Sciatic Nerve Injury Following IM Injections in the Gluteal Region


**Author(s):** Ramtahal, Jason; Ramlakhan, Shammi; Singh, Khaimraj

**Source:** The Journal of neuroscience nursing : journal of the American Association of Neuroscience Nurses; Aug 2006; vol. 38 (no. 4); p. 238-240

**Publication Date:** Aug 2006

**Publication Type(s):** Case Reports Journal Article Review

**PubMedID:** 16924999

Available at The Journal of neuroscience nursing : journal of the American Association of Neuroscience Nurses - from ProQuest (Health Research Premium) - NHS Version

Available at The Journal of neuroscience nursing : journal of the American Association of Neuroscience Nurses - from Ovid (LWW Total Access Collection 2019 - with Neurology)

**Abstract:** A 25-year-old male patient presented with foot drop indicative of a sciatic nerve injury following gluteal intramuscular (IM) injections. Blood tests and magnetic resonance imaging of his spine were within normal limits, but electrophysiological studies confirmed a partial sciatic nerve lesion. The course of the sciatic nerve in the gluteal region places it at risk for injury from IM injections. Proper technique minimizes the risk of injury.

**Database:** Medline
2. An unfortunate injection.

Author(s): Shah, Bhavik Sandip; Yarbrough, Chase; Price, Amy; Biswas, Rakesh
Source: BMJ case reports; Mar 2016; vol. 2016
Publication Date: Mar 2016
Publication Type(s): Case Reports Journal Article
PubMedID: 26931130
Available at BMJ case reports - from Europe PubMed Central - Open Access
Available at BMJ case reports - from HighWire
Available at BMJ case reports - from Unpaywall
Abstract: Intramuscular injection has been used to administer medications for more than a hundred years. However, despite our profession’s long experience with intramuscular administration, preventable complications such as injection nerve palsies are still prevalent in developing countries. Injections account for one-fifth of all traumatic nerve injuries. These injuries largely occur due to indiscriminate use of intramuscular injections for treating common illnesses, frequently by unlicensed or undertrained practitioners administering unnecessary treatment to impoverished patients. The sciatic nerve is the most commonly injured, and frequently the resulting muscle weakness and associated disability are irreversible. This case report includes a video of a patient with foot drop 6 weeks after gluteal intramuscular injection. Such injuries can be prevented by proper awareness and training, the implementation of safer injection techniques, and quality assurance methods.
Database: Medline


Author(s): Raju, Bharath; Ashraf, Omar; Jumah, Fareed; Appaji Gowda, Naveen Mandya; Gupta, Gaurav; Sun, Hai; Nanda, Anil
Source: World neurosurgery; Jul 2020
Publication Date: Jul 2020
Publication Type(s): Case Reports
PubMedID: 32679363
Abstract: Background: Sciatic nerve injury following inadvertent intramuscular gluteal injection is a well-described entity. Here we are presenting a case of rare and probably under-diagnosed pathology, Nicolau syndrome, which can be confused with injection palsy. Case description: We report on a 13-year-old male presenting with foot drop, urinary and fecal incontinence following intramuscular injection of Benzathine penicillin in the left gluteal region. On examination, the patient had multiple ecchymotic patches over the left gluteal region and back of the thigh, mild swelling of the left lower limb, and a left foot drop. Meticulous examination revealed a subtle weakness of the opposite limb also. Nerve conduction studies revealed axonopathy involving multiple bilateral lower limb nerves. These unusual neuro-dermatological signs and electrophysiological findings raised the concerns for an alternative pathology and was later diagnosed as Nicolau syndrome. The patient had clinical and electrophysiological recovery following oral steroids and physiotherapy over the next few months. Conclusion: Before diagnosing injection sciatic nerve injury, the possibility of medically treatable Nicolau syndrome should be considered. Neurosurgeons’ familiarity with this pathology and timely diagnosis is essential to plan treatment strategies.
Database: Medline

Author(s): Bhattacharjee, S; Bannerjee, T K; Bhattacharjee, A K; Ghosh, I
Source: British journal of hospital medicine (London, England : 2005); Feb 2013; vol. 74 (no. 2); p. 112-113
Publication Date: Feb 2013
Publication Type(s): Case Reports Journal Article
PubMedID: 23411983
Available at British journal of hospital medicine (London, England : 2005) - from EBSCO (MEDLINE Complete)
Database: Medline


Author(s): Fatunde, O J; Familusi, J B
Source: The Central African journal of medicine; Feb 2001; vol. 47 (no. 2); p. 35-38
Publication Date: Feb 2001
Publication Type(s): Journal Article
PubMedID: 11957269
Available at The Central African journal of medicine - from Unpaywall
Abstract: OBJECTIVES A retrospective study of all children with a diagnosis of sciatic nerve injury managed at the University College Hospital, Ibadan, Nigeria over a 12 year period was carried out in order to determine predisposing factors to the nerve injury and highlighting practical preventive measures. DESIGN The necessary data was collected from the case files of children seen at the hospital with a diagnosis of sciatic nerve injury, from 1988 to 1999. RESULTS There were 27 children aged five months to 12 years with a diagnosis of sciatic nerve injury. Twenty (74%) of the children were aged five years or less. While seven patients (26%) presented within two weeks of development of foot drop consequent on intramuscular (i.m.) injection given on the buttock, 20 patients (74%) presented much later. Fever was the most common complaint for which the injection had been given. The identity of the drugs given was not known in 10 patients. In the remaining 17 patients drugs administered were specified and included Chloroquine, Novalgin, Paraldehyde, Procaine penicillin, and Sulfadoxine-Pyrimethamine. Most of the patients had received the injections in privately owned medical facilities where staff with minimal training are often allowed to administer i.m. injections. CONCLUSION It is suggested that the i.m. route for injection be strongly discouraged when a drug can be given by other routes. Only trained staff should be allowed to administer i.m. injections. Giving i.m. injections at sites other than the buttock maybe advantageous in children particularly those aged five years and below.
Database: Medline

**Author(s):** Senes, Filippo M; Campus, Riccardo; Becchetti, Flavio; Catena, Nunzio

**Source:** Microsurgery; 2009; vol. 29 (no. 6); p. 443-448

**Publication Date:** 2009

**Publication Type(s):** Journal Article

**PMID:** 19306387

**Abstract:** Sciatic nerve injury caused by intramuscular injection in the gluteal region in the child seems as a sensory-motor palsy of the lower limb of variable degree. In preterm children or in children with severe perinatal distress, requiring intensive care, a drop foot is often missed or misdiagnosed as a malformative clubfoot or late diagnosed. Intramuscular drug injection (mainly antibiotics) during early infancy is another cause of injury. There are very few literature reports on postinjection trauma and on therapeutic indications in the child. The Authors report their experience in early microsurgical exploration of the sciatic nerve. From 1990 to 2004, we observed at different times from diagnosis 17 children with sciatic nerve palsy following intramuscular injection. Nine of them underwent nerve exploration surgery in the gluteal region (neurolysis in seven and nerve grafting in two). Conservative treatment was successful in only three cases showing early signs of recovery (at about 3 months of life). Complete recovery was observed only in five early treated cases, while late treated cases had only mild improvement after surgery. During surgery, anatomical variations predisposing to nerve injury were observed. The authors having observed better results and faster recovery in the early treated patients, stress the importance of a rapid therapeutic decision to avoid or limit foot deformities, sensory defects and lower limb length discrepancy due to paralysis during growth.

**Database:** Medline

7. Paralytic drop foot and gluteal fibrosis after intramuscular injections.

**Author(s):** Napiontek, M; Ruszkowski, K

**Source:** The Journal of bone and joint surgery. British volume; Jan 1993; vol. 75 (no. 1); p. 83-85

**Publication Date:** Jan 1993

**Publication Type(s):** Journal Article

**PMID:** 8421043

**Abstract:** Eight children with paralytic drop foot after intramuscular injections later developed gluteal fibrosis. Sciatic palsy, presenting as equinovarus or equinus deformity, was diagnosed on average 3.8 months after the intragluteal injections, but gluteal fibrosis was not diagnosed until 5.1 years after the injections. In three patients the equinovarus recurred after surgical correction due to persistent muscle imbalance and the effect of the external rotation contracture of the hip.

**Database:** Medline

Author(s): Namate, Chinsisi; Shabana, Merai; Mumba, Pilirani; Chimangeni, Sande; Prime, Matthew; Cashman, John

Source: Tropical doctor; Oct 2012; vol. 42 (no. 4); p. 229-231

Publication Date: Oct 2012

Publication Type(s): Journal Article

PubMedID: 23138659

Available at Tropical doctor - from EBSCO (MEDLINE Complete)

Abstract: The objective of our study was to investigate the clinical presentation of patients with acquired foot drop in Malawi; the association of intramuscular injections and quinine administration; and the association between private sector clinics. A consecutive case series of 50 paediatric patients with foot drop was identified that represented 5% of all outpatient appointments during the study period. Ninety percent of all patients had received a gluteal intramuscular injection of quinine, of which 58% were treated in private clinics. This study presents the first description of the aetiology of acquired foot drop in Malawi and suggests that gluteal intramuscular injection of quinine is the leading cause.

Database: Medline


Author(s): Sobel, E; Huang, E Y; Wieting, C B

Source: Journal of the American Podiatric Medical Association; Feb 1997; vol. 87 (no. 2); p. 52-59

Publication Date: Feb 1997

Publication Type(s): Case Reports Journal Article

PubMedID: 9046749

Abstract: Two cases of peroneal nerve palsy resulting in drop foot are reported. One case involves direct injury to the common peroneal nerve by an acupuncture needle. A second case describes sciatic nerve injury caused by an intragluteal injection. Although acupuncture injury at the spinal cord level and the peripheral nerves of the upper extremity has been documented, peroneal nerve palsy resulting from acupuncture therapy has not been previously reported.

Database: Medline
10. A three year review of sciatic nerve injection palsy in the Physiotherapy Department of a Nigerian Specialist Hospital.

Author(s): Fapojuwo, O A; Akinlade, T S; Gbiri, C A
Source: African journal of medicine and medical sciences; Dec 2008; vol. 37 (no. 4); p. 389-393
Publication Date: Dec 2008
Publication Type(s): Journal Article
PubMedID: 19301718

Abstract: Sciatic Nerve palsy associated with intramuscular injection is a major cause of disability among children under 6-years-old in the developing Countries. A retrospective study was conducted with an objective to review cases of all patients with injection induced sciatic nerve palsy managed at the Physiotherapy Department, State Specialist Hospital, Akure Ondo State over a period of 3 years (January 2004 and December 2006). The case notes of these patients were reviewed and the details of the patients’ sex, age and presentations were obtained. Records of 160 patients presenting with Sciatic Nerve Injection Palsy were studied. Males accounted for 60% while 40% were females. They were aged from 3 months to 70 years with paediatric cases accounting for 90% of cases. All of the patients had intramuscular injections following febrile illness. Muscle paralysis with foot drop accounted for 41% cases while 59% had varying degrees of muscle paresis, without foot drop, and 4% had equinovarus deformity as a complication of the paralytic foot drop. Sciatic Nerve Injection Palsy especially in children is a common referral to the Physiotherapy Clinic. There is therefore need for caution in the administration of gluteal intramuscular injections particularly in children.

Database: Medline

11. Iatrogenic post intramuscular injection related peripheral nerve palsy-a retrospective study of 292 surgically treated patients

Author(s): Warade A.G.; Desai K.
Source: Journal of Neurosurgery; Apr 2020; vol. 132 (no. 4); p. 69
Publication Date: Apr 2020
Publication Type(s): Conference Abstract
Available at Journal of Neurosurgery - from Unpaywall

Abstract: Introduction: Iatrogenic intramuscular injection related peripheral nerve injury is a common problem in rural parts of developing countries like India. The major cause being untrained medical staff and misconception that injections have better outcome than oral medications. A retrospective analysis of outcomes in patients surgically treated for iatrogenic peripheral nerves palsies following intramuscular injections was done. Method(s): 292 patients from 2000-2018 were operated by senior author, M:F ratio was 4:1, mean age was 18.7 years and average duration of presentation was 6.7 mths. Commonest nerve involved was sciatic nerve in gluteal region presenting as foot drop in 151 patients. Radial nerve in arm presenting as wrist drop in 132 & axillary nerve in shoulder presenting as restricted abduction in 9 patients. The mean follow-up was 9.7 months (6 months to 3-years) Results: Neurogenic pain and paresthesias in nerve distribution area was noted in 28% patients and muscle wasting in 38% patients. Electrophysiological study was performed in all patients prior to surgical intervention. Pre-operative Magnetic resonance imaging (MRI) and neurography was performed in 11% patients. 210 (71.9%) patients underwent external neurolysis and 82(28.1%) underwent excision of neuroma and sural nerve cables grafting was performed with Intraoperative electrophysiological monitoring. Functional recovery was excellent in radial (90%) and axillary nerves (88.9%). Patients with sciatic nerve palsy, it was 56.5% in tibial and 23.7% in common peroneal nerves. Good outcomes were seen when surgery was performed earlier (<6 months) with external neurolysis having better outcome than nerve grafting. Conclusion(s): The outcome of
iatrogenic post intramuscular injection peripheral nerve injury largely depends on timing of surgery in patients who failed conservative management.

Database: EMBASE

12. Sciatic nerve injury following buttock intramuscular injection in the child: An ongoing risk factor

Author(s): Mayer M.; Romain O.
Source: Archives de Pediatrie; 2001; vol. 8 (no. 3); p. 321-323
Publication Date: 2001
Publication Type(s): Short Survey
PubMedID: 11270260

Abstract: Intramuscular injections are regularly recommended for the administration of certain drugs in children. This article underlines the fact that buttock intramuscular injection risks injury to the sciatic nerve, which may lead to lower limb palsy, most often presenting as paralytic drop foot. This condition rarely results from direct traumatic lesion of the sciatic nerve, but usually from the caustic effect of the injected drug. It may occur in older children and adolescents, as well as in infants and younger children. Therefore, the buttocks should not be used as an intramuscular injection site in children whatever their age. In the case of sciatic nerve injury following intramuscular injection, extrafascicular neurolysis may prevent the occurrence of paralysis. © 2001 Editions scientifiques et medicales Elsevier SAS.

Database: EMBASE

13. Coexistent paralytic drop foot and gluteal fibrosis after intramuscular infections--therapeutic implications

Author(s): Napiontek M.; Ruszkowski K.
Source: Chirurgia narzadow ruchu i ortopedia polska; 1991; vol. 56 (no. 4); p. 126-128
Publication Date: 1991
Publication Type(s): Article
PubMedID: 1369903

Abstract: Six children with paralytic drop foot, which developed after intramuscular injections and who had co-existing gluteal fibrosis are presented in this study. Paralytic drop foot was diagnosed on an average of 5.5 months after intra-gluteal injections. This was the major therapeutic problem. The diagnosis of gluteal fibrosis was made on an average only 3 years and 7 months later. In 3 cases the external rotation and abduction contracture of the extremity in the hip joint, caused by gluteal fibrosis, with active plantar flexors and supinators of the foot could contribute to the recurrence of the equinovarus deformity of the surgically corrected foot.

Database: EMBASE
14. Iatrogenic sciatic nerve injuries following gluteal intramuscular injection among children

**Author(s):** Deena K. A.-S.; Nashwan A. A.-A.

**Source:** International Research Journal of Pharmacy; Apr 2014; vol. 5 (no. 4); p. 267-270

**Publication Date:** Apr 2014

**Publication Type(s):** Article

Abstract:
The objective of this is to provide an overview of iatrogenic sciatic nerve injuries following gluteal IM injection, to determine predisposing factors and the outcome of a conservative treatment of patients with the aim of highlighting practical preventive measures to improve the health of the children by preventing disabilities through safe injection practice in Mosul city. A retrospective study of all children had iatrogenic sciatic nerve injuries following gluteal intramuscular injection were evaluated and treated at Rheumatology and Medical Rehabilitation Unit in Al-Salaam Teaching Hospital and from private clinic of Rheumatology and Medical Rehabilitation in Mosul city, between March 2013 and January 2014. A total of 33 children were enrolled in this study. Of these, 17 patients (51.5 %) were males and 16 patients (48.5 %) were females, with ages ranging from 1 month to 7 years (mean age was 1.9 years). Nineteen cases (57.6 %) aged between 1 and 6 months. Most patients were poor and from low social class, 90.9 % of the cases were sustained their nerve injury by nurses, and Antibiotics that mixed with other drugs simultaneously were the offending agents in 81.8 % of patients. Foot drop is the commonest presenting clinical feature (63.6 %).

Complete recovery was reported in 16.7 % of the patients, partial recovery in 73.3 % and 10 % had no clinically measurable improvement from the baseline. Injection-induced sciatic nerve injury is common among pediatric patients in our city. Electrophysiological examinations provide significant clues about the prognosis and treatment. The role of early rehabilitation is important for smooth recovery with prevention of complications which lead to deformity and disability. It is also emphasized that in order to reduce the frequency of this handicapping condition, intra glutael injections to the infants should be prohibited and should be prescribed only when mandatory, not mix more than one drug in same syringe and should be administered by wellqualified and competent personnel.

**Database:** EMBASE

15. A case of complex regional pain syndrome type II following sciatic nerve injury caused by intramuscular injection

**Author(s):** Bicer A.; Gunay E.; Sarikaya M.

**Source:** Journal of Musculoskeletal Pain; Jun 2012; vol. 20 (no. 2); p. 122-125

**Publication Date:** Jun 2012

**Publication Type(s):** Article

Abstract:
Background: Complex regional pain syndrome [CRPS] type II is characterized by variable dysfunctions of the musculoskeletal, skin, and vascular systems in association with the presence of clinical signs consistent with a definite peripheral nerve injury. Finding(s): A 61-year-old female patient, diagnosed with CRPS type II following a right sciatic nerve injury due to intramuscular [IM] injection, suffered from severe pain, constant burning and tingling, edema, and foot-drop on her right extremity. Conclusion(s): Complex regional pain syndrome type II caused by sciatic nerve injury after an IM injection is a rare clinical complication, and pathophysiology of the disease still remains obscure. © 2012 Informa Healthcare USA, Inc.

**Database:** EMBASE

**Author(s):** Tammelleo A.D.

**Source:** The Regan report on nursing law; Feb 1985; vol. 25 (no. 9); p. 3

**Publication Date:** Feb 1985

**Publication Type(s):** Article

**PubMedID:** 3844856

**Database:** EMBASE

17. Letter to the Editor.

**Author(s):** Chong ; Kira, Ryutaro

**Source:** Journal of Paediatrics & Child Health; Feb 2020; vol. 56 (no. 2); p. 348-349

**Publication Date:** Feb 2020

**Publication Type(s):** Academic Journal

**PubMedID:** NLM32045130

Available at [Journal of paediatrics and child health](https://onlinelibrary.wiley.com/doi/abs/10.1111/jpc.14561) - from Wiley Online Library

Available at [Journal of paediatrics and child health](https://www.unpaywall.org/doi/abs/10.1111/jpc.14561) - from Unpaywall

**Abstract:** Intramuscular injections are common in modern medical care, and safe injection practices should concern all health professionals. The dorsogluteal area is commonly used because of its easy access and muscle bulk, and sciatic nerve injury has been reported as the most frequent serious complication.[1] We report here the case of a child who developed post-injection gluteal fibrosis, an uncommon complication of intramuscular injections in the gluteal area, and first describe the magnetic resonance imaging (MRI) findings of this condition. Gluteal fibrosis manifesting as abduction contracture and external rotation of the hip, and sciatic nerve damage presenting as paralytic drop foot, are preventable complications of intragluteal injections in infancy.[2] Post-injection gluteal fibrosis is diagnosed several years later, usually presenting with abnormal gait.

**Database:** CINAHL
18. Sciatic nerve injury in children after gluteal intramuscular injection: Case reports on medical malpractice.

**Author(s):** Zhuo ; Gao, Dong; Xia, Qing; Ran, Dan; Xia, Wentao

**Source:** Medicine, Science & the Law; Jul 2019; vol. 59 (no. 3); p. 139-142

**Publication Date:** Jul 2019

**Publication Type(s):** Academic Journal

**PubMedID:** NLM31315535

**Abstract:** Two cases of medical malpractice for sciatic nerve injury caused by gluteal intramuscular injection in China are reported. Two children presented with foot drop indicative of sciatic nerve injury following gluteal intramuscular injections. The appraisal of whether there was medical negligence, the causal relationship between the patients' nerve injuries and medical standard of care, and the causative potency were entrusted to us by the court. Based on each patient's original medical history, imaging examination results, limb dysfunction and interviews with their relatives, there was a causal relationship between the children's injuries and the medical treatment. The causative potency of medical negligence was complete effect in one case and main effect in the other case.

**Database:** CINAHL


**Author(s):** Park, Chan-Woong; Cho, Woo-Chul; Son, Byung-Chul

**Source:** Korean journal of neurotrauma; Apr 2019; vol. 15 (no. 1); p. 61-66

**Publication Date:** Apr 2019

**Publication Type(s):** Case Reports

**PubMedID:** 31098352

Available at [Korean journal of neurotrauma](https://www.kjn.org) - from Europe PubMed Central - Open Access

Available at [Korean journal of neurotrauma](https://www.kjn.org) - from Unpaywall

**Abstract:** Iatrogenic injuries due to intramuscular (IM) injection, although less frequently reported than before, are still common. The sciatic nerve is the most commonly injured nerve because of an IM injection owing to its large size and the buttock being a common injection site. Iatrogenic injury to the sciatic nerve resulting from a misplaced gluteal IM injection is a persistent problem worldwide affecting patients in economically rich and poor countries alike. The consequences of sciatic nerve injection injury (SNII) are potentially devastating and may result in serious neurological and medico-legal problems. A 68-year-old male presented with intractable neuropathic pain from SNII that occurred during gluteal IM injection of an analgesic for post-appendectomy pain. This chronic SNII pain did not improve despite his gradual recovery from weakness in the left foot. Partial improvement was seen following an external neurolysis, performed three months post-appendectomy. SNII is a preventable complication of gluteal IM injection. While the complete avoidance of gluteal IM injection is desirable, should need arise, the use of an appropriate administrative technique is recommended.

**Database:** Medline

Author(s): Mishra, P; Stringer, M D

Source: International journal of clinical practice; Oct 2010; vol. 64 (no. 11); p. 1573-1579

Publication Date: Oct 2010

Publication Type(s): Journal Article Review

PubMedID: 20670272

Available at International journal of clinical practice - from Wiley Online Library

Abstract: BACKGROUND/AIMS An intramuscular (i.m.) injection into the buttock risks damaging the sciatic nerve. Safe injection practices need to be understood by doctors and nurses alike. The aims of this study were to determine if sciatic nerve injury because of i.m. injection is a continuing problem and to establish the availability of published guidelines on i.m. injection techniques. METHODS Intramuscular injection related sciatic nerve injury claims to the New Zealand Accident Compensation Corporation between July 2005 and September 2008 were reviewed. Nursing organisations were surveyed to enquire about guidelines on i.m. injection. I.m. injection related sciatic nerve injuries in the medical and medicolegal literature (1989-2009) were systematically reviewed. RESULTS There were eight claims for sciatic nerve injection injury made to the ACC during the 3-year study period; all were in young adults. Only one of the nursing organisations contacted had published guidelines on i.m. injection technique, and these related specifically to immunisation. Seventeen reports of patients with sciatic nerve injury from i.m. injection were identified comprising a total of 1506 patients, at least 80% of which were children. Nine court decisions finding in favour of the plaintiff were identified, all from the North American legal system. A broad range of drugs were implicated in the offending i.m. injections. CONCLUSIONS Sciatic nerve injury from an i.m. injection in the upper outer quadrant of the buttock is an avoidable but persistent global problem, affecting patients in both wealthy and poorer healthcare systems. The consequences of this injury are potentially devastating. Safer alternative sites for i.m. injection exist. These should be promoted more widely by medical and nursing organisations.

Database: Medline


Author(s): Geyik, Sirma; Geyik, Murat; Yigit, Remzi; Kuzudisli, Samiye; Saglam, Sadullah; Elci, Mehmet Ali; Yilmaz, Mustafa

Source: Turkish neurosurgery; 2017; vol. 27 (no. 4); p. 636-640

Publication Date: 2017

Publication Type(s): Journal Article Review

PubMedID: 27593812

Available at Turkish neurosurgery - from Free Medical Journals . com
Available at Turkish neurosurgery - from Unpaywall

Abstract: AIM Sciatic nerve injury is the most frequent and serious complication of intramuscular gluteal injection. This study aims to highlight the incidence and causes of this continuing problem and to discuss the relevant literature. < p < MATERIAL and METHODS: A total of 217 subjects who were diagnosed with sciatic nerve injury in our neurophysiology laboratory between 2003 and 2013 were examined. Sensory and motor transmission studies and needle electromyography were performed by conventional methods in the two lower legs and the results were compared between each leg. RESULTS Of the subjects who experienced a sciatic injury secondary to intramuscular
injection, 59 (27.2%) were female and 158 (72.8%) were male. In all subjects, the dorsogluteal site of the buttocks was selected for intramuscular injection. Sciatica occurred on the right side in 91 subjects, on the left side in 125, and bilaterally in one. The peroneal nerve was more affected than the tibial nerve. The most used agents were non-steroidal anti-inflammatory drugs. According to follow-up electromyography findings of 103 subjects, significant sequelae remained in 2/3 of cases.

CONCLUSION The occurrence of sciatic neuropathy after gluteal injection causing permanent sequelae and leading to medicolegal problems is relatively rare. We suggest a double quadrant drawing technique in each gluteal region. We also draw attention to this issue with postgraduate and in-service training programs of medical staff, and providing continuity in education can reduce this serious complication.

Database: Medline


Author(s): Kadioglu, Hakan Hadi

Source: Turkish neurosurgery; 2018; vol. 28 (no. 3); p. 474-478

Publication Date: 2018

Publication Type(s): Journal Article

PubMedID: 28585677

Available at Turkish neurosurgery - from Free Medical Journals .com

Available at Turkish neurosurgery - from Unpaywall

Abstract: AIM To analyze the cases discussed at the High Health Council (HHC) and to determine the solutions for problems related to gluteal intramuscular injection (IMI) applications. MATERIAL AND METHODS In a 10-year period, the cases of IMI-related sciatic nerve injury (SNI) referred for an opinion from the HHC of Turkey were reviewed. The cases were analyzed based on demographic features, degree of nerve damage, side of gluteal injection, injected drugs, primary disease, appropriateness of parenteral therapy indications, and management. RESULTS There were 107 SNIs from gluteal IMI during the 103 months. Eight of the 107 cases were male and 99 female. The mean age was 28 years. The left sciatic nerve was more commonly injured (41 right, 65 left side). SNI was partial in 48.5% of the cases. The most commonly injected drug was diclofenac sodium (29.9%), and 23.3% of cases were injected more than one drug together. Conservative management was performed in all cases, except one. CONCLUSION Based on our findings, indications of parenteral therapies were exaggerated and nurses injected the drug while the patient"s position was inappropriate for IMI. However, an IMI into the gluteal region is potentially devastating. For those reasons, we conclude that physicians should be restricted in their indications for IMI, and continuous education courses should be organized for nurses. Injured patients should be managed according to their neurological damage.

Database: Medline
23. Foot deformities secondary to gluteal injection in infancy.

**Author(s):** Bigos, S J; Coleman, S S

**Source:** Journal of pediatric orthopedics; Sep 1984; vol. 4 (no. 5); p. 560-563

**Publication Date:** Sep 1984

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 6490875

**Abstract:** We report six cases of foot deformities in children due to sciatic nerve dysfunction that appear to have been caused by gluteal intramuscular injection. Of four patients who developed cavovarus foot deformities, two also exhibited a component of ankle equinus. A fifth patient had a calcaneocavus foot deformity. In the sixth patient foot palsy resolved completely 1 year after injury, and no deformities developed. Identification of the muscle imbalance, as well as appropriate correction of the deformity before the implementation of muscle balancing procedures, led to the attainment of a satisfactory plantigrade gait in the first five patients with deformities. Based on our experience with these six cases and reports in the literature, we recommend that the superolateral gluteal area between the crest of the ilium and the greater trochanter be properly defined as the preferred site for intramuscular injection.

**Database:** Medline

24. Transient lower extremity weakness in an obstetric patient unrelated to epidural anesthesia.

**Author(s):** Ravindran, R S; Viegas, O J

**Source:** Anesthesia and analgesia; Jul 1981; vol. 60 (no. 7); p. 527-528

**Publication Date:** Jul 1981

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 6264821

Available at [Anesthesia and analgesia](https://www.ovid.com) - from Ovid (LWW Total Access Collection 2019 - with Neurology)

**Database:** Medline
25. Sciatic nerve injury due to intramuscular injection: Electrophysiological findings and one-year follow-up

**Author(s):** Bagis S.; Guven A.Z.; Celiker A.R.; Adam M.; LeblebicI U.B.; Karatas M.

**Source:** Turkish Journal of Medical Sciences; 2012; vol. 42 (no. 5); p. 913-917

**Publication Date:** 2012

**Publication Type(s):** Article

Available at [Turkish Journal of Medical Sciences](http://www.tjms.org.tr) - from Free Medical Journals.com

**Abstract:** Aim: To investigate the electrophysiological findings of sciatic nerve injury following intramuscular injection and follow-up progression. Material(s) and Method(s): Included in the study were 26 patients (16 men, 10 women) with sciatic nerve injuries due to intramuscular injections who were admitted to our electrophysiology laboratory. The age, sex, and body mass index (BMI), along with the clinical and electrophysiological findings of each of the patients, were recorded. Tibial and peroneal nerve motor conduction studies, sural and superficial peroneal nerve sensorial conduction studies, and needle electromyography were performed. The patients were reevaluated for electrophysiological evaluation at 3 and 6 months and 1 year after the procedure. Result(s): The mean age was 44.85 +/- 22.71. All of the patients had peroneal involvement; 22 had tibial involvement, 6 had a total lesion at the peroneal and tibial nerve, 18 had severe or moderate involvement (70%), and only 8 (30%) had mild involvement. Recovery was poor, except for those with mild involvement. Conclusion(s): Sciatic nerve injury due to intramuscular injection is a significant health problem. Although most of the lesions were moderate, recovery was inadequate. Electrophysiological examinations give significant clues about the prognosis and treatment. © TUBITAK.

**Database:** EMBASE

26. Outcome of iatrogenic lesions of the sciatic nerve due to intramuscular injections

**Author(s):** Alagnide E.; Kpadonou G.T.; Gbenou S.

**Source:** Annals of Physical and Rehabilitation Medicine; Oct 2010; vol. 53

**Publication Date:** Oct 2010

**Publication Type(s):** Conference Abstract

Available at [Annals of Physical and Rehabilitation Medicine](https://www.elsevier.com) - from Unpaywall

**Abstract:** Introduction.- Lesions of the sciatic nerve due to intramuscular injections (LNSIM) are well known in malaria endemic zones [1,2]. The consequences may be invalidating, both functionally and economically. Objective.- Determine the outcome of iatrogenic sciatic nerve injuries long after rehabilitation. Patients and method.- Retrospective cross sectional study to describe 89 cases of LNSIM followed in our rehabilitation unit from January 1996 to December 2005 and reviewed in 2008. Results.- The annual prevalence was 9 cases, with a maximum of 13 in 1997. Quinine was the most commonly observed product. Male children (55%) and children aged less than 10 years (55.1%) predominated. The injury involved the common fibular nerve (64%), the sciatic trunk 20%) and the tibial nerve (16%). The clinical course was marked by persistent motor disorders (amyotrophy, muscle palsy), orthopedic problems (stiff ankle, irreducible pes equinovarus), and sensorial disorders (hypoesthesia, residual pain). LNSIM had an impact on school and recreational activities leading most of the children to stop their recreational activities or perturbing their schooling. Recovery was slow, incomplete, and sometimes totally absent neurotmesis). Discussion.- The severity of the deficiencies, the limitations on functional capacities, and restrictions on active participation due to LNSIM should incite authorities to develop preventive measures to prevent the use of intramuscular injections of quinine.
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