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Neurological and neurourological complications of electrical injuries

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Abstract

Electrical injury can affect any system and organ. Central nervous system (CNS) complications are especially well recognised, causing an increased risk of morbidity,

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while peripheral nervous system (PNS) complications, neuroulogical and cognitive and psychological abnormalities are less predictable after electrical injuries.

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PubMed was searched for English language clinical observational, retrospective, review and case studies published in the last 30 years using the key words: electrical injury, electrocution, complications, sequelae, neurological, cognitive, psychological, urological, neuropsychological, neuroulogical, neurogenic, and bladder.

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In this review, the broad spectrum of neurological, cognitive, psychological and neuroulogical consequences of electrical trauma are discussed, and clinical features characteristic of an underlying neurological, psychological or neuroulogical disorder are identified. The latest information about the most recently discovered forms of nervous system disorders secondary to electrical trauma, such as the presentation of neurological sequelae years after electrocution, in other words long-term sequelae, are presented. Unexpected central nervous system or muscular complications such as hydrocephalus, brain venous thrombosis, and amyotrophic lateral sclerosis are described. Common and uncommon neuropsychological syndromes after electrical trauma are defined. Neuroulogical sequelae secondary to spinal cord or brain trauma or as independent consequences of electrical shock are also highlighted.

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Keywords

electrical injury, neurological sequelae, neuroulogical complications

About this article

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