|| Print ISSN: 2589-7837 || Online ISSN: 2581-3935 ||
International Journal of Medical Science and Diagnosis Research (IJMSDR)
Available Online at www.ijmsdr.com
PubMed (National Library of Medicine ID: 101738825)
Volume 3, Issue 10; October: 2019; Page No. 16-19
Case Report
crossref DOI: https://dx.doi.org/10.32553/IJMSDR/v3i10.3

RARE CASE OF DROWNING PRESENTING AS A STROKE

Dr. Deepak Sharma[1] (Prof.), Dr. Bushra Khanam[2] (Assoc. Prof.), Dr. Abhishek Singh[3] (P.G. Resident) & Dr. Vibhu Sagar Kulshreshtha[4] (P.G. Resident)
Index Medical College Hospital & Research Centre, Indore[1,2,3&4]
Conflicts of Interest: Nil
Corresponding author: Dr. Bushra Khanam

Abstract:
Survivors may sustain severe neurologic morbidity. There is negligible research specific to brain injury in drowning making current clinical management non-specific to this disorder. This case report is about a patient who fell from a bridge into the river following consumption of alcohol. The history has been elicited from the patient's husband. As per the patient's husband the patient fell from a bridge into the river following consumption of alcohol.
Cases where a person has minimal symptoms after a drowning incident, such as stroke, cough, pulmonary edema (fluid in the lungs), or confusion, are far more common than fatal drowning. It is actually the most common presentation of drowning. New imaging techniques have allowed for the rapid and accurate diagnosis of stroke.
Keywords: Drowning & Stroke

Introduction

Stroke is the second leading cause of death worldwide. It is defined as abrupt onset of neurological deficit that is attributable to a focal vascular cause.[1]

Drowning is the leading cause of accidental death. Survivors may sustain severe neurological morbidity. This review represents the case, who suffered an ischemic stroke post drowning.[2] The greatest permanent harm in drowning incidents is to the brain, which has negligible metabolic substrate reserve to sustain in the absence of continuous delivery of oxygen. Relevant factors in drowning cases are age, submersion time, symptoms, coincidental alcohol or drug abuse, underlying medical conditions.[3,4]

We are reporting a case of drowning presenting as an ischemic stroke. The risk factor is alcohol abuse, no other comorbidities were present.

Case Presentation:

Chief Complaints:

The patient presented to the hospital with complaints of inability to speak since 5 days.

History of the case:

The patient was unable to speak. The history has been elicited from the patient's husband. As per the patient's husband, the patient fell from a bridge into the river following consumption of alcohol. The patient was retrieved by some fishermen present in the river at that time and chest compressions were given. Following this the patient was revived. The patient was unconscious for 6 hours and was then taken to M.Y. Hospital, Indore. NCCT was donethere, which revealed normal brain parenchyma and left nasal bone fracture. The patient was unable to communicate even after 2 days, following which the patient was taken to Index Medical College Hospital & Research Centre, Indore, where an MRI was performed which revealed left MCA territory and left cerebellar infarct.
There was no history of focal neurological deficit.
Past history: h/o alcohol consumption since 5 years, 4-5 times a month
h/o suicidial attempt in the past by burning her right hand
Family and personal history: Nothing contributory
General Examination:
Patient is well built, lying supine in her bed
Pallor +
No Icterus, cyanosis, clubbing, lymphadenopathy, edema
Vitals: Pulse: 70/ minute in left radial artery
All peripheral pulses present
Blood Pressure: 130/80 mm of Hg
Temperature: Afebrile
Respiratory rate: 18 cycles/minute thoracoabdominal

Systemic Examination:

Cardiovascular system: S1 and S2 heard normally, JVP not raised. No added sounds including S3 and S4

Respiratory system: Bilateral normal vesicular breath sounds heards

Per abdomen: Soft, non tender, no palpable organomegaly

Central Nervous System:

Patient is conscious, cooperative well oriented to time, place and person.

Higher mental functions: Memory intact

Patient is following commands properly but unable to speak. She understands written and spoken words.

Gait: Normal

No palpable Peripheral Nerves

No signs of Meningeal Irritation

No signs of raised Intracranial Pressure

Table 1: Motor examination

	Right	Left
Tone Upper limb	Adequate	Adequate
Tone Lower limb	Adequate	Adequate
Power Upper limb	5/5	5/5
Power Lower limb	5/5	5/5

Table 2: Reflexes

	Right	Left
Biceps	2+	2+
Triceps	2+	2+
Supinator	2+	2+
Knee	1+	1+
Plantar	Mute	Flexor

Investigations:

1. Hemogram: Hb 8.4g/dl, WBC: 8,340/mm^3, Platelet's: 1,71,000/mm^3

2. 2D Echo: Normal

3. Carotid Doppler: Normal Flow Pattern in Carotid and Vertebral Arteries Bilaterally.

4. Fasting Lipid Profile: Normal

5. Serum Creatinine: 0.96 mg/dl

6. Liver Function Test: Normal

Treatment:

I/V CEFTRIAXONE 10M BD
I/V METRO 100ML TD X 05 DAYS
Tablet LEVERA 500mg BD
Tablet BENFOTHIAMINE 100 mg OD
Tablet ASPIRIN 75mg OD
Tablet Atorvastatin 40mg HS
Tablet PIRACETAM 400mg TDS

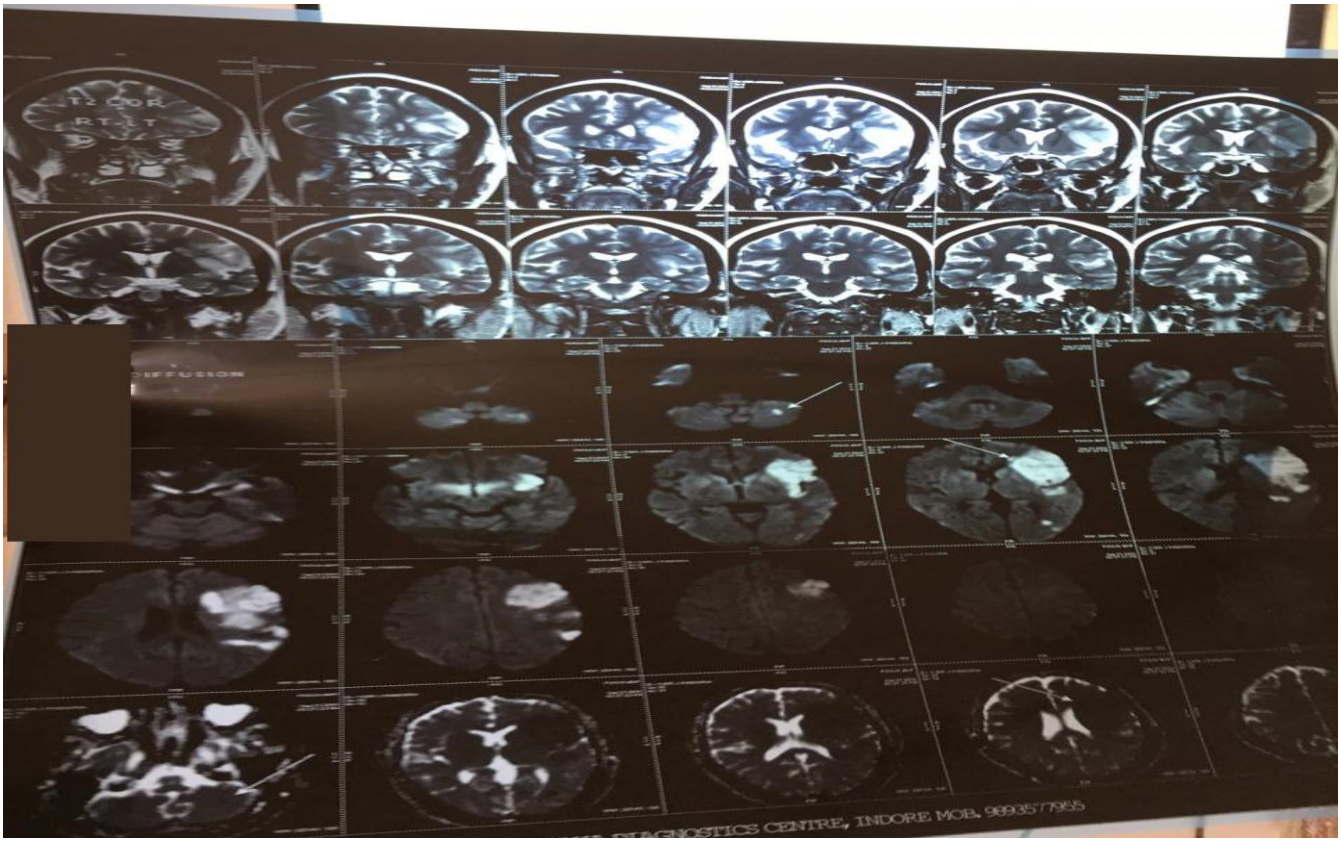

Figure 1: MRI Brain

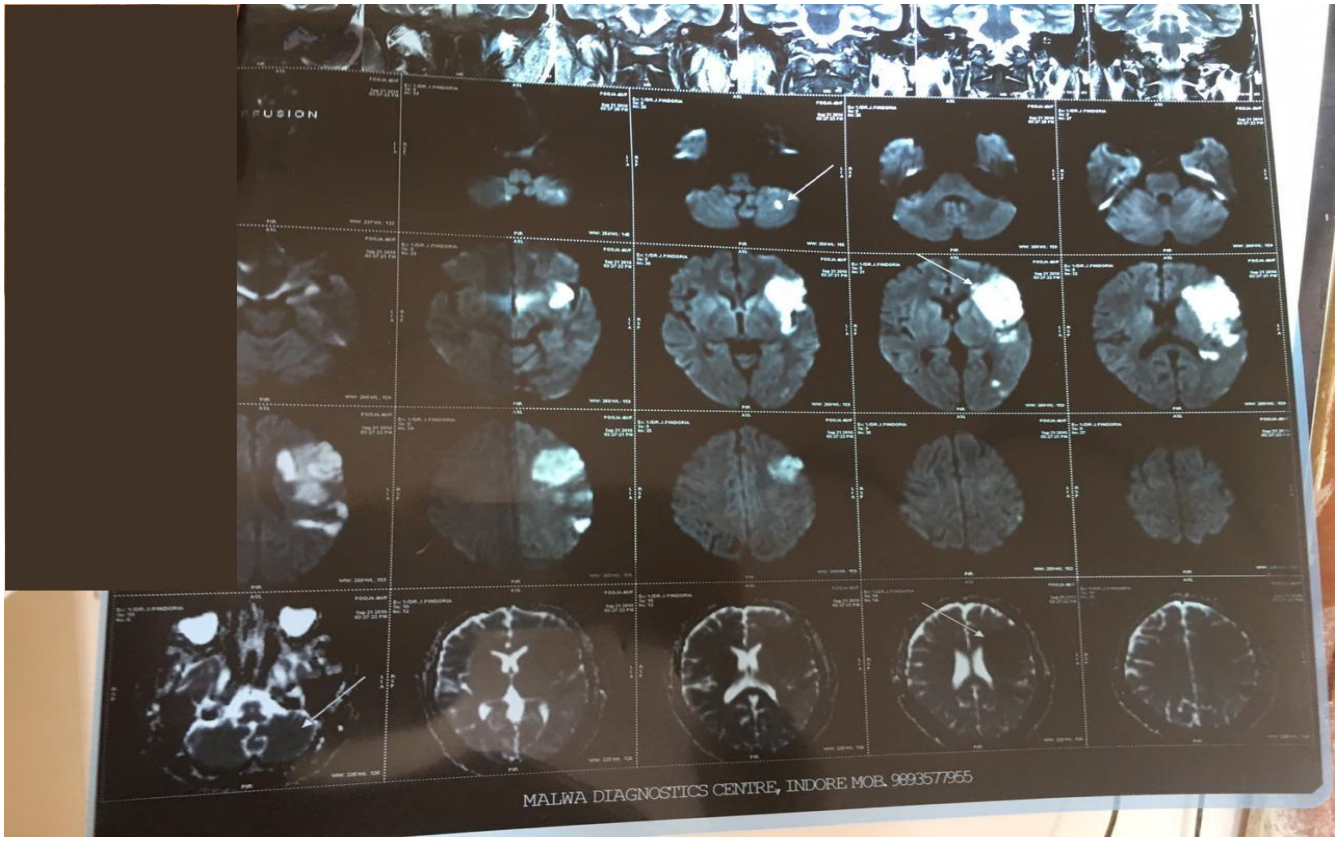

Figure 2: MRI Brain

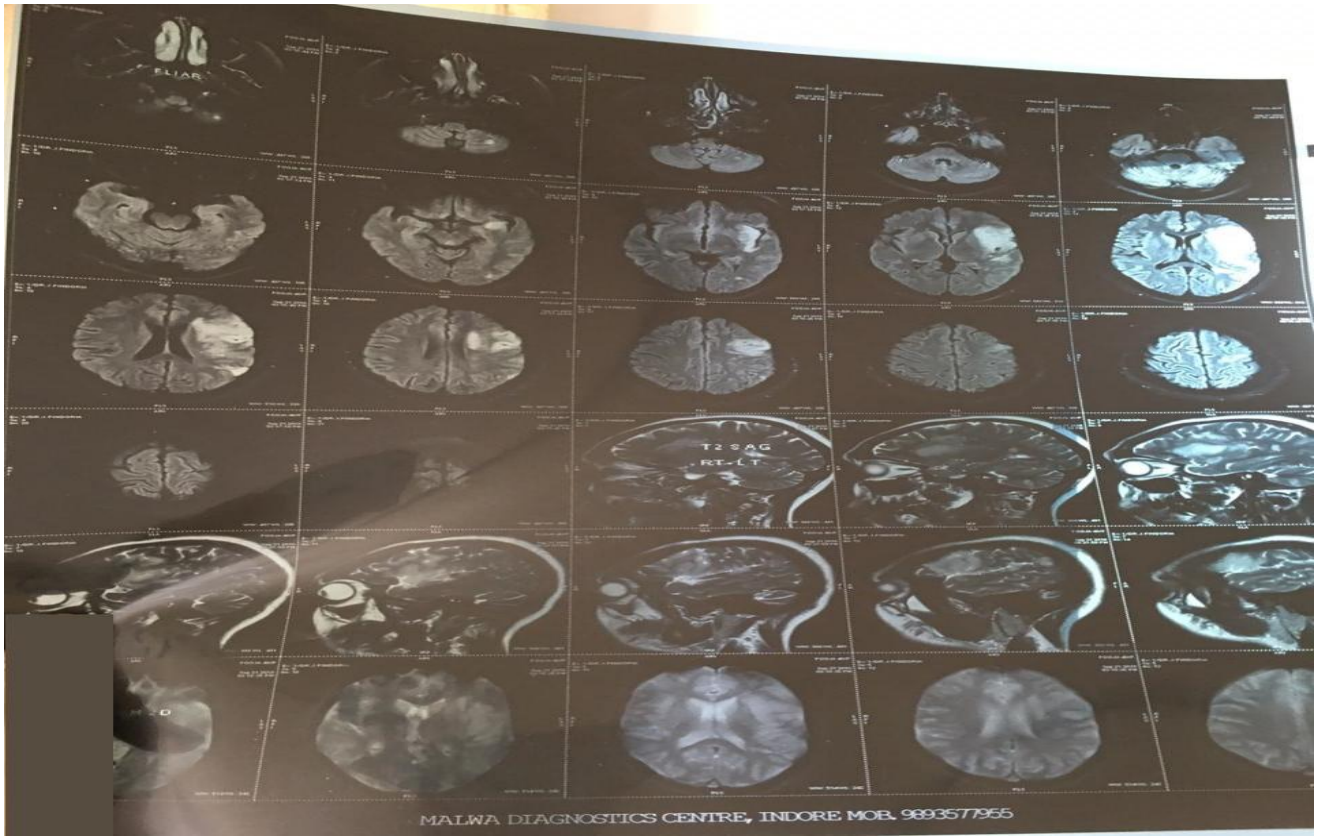

Figure 3: MRI Brain

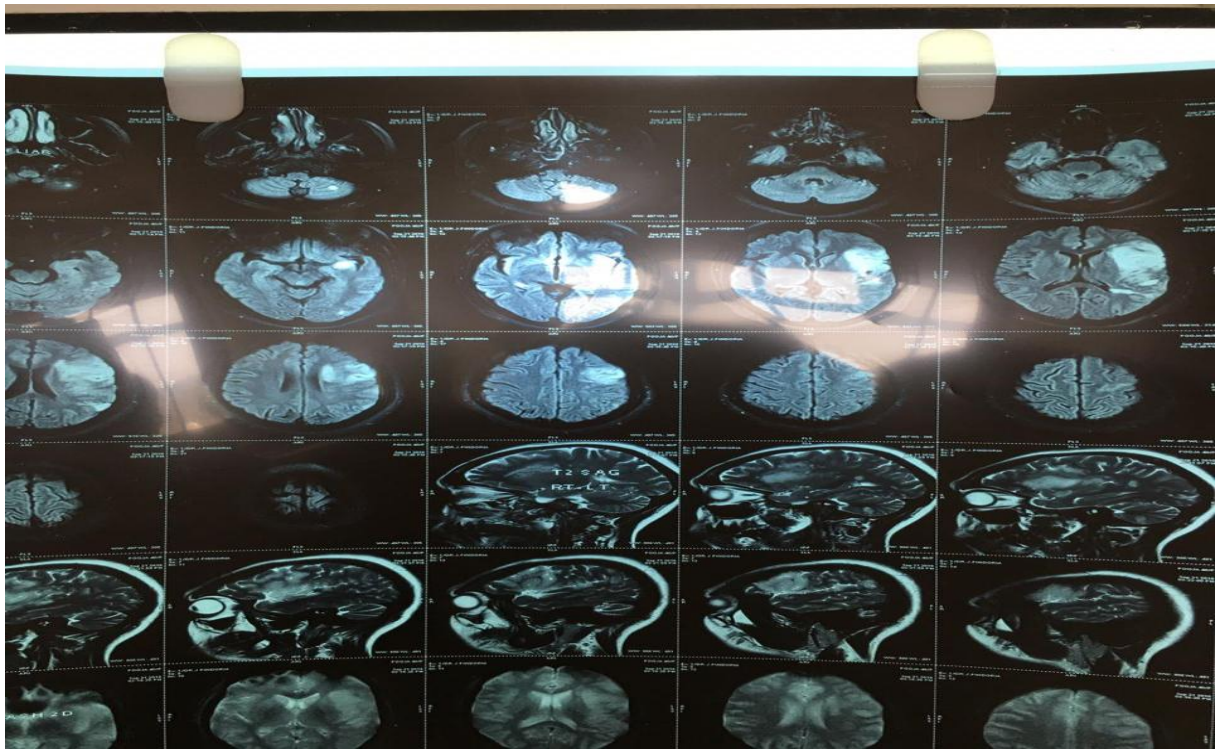

Figure 4: MRI Brain

Discussion:

Prevention is the best neuroprotective therapy for drowning. When drowning occurs the initial strategy is optimized rescue and basic life support. For victims who present with stroke, the brain oriented resuscitation strategies are recommended for medical provider to improve the outcome.[5, 6] Hypoxemia and Hyperoxemia should be prevented. Adequate oxygen ventilation should be provided. Hypotension should be prevented, recognized and treated.

The patient should be transferred to a facility with expertise in neurocritical care. The association of drowning and stroke is rare in comparison to other complications of drowning.[7]

Conclusion:

Cases of drownings are rare. The manner of death may remain undetermined even when the diagnosis of drowning is confirmed or declined. It is expected that drowning in some of the available studies may have been over- or under-reported because of misclassification. Except the fact that the case is interesting as casuistry to coroners, it induces many questions with the understanding of the problem with suicidal attempts. It is necessary that serious analysis of the problem should be made, with the appropriate introduction of preventive and rescue strategies, and preventive programs for patients with chronic pain and manifested depression.

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