Intramuscular Injections and Sciatic Nerve Injury

1. Sciatic neuropathy developed after injection during curettage.

**Author(s):** Altıntaş, Ayşe; Gündüz, Ayşegül; Kantarcı, Fatih; Gözübatık Çelik, Gökçen; Koçer, Naci; Kızıltan, Meral E

**Source:** Agri : Agri (Algoloji) Dernegi'nin Yayin organidir = The journal of the Turkish Society of Algology; Jan 2016; vol. 28 (no. 1); p. 46-48

**Publication Date:** Jan 2016

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

**PubMedID:** 27225613

Available at [Agri : Agri (Algoloji) Dernegi'nin Yayin organidir = The journal of the Turkish Society of Algology](from Unpaywall)

**Abstract:** Intramuscular injections are likely the most common cause of sciatic nerve injury in developing countries. Less common causes include piriformis syndrome, primary tumors of the sciatic nerve, metastatic tumors invading or compressing the nerve, endometriosis, vascular malformations, and prolonged immobilization or positioning. While the most reliable diagnostic and prognostic methods include nerve conduction studies and electromyography, magnetic resonance imaging has been suggested as an alternative method of determining type of lesion, establishing location, and investigating level of nerve involvement. A case of sciatic neuropathy that developed after intramuscular injection, with patient in prolonged lithotomy position and under sedation, is described.

**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 Science, Technology and Medicine Collection 2019

Available at International journal of clinical practice - from Unpaywall

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
3. The relationship between nerve conduction studies and neuropathic pain in sciatic nerve injury due to intramuscular injection.

**Author(s):** Fidancı, Halit; Öztürk, İlker

**Source:** The Korean journal of pain; Jan 2021; vol. 34 (no. 1); p. 124-131

**Publication Date:** Jan 2021

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

**PubMedID:** 33380575

Available at The Korean journal of pain - from Europe PubMed Central - Open Access
Available at The Korean journal of pain - from Free Medical Journals . com
Available at The Korean journal of pain - from Unpaywall

**Abstract:** Background: Sciatic nerve injury due to intramuscular injection (SNIII) is still a health problem. This study aimed to determine whether there is a correlation between neuropathic pain and electrodiagnostic findings in SNIII.

**Methods:** Patients whose clinical and electrodiagnostic findings were compatible with SNIII participated in this retrospective cohort study. Compound muscle action potential (CMAP) and sensory nerve action potential (SNAP) amplitudes of the sural, superficial peroneal, peroneal, and tibial nerves were graded from 1 to 4. Leeds assessment of neuropathic symptoms and signs scale (LANSS) was applied to all patients.

**Results:** Forty-eight patients were included in the study, 67% of whom had a LANSS score ≥ 12. Sural SNAP amplitude abnormalities were present in 8 (50%) out of 16 patients with a LANSS score < 12, and 28 (87.5%) out of 32 patients with a LANSS score ≥ 12, with significant differences between the groups (P = 0.011). There was a positive correlation between the LANSS score and the sural SNAP amplitude grading (P = 0.001, r = 0.476). A similar positive correlation was also found in the LANSS score and the tibial nerve CMAP amplitude grading (P = 0.004, r = 0.410).

**Conclusions:** This study showed a positive correlation between the severity of tibial nerve CMAP/sural SNAP amplitude abnormality and LANSS score in SNIII. Neuropathic pain may be more common in SNIII patients with sural nerve SNAP amplitude abnormality.

**Database:** Medline


**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 - from Europe PubMed Central - Open Access
Available at Korean journal of neurotrauma - 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):** 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](https://www.turkneurosurgery.com) from Free Medical Journals . com

Available at [Turkish neurosurgery](https://www.turkneurosurgery.com) 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
6. Preventing Sciatic Nerve Injury due to Intramuscular Injection: Ten-Year Single-Center Experience and Literature Review.

Author(s): Geyik, Sirma; Geyik, Murat; Yigiter, 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: AIMSciatic 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.  

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
7. 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](https://www.bmjcasereports.com) - from Europe PubMed Central - Open Access

Available at [BMJ case reports](https://www.bmjcasereports.com) - from HighWire

Available at [BMJ case reports](https://www.bmjcasereports.com) - 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

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8. MRI imaging and clinical features of sciatic nerve injection injury.

**Author(s):** Ripellino, Paolo; Mazzini, Letizia; Comi, Cristoforo; Perchinunno, Marco; Stecco, Alessandro; Cantello, Roberto

**Source:** The International journal of neuroscience; 2016; vol. 126 (no. 7); p. 658-659

**Publication Date:** 2016

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

**PubMedID:** 26000913

Available at [The International journal of neuroscience](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5140021/) - from EBSCO (Psychology and Behavioral Sciences Collection)

**Database:** Medline

Author(s): Jung Kim, Hyun; Hyun Park, Sang

Source: The Journal of international medical research; Aug 2014; vol. 42 (no. 4); p. 887-897

Publication Date: Aug 2014

Publication Type(s): Journal Article Review

PubMedID: 24920643

Available at The Journal of international medical research - from Free Medical Journals . com

Abstract:Nerve injury is a common complication following intramuscular injection and the sciatic nerve is the most frequently affected nerve, especially in children, the elderly and underweight patients. The neurological presentation may range from minor transient pain to severe sensory disturbance and motor loss with poor recovery. Management of nerve injection injury includes drug treatment of pain, physiotherapy, use of assistive devices and surgical exploration. Early recognition of nerve injection injury and appropriate management are crucial in order to reduce neurological deficit and to maximize recovery. Sciatic nerve injection injury is a preventable event. Total avoidance of intramuscular injection is recommended if other administration routes can be used. If the injection has to be administered into the gluteal muscle, the ventrogluteal region (gluteal triangle) has a more favourable safety profile than the dorsogluteal region (the upper outer quadrant of the buttock).

Database: Medline


Author(s): Ong, Marcus Jian Fu; Lim, Gavin Hock Tai; Kei, Pin Lin

Source: Singapore medical journal; Aug 2012; vol. 53 (no. 8); p. 551

Publication Date: Aug 2012

Publication Type(s): Journal Article

PubMedID: 22941135

Abstract:A 77-year-old Chinese female patient presented with acute onset of left lower limb paraesthesia and weakness after she received an intramuscular injection for pain relief in the gluteal region. Magnetic resonance (MR) imaging of her lumbosacral spine and sacral plexus was performed. The MR imaging findings are reviewed and discussed.

Database: Medline
11. Early surgical treatment protocol for sciatic nerve injury due to injection—a retrospective study.

Author(s): Topuz, Kivanç; Kutlay, Murat; Simşek, Hakan; Atabey, Cem; Demircan, Mehmet; Senol Güney, Mehmet

Source: British journal of neurosurgery; Aug 2011; vol. 25 (no. 4); p. 509-515

Publication Date: Aug 2011

Publication Type(s): Journal Article Review

PubMedID: 21513449

Abstract: BACKGROUND AND PURPOSE We retrospectively researched 119 patients with buttock level traumatic injury to sciatic nerves and 42 cases of sciatic nerve injuries due to intramuscular injections were observed among them. Our aim was finding out the post-operative outcomes of early intervention and describing a timing schedule for surgical intervention. METHODS Between 1984 and 2004 a total of 73 patients were operated on to explore the nerve lesion. These injuries consisted of post-injection injury, hip fracture/dislocation, contusion, compression, gunshot wound, hip arthroplasty and laceration. Our study took into account 29 cases operated because of injection injury. The most common presenting symptom was pain, which often masked underlying loss of function. Findings at operation were analysed according to the type of sciatic nerve damaged following intramuscular injection, the nature of this injury and the referring speciality. Some of the more common causal operations and procedures are discussed. Preventive measures are listed, and early diagnosis and treatment are recommended. The aim of the operation was to establish the diagnosis, to resolve pain and to improve function by epineural or interfascicular neurolysis. RESULTS We analysed the findings at operation according to the nature of the injury and the procedures which the patients underwent. Seven patients (24.1%) had an excellent outcome, 14 patients (48.2%) had good outcome and 4 patients (13.8%) had fair outcome. The other four patients (13.8%) had poor outcome. No patients suffered from additional post-operative neurological deficits or from worsening of pre-operative deficits. CONCLUSION Based on our experiences, we recommend measures by which the morbidity rate of these injuries may be reduced. We stress, however, that if the clinical evidence points to transection of a nerve, that nerve may be explored without waiting for electrophysiological confirmation. Delay in recognition and therefore treatment was a cause of litigation, and contributed to the poor outcome in many cases.

Database: Medline

**Author(s):** Şencan, Savaş; Cüce, Isa; Gündüz, Osman Hakan

**Source:** Turkish journal of physical medicine and rehabilitation; Jun 2019; vol. 65 (no. 4); p. 406-410

**Publication Date:** Jun 2019

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

**PubMedID:** 31893279

Available at Turkish journal of physical medicine and rehabilitation - from Unpaywall

**Abstract:** Post-injection sciatic neuropathy (PISN) from an inadvertent intramuscular injection in the gluteal region is a type of iatrogenic sciatic nerve injury. Patients with neuropathic pain following PISN frequently experience disability leading to restrictions in daily activities and pain, which may be resistant to conventional treatments and physiotherapy in some cases. To date, minimal invasive procedures for neuropathic pain have been performed with various medications at the site of lesion. Herein, we report three adult male cases with PISN-associated neuropathic pain who were resistant to conservative management and were treated with fluoroscopy-guided transsacral block.

**Database:** Medline

13. Fourteen (14) months follow up of traumatic sciatic neuritis due to intramuscular injection: A case report

**Author(s):** Varma A.R.; Jaiswal A.R.; Myadam S.B.; Dixit A.S.; Arora S.P.

**Source:** Pan African Medical Journal; 2021; vol. 39 (no. 188)

**Publication Date:** 2021

**Publication Type(s):** Article

Available at The Pan African medical journal - from Europe PubMed Central - Open Access

Available at The Pan African medical journal - from Free Medical Journals .com

**Abstract:** The injury caused due to the intramuscular (IM) mode of drug administration are still affecting population in rural area more than urban area. The IM injection given in any quadrant except the upper outer quadrant of buttock most commonly damages the sciatic nerve because of its course and extent in the injection prone site. The iatrogenic sciatic nerve injury because of IM injection in dorsogluteal site is a matter of concern all over the world covering the undeveloped, developing and developed countries. The iatrogenic sciatic neuritis causes severe neurological or motor deficits leading to the medico-legal consequences. An 8-year-old male child, post dorsogluteal IM injection for mild fever and cold, presented left lower limb weakness and pain in left gluteal region. The patient underwent the medical and physiotherapeutic management for 14 months. The medical management included the initial dose of steroids and ox carbamazepine along with methylcobalamine and folic acid. The physiotherapeutic intervention concentrated on the functional independency of child. The patient attended complete physiological and functional recovery by the end of 14th month concluding that sometimes waiting for lesion to resolve is better than intervention. The iatrogenic sciatic neuritis is a complication that needs attention for prevention following intramuscular drug administration technique.

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**Database:** EMBASE

Author(s): Riso V.; Iodice F.; Barbato F.; Granata G.

Source: Journal of ultrasound in medicine : official journal of the American Institute of Ultrasound in Medicine; Sep 2020; vol. 39 (no. 9); p. 1877-1878

Publication Date: Sep 2020

Publication Type(s): Letter

PubMedID: 32255194

Available at Journal of ultrasound in medicine : official journal of the American Institute of Ultrasound in Medicine - from HighWire - Free Full Text

Database: EMBASE

15. Sciatic nerve injury following intramuscular gluteal injection in children: An electrophysiological study

Author(s): AL Sabawi M.I.S.

Source: Biochemical and Cellular Archives; 2020; vol. 20 ; p. 4301-4307

Publication Date: 2020

Publication Type(s): Article

Abstract: Sciatic nerve injury is a common complication following intramuscular injection and the sciatic nerve is the most frequently affected nerve, especially in children. The neurological presentation may range from minor transient pain to severe sensory disturbance and motor loss with poor recovery. The aim of the study is to investigate the electrophysiological findings of sciatic nerve injury following intramuscular injection in children and to detect the prognosis of this injury. Twenty-five child patient with sciatic nerve injury caused by intramuscular injection are included in this study. They are diagnosed through short history; clinical examination and electrophysiological study in the Nineveh Handicap Rehabilitation center and private clinic. Nerve conduction study for sciatic nerves (common peroneal and posterior tibial nerves-motor) and sural nerves (sensory) bilaterally are done for the patients to study the Distal motor and sensory latency (DML; DSL); Compound motor and sensory action potential (CMAP; SNAP); and Conduction nerve velocities (NCV); by using Neuropack EMG\EP measuring system-Nihoncodene (MEB-9400K) and EMG_NT Electromyography & Nerve Conduction Studies for Galileo NT Line (Nemus-2). The common peroneal nerve is most frequently affected than the tibial nerve. Sensory sural nerve injury is detected in our study in 3 patients. Child patients with BMI(25-29.9kg\m2) show less sciatic nerve injury than who have BMI(18.5-24.9 kg\m2).Copyright © 2020, Connect Journal.

Database: EMBASE
16. Iatrogenic sciatic nerve injury: A case report

Author(s): Devaraj N.K.; Rashid A.A.; Kassim P.S.J.; Ali H.

Source: Malta Medical Journal; 2020; vol. 32 (no. 2); p. 118-121

Publication Date: 2020

Publication Type(s): Article

Abstract: Sciatic nerve injury is an uncommon presentation seen in primary care. Detailed history and careful physical examination may sometimes be able to elicit this diagnosis and its possible cause. Sometimes additional imaging modality such as ultrasound or magnetic resonance imaging may be needed to confirm the diagnosis. This case report will look at a case of 60-years old woman who presented with severe pain and limping over her right lower limb which eventually linked to intramuscular injection given two days earlier for severe knee pain. Copyright © 2020, University of Malta. All rights reserved.

Database: EMBASE

17. Bilateral nerve conduction studies must be considered in the diagnosis of sciatic nerve injury due to intramuscular injection

Author(s): Fidanci H.; Ozturk I.; Koyluoglu A.C.; Yildiz M.; Arlier Z.

Source: Neurological Sciences and Neurophysiology; 2020; vol. 37 (no. 2); p. 94-99

Publication Date: 2020

Publication Type(s): Article

Abstract: Objectives: Although compound muscle action potential (CMAP) and sensory nerve action potential (SNAP) amplitudes of the nerves are reduced in sciatic nerve injury due to intramuscular injection (SNIII), they may still be higher than the reference values if there is a mild axonal degeneration. In this case, comparing the outcomes of nerve conduction studies of intact and affected lower extremities becomes important. We aimed to determine the role of this comparison in the diagnosis of SNIII. Method(s): Patients with SNIII were included. Reference values for lower extremity nerve conduction studies were obtained from healthy participants. Peroneal, posterior tibial, superficial peroneal, and sural nerve conduction studies were performed in both lower extremities. In the first analysis, the CMAP or SNAP amplitude of the nerve was considered abnormal if it was less than the reference value. In the second analysis, the CMAP or SNAP amplitude of the nerve was considered abnormal if it was less than the reference value or <50% of the CMAP or SNAP amplitude obtained from the intact limb nerve. Result(s): Thirty patients and 31 controls were included in the study. Compared with those found in the first analysis, the number of posterior tibial nerve CMAPs with reduced amplitudes, and the sural and superficial peroneal nerve SNAPs with reduced amplitudes were higher in the second analysis (P = 0.008, P < 0.001, and P = 0.031; respectively). Conclusion(s): This study showed that nerve conduction studies should be performed in both the intact and affected extremities in SNIII. Copyright © 2020 Neurological Sciences and Neurophysiology.

Database: EMBASE
18. Nicolau Syndrome, Masquerader of Postinjection Sciatic Nerve Injury: Case Report and Review of Literature

**Author(s):** Raju B.; Ashraf O.; Jumah F.; Gupta G.; Sun H.; Nanda A.; Appaji Gowda N.M.

**Source:** World Neurosurgery; Nov 2020; vol. 143; p. 51-55

**Publication Date:** Nov 2020

**Publication Type(s):** Article

**PubMedID:** 32679363

**Abstract:** Background: Sciatic nerve injury after inadvertent intramuscular gluteal injection is a well-described entity. We have presented a case of a rare and probably underdiagnosed pathological entity, Nicolau syndrome, which can be confused with injection palsy. Case Description: We report the case of a 13-year-old boy who had presented with foot drop and urinary and fecal incontinence after an intramuscular injection of benzathine penicillin in the left gluteal region. On examination, the patient had multiple ecchymoses over the left gluteal region and back of the thigh, mild swelling of the left lower limb, and left foot drop. Meticulous examination also revealed a subtle weakness of the opposite limb. Nerve conduction studies revealed axonopathy involving multiple bilateral lower limb nerves. These unusual neurological-dermatological signs and electrophysiological findings raised the concern for an alternative pathology, which was later diagnosed as Nicolau syndrome. The patient experienced clinical and electrophysiological recovery after a course of oral steroids and physiotherapy during the next few months. Conclusion(s): Before diagnosing injection sciatic nerve injury, the possibility of medically treatable Nicolau syndrome should be considered. Neurosurgeons’ familiarity with this pathology and a timely diagnosis is essential to plan appropriate treatment strategies. Copyright © 2020 Elsevier Inc.

**Database:** EMBASE

19. 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

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20. Sciatic nerve injection palsy in children

Author(s): Harsh V.; Ahmad W.; Kumar A.; Chengazhacherril R.B.; Sharma K.; Kalakoti P.; Gupta U.

Source: Iranian Journal of Child Neurology; 2016; vol. 10 (no. 4); p. 86-87

Publication Date: 2016

Publication Type(s): Letter

Available at Iranian journal of child neurology - from PubMed Central

Available at Iranian journal of child neurology - from PubMed

Database: EMBASE

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21. Morphological variations of sciatic nerve and piriformis muscle in gluteal region during fetal period

Author(s): Sinha M.B.; Aggarwal A.; Sahni D.; Harjeet K.; Gupta R.; Sinha H.P.

Source: European Journal of Anatomy; 2014; vol. 18 (no. 4); p. 261-266

Publication Date: 2014

Publication Type(s): Article

Abstract: Intramuscular drug injection in the gluteal region is often the most frequent cause of sciatic nerve injury in preterm newborns. Local anatomic variation is one of the predisposing causes of iatrogenic sciatic nerve injury. The aim of this morphological study was to assess the relationship of sciatic nerve with the piriformis muscle and to elucidate variations of fusion of piriformis with neighboring muscles in the gluteal region of Indian human preterm fetuses. Four types of relationship of the sciatic nerve with the piriformis muscle were observed in one hundred gluteal regions of fifty spontaneously aborted, formalin-fixed fetuses, aged 20 to 36 week (24 males and 26 females). In 85% of the gluteal regions, the classic pattern was found, in which the two components of the sciatic nerve fuse with each other proximal to the piriformis, and the fused sciatic nerve emerges at the lower border of the piriformis. In the remaining 15% of the gluteal regions, variations in relationship were found. The most common variation, characterized by the passage of the common peroneal component through the piriformis and the emergence of the tibial part at the lower border of the piriformis, was seen in 9% of the gluteal regions. Common peroneal and tibial components passed above and below the muscle respectively in 3%, and the unsplit sciatic nerve passed through the piriformis in 3% of the gluteal regions. Four types of fusion of the piriformis with the neighboring muscles were seen: namely, no fusion; fusion with superior gamellus; fusion with gluteus medius, or fusion with gluteus medius and obturator internus complex in 28%, 43%, 26% and 3% of the gluteal regions respectively. Anatomical variations of the sciatic nerve in relation to the piriformis muscle should be kept in mind while performing medical or surgical interventions in this region.

Database: EMBASE
22. Sciatic nerve injury: Legal cases

Author(s): Sener M.T.; Sahingoz S.; Anci Y.; Kok A.N.; Kir M.Z.

Source: Duzce Medical Journal; Sep 2014; vol. 16 (no. 1); p. 38-40

Publication Date: Sep 2014

Publication Type(s): Article

Abstract: Objective: Sciatic nerve (SN) injuries may occur as a result of traumatic events or in result of medical interventions during the injections. This study was carried out to determine the causes of sciatic nerve injury which was subject to judicial scrutiny. Method(s): 16,827 cases were analyzed between the years 2002 and 2011 which were sent to Department of Forensic Medicine of Ataturk University were evaluated retrospectively. A total of 21 SN injury cases were evaluated Results: The reason of SN injury were in 10 cases (47.6%) intramusculer (IM) injection. In EMG of these 10 cases (47.6%) were identified as tibial-peroneal nerve injury. Physical examinations showed foot drop in 7 cases (33.3%) and dorsiflexion or plantar flexion weakness in 8 cases (38.1%). Conclusion(s): More than half of the cases of SN injury were due to IM injection. For that reason, IM injection should be made by authorized medical staff and these staff should be well educated. Copyright © 2012 Duzce Medical Journal.

Database: EMBASE

23. 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.
24. 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

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

**Author(s):** Bagis S.; Guven A.Z.; Cellker 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 - 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
Intramuscular injection-related nerve injury: Clinical and electrodiagnostic study

Author(s): Ravi N.; Kiran E.S.S.; Saxena A.B.; Devdutt D.; Ul Rehaman A.; Murthy J.M.K.

Source: Clinical Neurophysiology; Oct 2010; vol. 121

Publication Date: Oct 2010

Publication Type(s): Conference Abstract

Abstract: Objectives: Still in India unsafe intramuscular injection (IMI) by so called registered medical practitioners (not qualified in allopathic medicine) is one of the most preventable causes of nerve injury (NI). This study reports the clinical and electrodiagnostic findings in patients with IMI-related NI (IMINI). Method(s): This is a retrospective review of the case records of all patients with IMINI referred for electrodiagnostic studies between January 2007 and December 2009. Electrodiagnostic studies included motor and sensory conduction studies of all the nerves in the affected limb and also screening for any evidence of generalized or focal neuropathy. Needle EMG of the muscles innervated by radial and sciatic nerve was done. Nerve injury was classified as neuropraxia, axonotmesis, and neurotmesis. Result(s): Thirty-five patients were evaluated for IMINI during the study period: radial 23 [M:F: 17:6; mean age 38.21 yrs, range 9 to 71 yrs] and sciatic 12 [M:F: 10:2; mean age: 40.05 yrs; range 1.5 to 82 yrs]. IMINI accounted for 0.5% of all the electrodiagnostic studies (n = 6805) done during the study period. In all the patients with sciatic IMINI, the site of injury was in the gluteal region above the origin of branches to hamstring muscles. Electrodiagnostic studies were suggestive of neurotmesis in four patients and axonotmesis in eight. Of the 23 patients with radial IMINI, the site of injury was above the radial groove in 19 and at the radial groove in four. Electrodiagnostic studies were suggestive of neurotmesis in 12 patients and axonotmesis in 11. No motor functional recovery in all the 16 patients with neurotmesis and partial in all the 19 patients with axonotmesis. Conclusion(s): Radial and sciatic NI following unsafe IMI, a totally preventable iatrogenic hazard, is not uncommon in this part of the world and carries a poor prognosis.

Database: EMBASE
27. Inferior Gluteal Nerve Injury Due to Intramuscular Injection.

**Author(s):** FİDANCI; ÖZTÜRK, İlker; ARLIER, Zülfikar

**Source:** Duzce Medical Journal; Sep 2020; vol. 22 (no. 3); p. 161-165

**Publication Date:** Sep 2020

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

**Abstract:**

Aim: The purpose of this study was to determine the clinical features of the inferior gluteal nerve (IGN) injury due to intramuscular (IM) injection. Material and Methods: Patients with clinical and electrodiagnostic features of the sciatic nerve (SN) and possible IGN injuries due to IM injection were included in this retrospective study. The presence of an IGN injury was considered in patients with weakness in the gluteus maximus (GM) muscle or in those who demonstrated needle electromyography (EMG) abnormality in the GM muscle. Results: There were 44 (95.6%) patients with an SN injury only, 1 (2.2%) patient with both an SN and an IGN injury, and 1 (2.2%) patient with an IGN injury only. The complaints of the patient with an IGN injury only occurred within hours to days after the IM injection; this patient had no muscle weakness. The complaints of the patient with both IGN and SN injuries occurred minutes to hours after IM injection; this patient had mild weakness in the plantar flexion of the foot. In 40 of the patients with only an SN injury, complaints occurred immediately after or within a few seconds following the IM injection, while complaints occurred within minutes to hours in the remaining 4 patients. Conclusion: Although rare when compared to SN injury, the IGN can be injured by IM injection. Therefore, the GM muscle should be examined with needle EMG in patients with complaints associated with IM injection. Muscle weakness may not occur in nerve injuries due to IM injections.

**Database:** CINAHL

28. 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 glutéal intramuscular injection in China are reported. Two children presented with foot drop indicative of sciatic nerve injury following glutéal 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
29. Post-injection sciatic nerve injury: MRI.

**Author(s):** Agarwal; Mirza, Arif; Gulati, Aishwarya; Gulati, Parveen

**Source:** Neurology India; Jan 2019; vol. 67; p. 157-158

**Publication Date:** Jan 2019

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

**PubMedID:** NLM30688253

Available at [Neurology India](https://neurologyindia.com) - from Free Medical Journals .com

Available at [Neurology India](https://neurologyindia.com) - from ProQuest (Health Research Premium) - NHS Version

**Abstract:** The article presents a case study of a one-year-old child, with a foot drop for fifteen days. It mentions the nerve conduction velocity (NCV) and electromyogram (EMG) findings were suggestive of involvement of common peroneal nerve as well as posterior tibial nerve; and also mentions the treatment options vary depending upon the severity of symptoms and can range from pain killers, physiotherapy, braces or operative exploration.

**Database:** CINAHL

30. SCIATIC NERVE INJURY: LEGAL CASES.

**Author(s):** Şener; Kir, Muhammed Ziya; Şahingöz, Sadık; Ancı, Yüksel; Kök, Ahmet Nezih

**Source:** Duzce Medical Journal; Jan 2014; vol. 16 (no. 1); p. 38-40

**Publication Date:** Jan 2014

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

**Abstract:** Objective: Sciatic nerve (SN) injuries may occur as a result of traumatic events or in result of medical interventions during the injections. This study was carried out to determine the causes of sciatic nerve injury which was subject to judicial scrutiny. Method: 16,827 cases were analyzed between the years 2002 and 2011 which were sent to Department of Forensic Medicine of Atatürk University were evaluated retrospectively. A total of 21 SN injury cases were evaluated. Results: The reason of SN injury were in 10 cases (47.6%) intramuscular (IM) injection. In EMG of these 10 cases (47.6%) were identified as tibial-peroneal nerve injury. Physical examinations showed foot drop in 7 cases (33.3%) and dorsiflexion or plantar flexion weakness in 8 cases (38.1%). Conclusion: More than half of the cases of SN injury were due to IM injection. For that reason, IM injection should be made by authorized medical staff and these staff should be well educated.

**Database:** CINAHL

Author(s): GÜndÜZ ; Uzun, Nurten; Alkan, Nevzat; Karaall Savrun, Feray; Kiziltan, Meral E.

Source: Archives of Neuropsychiatry / Noropsikiatri Arsivi; Sep 2012; vol. 49 (no. 3); p. 208-211

Publication Date: Sep 2012

Publication Type(s): Academic Journal

Available at Nöro Psikiyatri Arşivi - from ProQuest (Health Research Premium) - NHS Version

Abstract: Objective: The gluteal region is usually the preferred site for intramuscular injections. However, reported complications include pain, abscess formation, hematoma formation and peripheral nerve injury, most frequently sciatic nerve injury. Here, we aimed to analyze the demographical, clinical and electrophysiological features of patients with sciatic nerve injury following gluteal intramuscular injections and to summarize the legal procedure in Turkey. Methods: We retrospectively investigated the clinical and electrophysiological features of 33 patients who were admitted to our electrophysiology department between January 1995 and June 2006 with symptoms and signs of sciatic nerve injury which appeared after intramuscular injection in the gluteal region and we reviewed the legal procedure. Results: There were 16 male (48.5%) and 17 female (51.5%) patients. Age range was between 1.5 and 81 years. The interval between nerve injury and admission to our laboratory ranged from 20 days to 25 years. 24 patients were admitted within 6 months after the injury, 32, within 1 year and, only one was admitted after 25 years. The patients who were admitted within the first 6 months after the injury, were commonly admitted for diagnosis and determination of prognosis, whereas the patients in the late periods were referred as a part of medico-legal procedure. All patients expressed burning and shock-like pain radiating to the whole lower extremity. The other symptoms were weakness (50%), numbness (9.1%), and paresthesia (4.5%). Electrophysiologically, both divisions of the sciatic nerve were affected in 9 (27.2%) and axonal involvement of the lateral division predominated in the remaining patients. Conclusion: Injection neuropathy constitutes the major part of the sciatic nerve injuries. Most frequent symptoms are burning pain and weakness. In any traumatic sciatic neuropathy, the peroneal nerve seems to be involved more frequently resulting from the more lateral and superficial location of the fibers supplying the peroneal nerve. Axonal involvement is generally predominating in injection neuropathies. Patients even in the late period are referred to the electrophysiology laboratory for determination of sequela and medico-legal procedures. All medical staff should be aware of clinical and electrophysiological findings and medicolegal approach in this condition.

Database: CINAHL

**Author(s):** Toopchizadeh, Vahideh; Barzegar, Mohammad; Habibzadeh, Afshin

**Source:** Iranian journal of child neurology; 2015; vol. 9 (no. 3); p. 69-72

**Publication Date:** 2015

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

**PubMedID:** 26401156

Available at [Iranian journal of child neurology](https://www.ncbi.nlm.nih.gov/pubmed/26401156) - from PubMed

Available at [Iranian journal of child neurology](https://www.ncbi.nlm.nih.gov/pubmed/26401156) - from PubMed Central

**Abstract:** Sciatic nerve injury is one of the frequent mononeuropathies in children that occurs due to different causes such as nerve compression, trauma and stretch during surgery. Gluteal injection is an uncommon cause of sciatic injury in developed countries. Poor techniques and frequent injections are the common cause of injection palsy. Proneal division of the sciatic nerve is more prone to injury due to anatomic and structural characteristics. The diagnosis is based on electrophysiological studies and the recovery rate is poor. In this study, in a period of 2 years between 2012 and 2013, we report seven children under 6 years old (three females and four males) with abnormal gait and foot pain following gluteal injection in pediatric electrodiagnostic center. Five children had proneal component and two with tibial component injuries. Five children were followed for one year and only one showed good recovery.

**Database:** Medline

33. IM Injection neuropathies of the sciatic nerve: Experience of an electrophysiology laboratory and medicolegal approach in Turkey

**Author(s):** Gunduz A.; Uzun N.; Karaali Savrun F.; Kiziltan M.E.; Alkan N.

**Source:** Noropsikiyatri Arsivi; 2012; vol. 49 (no. 3); p. 208-211

**Publication Date:** 2012

**Publication Type(s):** Review

Available at [Nöro Psikiyatri Arşivi](https://www.ncbi.nlm.nih.gov/pubmed/22290900) - from ProQuest (Health Research Premium) - NHS Version

**Abstract:** Objective: The gluteal region is usually the preferred site for intramuscular injections. However, reported complications include pain, abscess formation, hematoma formation and peripheral nerve injury, most frequently sciatic nerve injury. Here, we aimed to analyze the demographical, clinical and electrophysiological features of patients with sciatic nerve injury following gluteal intramuscular injections and to summarize the legal procedure in Turkey.

**Method(s):** We retrospectively investigated the clinical and electrophysiological features of 33 patients who were admitted to our electrophysiology department between January 1995 and June 2006 with symptoms and signs of sciatic nerve injury which appeared after intramuscular injection in the gluteal region and we reviewed the legal procedure. Result(s): There were 16 male (48.5%) and 17 female (51.5%) patients. Age range was between 1.5 and 81 years. The interval between nerve injury and admission to our laboratory ranged from 20 days to 25 years. 24 patients were admitted within 6 months after the injury, 32, within 1 year and, only one was admitted after 25 years. The patients who were admitted within the first 6 months after the injury, were commonly admitted for diagnosis and determination of prognosis, whereas the patients in the late periods were referred as a part of medico-legal procedure. All patients expressed burning and shock-like pain radiating to the whole lower extremity. The other symptoms were weakness (50%), numbness (9.1%), and paresthesia (4.5%). Electrophysiologically, both divisions of the sciatic nerve were affected in 9 (27.2%) and axonal involvement of the lateral division predominated in the remaining patients.
Conclusion(s): Injection neuropathy constitutes the major part of the sciatic nerve injuries. Most frequent symptoms are burning pain and weakness. In any traumatic sciatic neuropathy, the peroneal nerve seems to be involved more frequently resulting from the more lateral and superficial location of the fibers supplying the peroneal nerve. Axonal involvement is generally predominating in injection neuropathies. Patients even in the late period are referred to the electrophysiology laboratory for determination of sequela and medico-legal procedures. All medical staff should be aware of clinical and electrophysiological findings and medicolegal approach in this condition. © Archives of Neuropsychiatry, published by Galenos Publishing.

**Database:** EMBASE

34. **Intramuscular injection: an uncommon cause of ipsilateral foot drop.**

**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

**Database:** Medline

35. **Aetiology of acquired ‘drop foot’ deformity in Malawian children: a case series of 50 patients.**

**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

**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
36. Bilateral sciatic neuropathy related to intramuscular injection: A case report

**Author(s):** Yavuz S.; Yazici S.D.; Tastekin N.; Birtane M.

**Source:** Turkiye Fiziksel Tip ve Rehabilitasyon Dergisi; Apr 2013; vol. 59 ; p. 280

**Publication Date:** Apr 2013

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

Available at [Türkiye Fiziksel Tıp ve Rehabilitasyon Dergisi](https://www.turkphysmed.com) - from Unpaywall

**Abstract:** The primary causes of nerve injury are wrong injection techniques and drug neurotoxicity. In this case report bilateral sciatic nerve injury related to injection is discussed. Case: A 35 year old male patient presented with paresthesia/anesthesia and pain in both lower limbs and due to the severe plantar pain, the patient could ambulate using crutches. The patient who had Grand Mal epilepsy since the age of 16, developed sciatic nerve injury after receiving an injection in the emergency department while having a convulsion. Findings compatible with early-stage partial axonal involvement in the peroneal component of the left sciatic nerve were observed on the patient's EMG. The patient presented in another emergency department with pain and after receiving an i.m. Injection in his right gluteal region same problems developed on his right lower limb. Due to the increase of the patient's complaints related to his right lower limb even after medication, an EMG was taken and in addition to the left sciatic injury, a severe axonal involvement on the tibial division of the right sciatic nerve was detected. Muscle strength for L5 was 4/5 bilaterally, right S1 and left S2 myotomes were 4/5 and 5/5 respectively. Hiperaesthesia/allodini and anaesthetic region were observed in the left L5-S1 dermatomes. While the patellar reflex was bilaterally normal, the Achille reflex was absent in the right limb and normal on the left one. The Babinski reflex was indifferent on the right side and negative on the left. Tramadol 50 mg (2x1) and Diclofenac Sodium 50 mg (2x1) were given for the pain and Pregabalin 150 mg capsule (2x1) was administered for allodini/hyperesthesia. A contrast bath 2x1 was used for the swelling and redness in the right foot, TENS was applied to the painful regions and neurological rehabilitation was given for the foot-drop. The patient's pain was relieved after medical and physical therapy.

**Database:** EMBASE

37. Complex regional pain syndrome-type 2 in a patient with sciatic nerve injury caused by intramuscular injection

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

**Source:** Turkiye Fiziksel Tip ve Rehabilitasyon Dergisi; 2011; vol. 57 ; p. 162

**Publication Date:** 2011

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

**Abstract:** Complex regional pain syndrome-type 2 is a disease which is characterized by various dysfunctions of the musculoskeletal, skin and vascular systems on extremities, in association with a peripheral nerve injury. In this case presentation, a 61 year-old female patient, diagnosed as complex regional pain syndrome-type 2 on the right lower extremity, following the right sciatic nerve injury due to an intramuscular injection, was reported. The patient suffered from severe pain, edema, burning and tingling, allodynia and hyperalgesia, and drop-foot on her right foot. Complex regional pain syndrome-type 2 due to injection neuropathy is a rare clinical complication and pathophysiology of the disease still remains obscure.

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<td>CINAHL</td>
<td>(foot ADJ2 drop*).ti,ab</td>
<td>716</td>
</tr>
<tr>
<td>73</td>
<td>CINAHL</td>
<td>(49 AND 72)</td>
<td>7</td>
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