



## Factors and Causes that can lead to Coma

Yuming Lorno\*

Department of Neurology, Kuwait University, Kuwait City, Kuwait

### DESCRIPTION

Closed eyes, lack of response to painful stimuli, limbs that do not move voluntarily or in response, with the exception of reflex motions. A person with increasing diabetic shock, or hypercapnia, which is an excessive build-up of carbon dioxide in the blood, may first have hypertension, restlessness, and mental confusion before going into a coma. If left untreated, their capacity for clear thinking would steadily deteriorate and could eventually lead to unconsciousness. The signs of a coma may arise suddenly when there is a serious brain damage or intracranial hemorrhage [1].

#### Trauma

Head injuries can result in brain bleeding or swelling. The fluid in the brain inflates it against skull as it swells as a result of trauma. The RAS (Reticular Activating System), a region of the brain that controls alertness and cognition, may gradually become damaged as a result of the swelling pushing down on the brain stem [2].

Anoxic brain damage is a disorder of the brain brought on by complete deprivation of oxygen. A few minutes without oxygen results in the death of brain tissue cells. A cardiac arrest, a head injury or other trauma, suffocation, a drug overdose or poisoning can all cause anoxic brain injury. Brain tissue can swell even in the absence of distress. Swelling may occasionally be brought on by an oxygen deficit, an electrolyte imbalance, or hormones.

#### Bleeding

Because the wounded side of the brain is swollen and compressed, bleeding into the layers of the brain might result in coma. The brain shifts as a result of this deformation, harming the RAS and brainstem.

Non-traumatic origins of brain hemorrhage include elevated blood pressure, burst cerebral aneurysm, and tumors [3].

#### Stroke

A coma may develop when a significant portion of the brain is not receiving blood supply or when there is hemorrhage along with edema.

#### Blood sugar

When blood sugar levels remain extremely high in diabetics, coma may result. The medical term for such is hyperglycemia. A coma may develop as a result of hypoglycemia, or very low blood sugar. Once the blood sugar is stabilized, this kind of coma is typically recoverable. However, persistent coma and lasting brain damage can result from prolonged hypoglycemia.

#### Lack of oxygen

Oxygen is necessary for proper brain activity. Hypoxia or anoxia, an abrupt cessation of blood flow and oxygen to the brain, is brought on by cardiac arrest. Survivors of cardiac arrest are frequently in comas after receiving cardiopulmonary resuscitation (CPR). Choking or suffocation can also result in oxygen deprivation. Comas can also be brought on by infections of the central nervous system, such as meningitis and encephalitis.

#### Toxins

If the body is unable to properly get rid of certain substances, they can build up to toxic levels and cause harm. For instance, the body can become toxic due to the build-up of ammonia from liver disease, carbon dioxide from a severe asthma attack, or urea from kidney failure. Large doses of alcohol and drugs can also impair brain neuronal function [4].

**Correspondence to:** Yuming Lorno, Department of Neurology, Kuwait University, Kuwait City, Kuwait, E-mail: lornoyum63312@gmail.com

**Received:** 03-Oct-2022, Manuscript No. BDT-22-18722; **Editor assigned:** 06-Oct-2022, Pre QC No. BDT-22-18722 (PQ); **Reviewed:** 20-Oct-2022, QC No BDT-22-18722; **Revised:** 27-Oct-2022, Manuscript No. BDT-22-18722 (R)**Published:** 03-Nov-2022, DOI: 10.35248/2168-975X.22.11.175.

**Citation:** Lorno Y (2022) Factors and Causes that can lead to Coma. Brain Disord The. 11:175.

**Copyright:** © 2022 Lorno Y. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

## Seizures

Coma is rarely brought on by a single seizure. However, repeated seizures, also known as status epilepticus, might hinder the brain from recovering among seizures. This will result in a lengthy coma and death [5].

## REFERENCES

1. Chase S, Ratcliff G, Vernich L, Al-Sukhni E, Yasseen B, Colantonio A. Preventive health practices and behavioral risk factors in women surviving traumatic brain injury. *Health Care Women Int.* 2012;33(7):631-645.
2. Cole JH, Jolly A, de Simoni S, Bourke N, Patel MC, Scott G, et al. Spatial patterns of progressive brain volume loss after moderate-severe traumatic brain injury. *Brain.* 2018;141(3):822-836.
3. Gan S, Shi W, Wang S, Sun Y, Yin B, Bai G, et al. Accelerated brain aging in mild traumatic brain injury: longitudinal pattern recognition with white matter integrity. *J Neurotrauma.* 2021;38(18): 2549-2559.
4. Ianof JN, Anghinah R. Traumatic brain injury: An EEG point of view. *Dement Neuropsychol.* 2017;11:3-5.
5. Nguyen BM, Kim D, Bricker S, Bongard F, Neville A, Putnam B, et al. Effect of marijuana use on outcomes in traumatic brain injury. *The American Surgeon.* 2014;80(10):979-983.