

## A clinically diagnosed case report

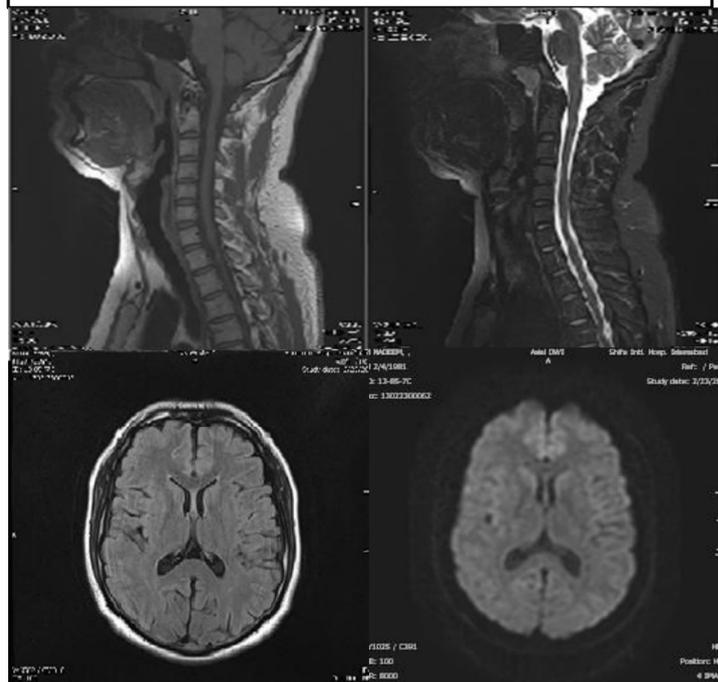
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### Introduction

Central nervous system injury is a frequent complication seen with electrocution in which impairment of mental status is common. There are also cases of electric shock in literature which resulted in ischemic stroke due to acute vasospasm, delayed development of motor neuropathy, mutism, brachial plexopathy and even amyotrophic lateral sclerosis.<sup>1</sup> Our experience with such a patient is worthy to share.



### Case Description

We report a case of 32 years old male, previously healthy, who presented with history of electric shock injury for 3-5 seconds around 4 weeks prior to presentation. Patient suddenly felt severe burning pain in shoulders, arms and upper back and weakness of both upper limbs. Before presenting to us he underwent electrophysiological studies twice at an outside facility at 1 week and 4 weeks after the shock, which were completely normal. On examination his higher mental functions were normal, power of Deltoids and Triceps was MRC grade 3/5 bilaterally. Flexors of forearm, and grip were 4+/5 bilaterally. Deep tendon reflexes were diminished in left triceps, whereas rest of the DTR's were 2+ and symmetrical. Sensations were normal. Cranial nerves and cerebellar examination were normal.

MRI brain and cervical spine without contrast showed no significant intracranial or spinal abnormality. Muscle biopsies were not done. Diagnosis of exclusion was brachial plexopathy secondary to electric shock injury. His last follow up was done 70 days after the event, neurological examination was static but patient reported subjective improvement in upper limb weakness. Repeat Nerve conduction studies are in plan after six months.

### Discussion

Limited Case reports in literature illustrate that Brachial plexopathy is the diagnosis of exclusion. No single diagnostic is specific. Nerve conduction and electromyographic studies at presentation are normal and nerve biopsy reveals changes of "Neuropraxia" which is the initial and mildest feature of nerve injury. Follow up neurological examination and neurophysiological studies at few months interval should be performed to assess the long term changes for prognostic purpose. No specific treatment has yet been approved for this condition.

### References

1. Electrical injuries: neurologic complications  
[Konstantina G Yiannopoulou MD](#), author. Dr. Yiannopoulou of Laiko General Hospital of Athens in Greece, [www.medlink.com](http://www.medlink.com).