

sues may get interfered with injured nerve site. Ultrasonography provides easy and practical assessment of soft tissues including peripheral nerves.

561

#### A RARE CAUSE OF MEDIAN NERVE PALSY

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**Introduction/Background:** Median nerve palsy is often caused by injuries to the arm, forearm, or wrist. It may also occur from blunt force trauma or neuropathy. Due to the close proximity of the median nerve and brachial artery, vascular pathologies of brachial artery may also cause nerve damages. Herein, we would like to report a case of median nerve palsy due to the pseudoaneurysm of brachial artery. **Material and Methods:** A 21 years-old man presented with weakness, numbness and paresthesias of the right hand in the area of median nerve distribution for the past 1 month. He had a history of brachial artery pseudoaneurysm after cardiac catheterization via the right brachial artery and he underwent a surgery due to his brachial pseudoaneurysm 1 week ago. On neurological examination, there was weakness of the flexor muscles of the thumb and index finger, thenar muscles, and wrist flexor muscles and he had also paresthesia of the right hand in the median nerve dermatome. Electroneurography and electromyography revealed subacute total axonal degeneration of right median nerve on the lesion level. **Results:** Physical therapy including strengthening exercises with electrostimulation was started. Pregabalin, 75 mg, orally two times daily was prescribed for paresthesias. The patient's treatment is ongoing. **Conclusion:** A pseudoaneurysm is a leakage of arterial blood from an artery into the surrounding tissue with a persistent communication between the originating artery and occurs when a blood vessel wall is injured. These pseudoaneurysms are mainly caused by arterial puncture for a diagnostic cardiac catheterization and arterial interventions. It is more common on the femoral artery than brachial artery. Herein, we want to emphasize that brachial artery catheterization can be damage to the median nerve by an arterial or venous pseudoaneurysm, which can compress the nerve and result in indirect damage.

562

#### COMPARING CLINICAL INDICATORS AND NEUROPHYSIOLOGICAL FINDINGS OF SURAL AND PERONEAL NERVES IN DETECTION OF DIABETIC NEUROPATHY

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**Introduction/Background:** Some clinical scoring systems as the quantitative tools have been developed to assess presence and severity of diabetic neuropathy based on both the patient's complaints and the physician's findings. The present study goaled to assess the presence and severity of the sural and peroneal nerve abnormalities using the Michigan Neuropathy Screening Instrument (MNSI) and the United Kingdom (UK) questionnaire compared with the electrophysiological assessments. **Material and Methods:** This cross-sectional study was conducted on 148 patients who suffered diabetes mellitus type I or II referred to Physical medicine and rehabilitation clinic. The findings of electrophysiological study such as Deep Peroneal and sural nerves conduction delay, velocity and amplitude were gathered. The patients were also assessed regarding clinical neuropathy status using the two instruments of MNSI and

UK. **Results:** Our study showed a significant agreement between electrophysiological assessment and both MNSI and UK tools in diagnosis of sural nerve neuropathy, however diagnostic agreement was not found between these tools and electrophysiological study in detection of Deep peroneal nerve neuropathy which is due to the weakness of screening questionnaires in detection of motor neuropathies. Based on the MNSI questionnaire, the main determinants of diabetic neuropathy included age higher than 50 years and disease duration longer than 10 years. Based on the UK questionnaire, female gender and diabetes duration longer than 10 years could predict diabetic neuropathy. According to electrophysiological assessment, age higher than 50 years was more prevalent with sural nerve neuropathy. **Conclusion:** EDx particularly Peroneal nerve conductive status are helpful methods to assess peripheral diabetic neuropathy. Clinical assessment using MNSI and UK questionnaire are also cost-benefit and available tools in screening suspected patients to neuropathy, especially predominantly sensory distal polyneuropathic processes. Due to weakness of screening tools in early detection of motor neuropathic process, routine electrodiagnostic evaluation of such patients, in spite of normal screening, is recommended.

563

#### SUPRASCAPULAR NERVE INJURY DISGUISED BY SUPRASPINATUS TENDON RUPTURE

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**Introduction/Background:** Supraspinatus muscle is one of the four rotator cuff muscles and also abducts the arm at the shoulder. Tear of the tendon may cause impairment of upper extremity function. However, nerve injury may mimic tendon injury. **Material and Methods:** 45-year-old man was admitted to our clinic with weakness on the right shoulder. In his medical history, he had fallen down from a 2-meter height 45 days ago and was diagnosed with soft tissue injury in an orthopedic clinic and then he was prescribed analgesic drugs and shoulder bandage. **Results:** In physical examination, tenderness with palpation in the lateral side of the shoulder was revealed. He was unable to initiate right shoulder abduction and external rotation. Shoulder range of motion and laboratory findings was normal. The full-thickness supraspinatus tear was detected via shoulder ultrasonography (Figure 1) and this condition was confirmed with magnetic resonance imaging. Nerve conduction and electromyographic studies showed severe lesion of the right suprascapular nerve. **Conclusion:** Suprascapular nerve injury should be considered in patients with weakness of shoulder abduction. This condition might be disguised by supraspinatus tear.

564

#### HUMERAL FRACTURE AND RADIAL NERVE INJURY DURING THROWING: TWO CASE REPORTS

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**Introduction/Background:** Spiral fractures of the humerus have been reported in throwing activities such as baseball, softballs, handballs, javelins, and hand grenades. Nerve palsy may accompany humeral shaft fractures. **Material and Methods:** We present a series of two patients who presented with pain on the arm after throwing a subject. Humeral shaft fractures were detected on radiography early after injury and casts were applied to the patients. **Results:** After removal of the cast, both patients reported weakness of the wrist and finger extensor muscles. Nerve conduction studies and needle electromyography revealed radial nerve injury. **Conclusion:** The humeral shaft fracture should be kept in mind in case of pain after throwing a subject and radial nerve injury may develop secondary to that kind fracture.