

**TABLE 4-13. Acute and delayed sequelae of electrical injury**

Acute	Delayed
Confusion	Depression
Impaired concentration	Memory loss
Disorientation	Aphasia
Personality changes	Cerebellar dysfunction
Paralysis	Cataracts
Subdural hematomas	Delayed ascending paralysis
Suppression of respiratory center	Syndrome resembling amyotrophic lateral sclerosis
Seizures	Transverse myelitis
Loss of consciousness	Incomplete cord transection
Coagulation of the cortex	
Epidural hematoma	
Intraventricular hemorrhage	
Coma	

Source. Adapted from Browne and Gasch 1992; Farrell and Starr 1968; and Fish 1993.

**Summary**

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**References**

Adrian J, Crankst and subjectiv gery—a prel 16:144-149, Alexander MP: T Neurologic D. New Yor American Psych Manual of N

Textbook of Traumatic Brain Injury.

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screened for neurocognitive  
bances before the procedure (Adrian et al. 1988). Asking  
patients about their expectations for the outcome of the  
procedure is also important because these expectations  
have an important bearing on the postoperative emotional  
state, cognitive deficits, and recovery from the surgery.

### Electrical Injuries

Electrocution can cause brain damage in two ways—  
direct cellular damage due to passage of current through  
brain tissue and cardiac arrest induced by it. Electrical  
injuries occur as a result of exposure to live wires at work  
or home or lightning strikes during thunderstorms. The  
degree of damage is determined by the amount and type  
of current, duration of exposure, parts of the body  
affected, and the pathway of current through the body.

Injuries acquired from exposure to electric current at  
home or work (low voltage injuries <1,000 volts) are dif-  
ferent from those sustained from lightning or contact  
with high-voltage wires (high-voltage injuries >1,000  
volts). Injuries due to alternating current are more seri-  
ous in comparison to those from direct current (Browne  
and Gasch 1992; Fish 1993). Patients who experience  
high-voltage electrical injury may initially show some  
cognitive deficits with confusion and memory loss, which  
usually clear within a few days. In cases in which these  
deficits persist, neuropsychological evaluation should be  
performed because some symptoms may be permanent,  
especially in cases of direct electrical injury to the brain  
(Table 4-13).

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