACT

It is uncommon for abscesses to occur after intramuscular injections; these are most frequently observed in immunocompromised people. In case, we feature a diabetic patients of age 60 yrs old female having RBS 241.8mg/dl was came to us with an intramuscular injection-related abscess and a serious illness. These patient had inj rexnerve plus for 5 days which is Ampicillin Sulbactam resistant to Klebsiella pneumonia to isolated from them. Due to the severity of the patient's illness, the virulence and resistance of the organism, the unusual circumstances, the patient's immune status, and the lack of supporting data to appropriately direct management in the use of health resources, these patients presented a significant challenge to the healthcare system and the treating physician. To the best of our knowledge, there isn't a report of intramuscular Ampicillin Sulbactam resistant to Klebsiella pneumonia in the modern literature. As abscess is present it may preferable for incision & drainage done with debridement of death tissue. Conservative treatment given and further treated as open wound dressing done vranaropa tail followed by raktamokshan (leech application), dhavan and dhoopan. As per Acharya Shushruta, explained sign and symptoms of sadyovrana. Moreover, Raktamokshan is particularly performed in case where Pitta dosha is accentuated. Pittavyadhi is done with Jaloukavcharan.

KEYWORDS

I&D, debridement, Sadyovran, leech application, jaloukavcharan, Raktamokshan, dhavan and dhoopan, & vranaropak tail

INTRODUCTION

In many treatment procedures, intramuscular injection is the preferred method for administering medications in order to produce a prompt and efficient response. Sciatic nerve damage is the most common and serious side effect of this operation; nevertheless, tissue necrosis and/or an abscess may also appear at the injection site [1–5].

An uncommon side effect of intramuscular injection, Nicolau syndrome (also known as livedoid dermatitis or embolia cutis medicamentosa) typically manifests as discomfort at the injection site, hyperemia, skin coloring, redness, abscess formation, and localized ischemia necrosis involving the skin and adipose tissue. Although the pathophysiology is still unclear, it is believed to involve perivascular inflammation, direct vascular injury, and the contraction of the arteries after injection [1–5]. Injectable medications' properties could be important. For example, nutritional supplements like multivitamin suppress the enzyme cyclooxygenase, which prevents prostaglandin from being synthesized. This leads to vascular spasm and restricted circulation in the area [6–10].

The injection site, the depth of the muscle, the frequency of drug administration, and the drug's actual effect are all strongly linked to the risk of Nicolau syndrome. The medicine may stay in the adipose tissue if the needle tip misses the muscle, which happens frequently in people who are overweight. Complications may also arise with repeated injections at the same location. Nicolau syndrome can present with anything from tissue necrosis to a sterile or purulent abscess [1-6]. The medications Phenylbutazone, local anesthetics, antihistamines, anti-inflammatory medicines, corticosteroids, and penicillins are among the medications that most frequently cause tissue necrosis [4–12]. Numerous case reports have been published on this syndrome; nevertheless, few suggestions have been offered regarding the

most effective course of treatment. The current study addresses potential causes and risk factors for the development of Nicolau syndrome in the gluteal region, in addition to therapeutic strategies we used at our hospital for patients with this disease.

A CASE STUDY

A 60 yrs old female patient, who works as a house wife lives in Amravati, was apparently alright before 2 months but took treatment for bodyache and came to our hospital's Shalyatantra department complaining of throbbing pain, inflamed swelling and blackish discoloured skin over left buttock region that has been present for 15 days .She was given diagnosis of injection abscess. So firstly incision & drainage done of abscess and death tissue debriement done and with conservative treatment of antibiotics, wound treated with jaloukavcharan , triphala dhavan& dhoopan with vranaropak tail.

GENERAL EXAMINATION

BP – 120/80mmhg
Pulse – 76/min

Local examination

Inflamed large swelling with black coloured skin lesion over left buttock region
Throbbing pain
Pus discharge
Tenderness noted

SYSTEMIC EXAMINATION

The result of the systemic assessment showed that the heart and lungs were both functioning normally. Patient's pupillary reflexes were within normal ranges, but she was restless and experiencing excruciating pain and throbbing pain at left buttock region. Both superficial and deep tendon reflexes were normal.

DASHAVIDHA PARIKSHAN

Nadi – vatpittaj Jivha –
sama Aakruti –
madhyamDhruk –
normal
Prakruti – vaat pittaj

Sarta – madhyam
Satva – alpa
Vyayam shatkti – madhyam satmya avaraVikruti
– vaatpitta Pradhan Abhyavaharan shakti –
madhyam
Jaran Shakti - madhyam
Bowel habbit – regular

INVESTIGATION

Hb – 10.1g/dl	HBsAg - negative
Tlc – 16400/cumm	HIV - negative
Plt – 463000/cumm	BSL-R – 241.8mg/dl

ESR –
S.Urea –
S.Creat – 0.96mg/dl
– 3min

Urine examination: protein- nil
Epithelial cells -0-2/hpf

Electrolyte: Sodium – 133.3mEq/L
potassium – 4.1mEq/L
chloride -101.2mEq/LBT

CT- 5min
pus cell – 2-5/hpf
RBC - absent
glucose-2+

MATERIALS AND METHODS

Materials

- Surgical blade no. 11 for incision and debridement
- Jalouka used
- Triphala kwatha for dhavan and dhoopan
- Vranropak tail for dressing
- Injectable higher antibiotic ,analgesics and IV fluid for 5 days
- Later oral tablets of antibiotic, analgesic and anti inflammatory

Methods

A 60 yrs old female was chosen for the current clinical investigation. Patient data wasgathered through interviews, and site of study was the shalyatantra opd.

DIAGNOSIS

Injection abscess over left gluteal region

TREATMENT PLAN

Patient was treated on IPD basis. When patient came with above complaints as emergency treatment I&D and debridement of death tissue done then with conservative procedure sadhyovrana treated with jalouka i.e leech used and triphala dhavan & dhoopan with dressingof vranroopak tail done alternate day. Jaloukavcharan done in 3 setting of 2 days gap.

KARMA	VIDHI	DURATION
Raktamokshan	Jaloukavcharan with 1 jalouka	3 rd , 5 th & 7 th day
Triphala dhavan & dhoopan	Triphala kwath for dhavan & triphalachurnafor dhoopan	8 th , 12 th & 15 th day
Vranaropak tail	Dressing with vranaropak tail	Daily

OBSERVATION

After I&D, debridement and jalouka settings, patient experienced immediate relief from signs & symptoms such as throbbing pain & swelling, also after triphala dhavan & dhoopan and dressing with vranaropak tail wound started healing faster and patient gained relief from pain.So it took 2 ½ months to get complete relief from pain & to form healed granulation.



DISCUSSION

After intramuscular injection, problems can occur in a range of 0.4% to 19.3%. Injection-site bleeding, hematomas, unintentional intravascular injections, sciatic nerve damage, discomfort, abscess formation, and tissue necrosis are common complications. When compared to the rate of sciatic nerve injury, the post-injection incidence of abscess formation and tissue necrosis is significantly higher [1-6].

In 1920, Nicolau syndrome was initially reported as a consequence of intramuscular injection of bismuth salt used to treat syphilis [1–5, 13]. The syndrome has been linked to the following substances: corticosteroids, vitamin B complex, local anesthetics, antihistamines, NSAIDs (diclofenac sodium, ketoprofen, piroxicam), diphtheria, tetanus,

and vaccinations against pertussis, meperidine, and the penicillin class [5–12].

Using pelvic tomography scans, Nisbet [15] evaluated the thickness of adipose tissue in gluteal injection sites and discovered that in 12% of cases, green needles (with a length of 3.8 cm) were too short to pierce through the adipose tissue in the anterior gluteal area. In female patients, the likelihood of the needle not reaching the muscle was twice as high as in male patients for both regions. The gluteal region is the primary area of fat deposition in women, therefore it is hypothesized that women with higher BMIs will have harmful consequences, reducing blood flow, and raising the possibility of fat necrosis. Additionally, patients who had received repeated injections showed increased tissue necrosis and inflammation due to cumulative effects.

The gluteal region is the main area where fat accumulates in women who are classified as obese. Women with a higher body mass index are typically the ones with the greater thickness of hip fat. Necrosis was only discovered in female patients who were deemed obese in the current investigation, which is consistent with findings published in other studies. As a result of an incorrect intramuscular drug injection into adipose tissue, abscesses may develop that are either sterile (i.e., primary) or infected (i.e., secondary), with the infection resulting from bacterial contamination of the needle tip. Such abscesses may appear as many pockets with several, interconnected foci due to fat necrosis. Thus, during abscess draining and necrosis debridement, access into these abscess pockets is essential. Following drainage and debridement, negative-pressure vacuum therapy is applied to guarantee the closure of these pockets and promote healing by boosting blood flow and wound granulation [15–16].

The majority of abscesses can be managed with ultrasonography-guided abscess drainage; if required, an antibiotic chosen based on the findings of an antibiogram may also be administered. When there is necrosis of the skin or fat, drainage and debridement must be done right away. Smaller tissue defects that result from necrosis can either be closed up for subsequent healing or treated with negative-pressure vacuum therapy. Because hip tissue is abundant and flexible, we had no trouble closing tiny and medium-sized lesions; however, for larger defects, local flaps (such as the Limberg flap or V-Y advancement flap) should be used. When people are fat, intramuscular when injecting, the right technique must be employed. Early and frequent debridement along with appropriate dressing procedures can help prevent extensive tissue loss in the event of discomfort, abscess formation, and fluid leakage following an injection.

RESULT-

Intramuscular injection abscess can be effectively treated with jaloukavcharan, triphala dhavan & dhoopan and vranaroopak tail dressing, which provided instant pain relief & started healing more fastly. At follow up patient never got any complication.

CONCLUSION-

Leeches doesn't cause any discomfort to their victims when they take their blood. Leeches are therefore helpful in curing the illness by eliminating the bad blood, or dushitrakta as it termed in laymen's language. Leeches are effective analgesics. It aids in the elimination of skin lesions & in reduction of pain and swelling. Also medication is beneficial in reducing edema and inflammation. And for wound healing process, local application of triphala dhavan & dhoopan with vranaroopak tail gained its ability to heal faster.

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