



Fatal Head Injuries in Royals that Changed the Course of History

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The classification and treatment of head injuries has been a source of concern for physicians even in ancient times as is evident from the Edwin Smith papyrus and the works of Hippocrates and it was known that such injuries could be serious and cause death.^{1,2} Over the ages, people (both plebeian and aristocrats) died due to head injuries either as a result of accident or assault (as in assassinations or in the battlefield). In most occasions of the latter, the exact nature of injury causing the death remains unknown. We have compiled a list (by no means exhaustive) of fatal head injuries among the royalty which changed the course of history (► **Table 1**), based on academic papers and resources we could find in the Internet like books and Wikipedia.^{3–20}

A few of these lethal injuries were caused in the heat of battle (Harold Godwinson, Richard III), in a fit of rage (Ivan Ivanovich, Moctuzema II), during executions or assassinations (Sequenra Taa, Julia Drusilla), and strangely enough some while going to watch or performing sporting events (Charles VIII and Henry II), or in the library (Humayun).

Whatever the cause, they were to be epoch making, as in a few instances, they resulted in the end of dynasties either by themselves (as in the case of the Anglo-Saxons and later the Plantagenets in England as well as the elder house of Valois in France), hastened it on account of a lack of a competent heir (Rurikids in Russia), or extinguished lineages (as in the Julio-Claudian dynasty). Yet others precipitated the decline and elimination of empires and conquests of entire continents (Aztecs in Mexico) or preceded brutal wars (religious wars of France between the Catholics and the Huguenots, the second battle of Panipat) or led to the displacement of large groups of people (Hyskos from Egypt may be the basis of the story of Exodus in the Old Testament).

Head injuries, therefore, may be not only be fatal for the person who suffers it but may have long-term catastrophic consequences for entire countries and large sections of the population who were in no way associated with the event.

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Table 1 List of fatal head injuries in royals that changed the course of history

Name	Injury and events following death
Seqenenre Taa II, ruler of Southern Egypt from 1558–1553 BC.	Died either in battle with the Hyskos or was executed after being captured by them. ³ CT scan of his mummified body showed numerous head injuries, including fracture of the frontal bone on both sides of the midline, right supraorbital fracture with bone loss, fracture of the right orbit and zygoma, fractures of left skull base including mastoid process, left occipital condyle and left side of the margin of the foramen magnum as well as right temporal and parietal bones and right greater wing of the sphenoid. ³ His effort to drive out the Hyskos (who were coexisting with the Egyptians till then) was finally completed by his elder son Kamose (last king of the 17th dynasty) and Ahmose I (first king of the 18th dynasty) and this resultant migration of the Hyskos is considered by some to be the genesis of the old testament tale of the “Exodus” ⁴ .
Julia Drusilla (also called Drussila the Younger), only legitimate child of Emperor Caligula of Rome.	She was killed when she was only 1 year old by having her “brains knocked out against a wall” after her father was assassinated (January 24, AD 41). ⁵ Julia Drussila was the last member of the Julio–Claudian dynasty and though Caligula was later succeeded by Claudius and Nero, the dynasty eventually gave way to the Flavian dynasty. ⁶
Harold Godwinson, the last crowned Anglo-Saxon king of England ruled in 1066.	Killed by an arrow to his eye that entered his brain (as described in the Bayeux tapestry) in the Battle of Hastings (October 14, 1066). ⁷ Although this is the commonly described cause of his death, it has been disputed as inconclusive by some scholars. ⁸ With his death, the Norman rule of England began under William the Conqueror (also called William the Bastard).
Richard III King of England and Lord of Ireland from 1483–1485. Last king of the House of York.	Died in the Battle of Bosworth (August 22, 1485). His exhumed remains showed in addition to an arrow injury on his spine, eight injuries on his skull and facial bones. These included a depressed fracture on the calvarium and a large area of bone loss at the base of the skull in the right occipital region (presumably caused by a halberd), which along with another skull base wound would have been fatal. ⁹ With his death, the Plantagenet dynasty came to an end and England was then ruled by the Tudors.
Charles VIII of France (Charles the Affable) King of France from 1483–1498.	While going to watch a game of tennis, he struck his head on the door. Later, after returning from the game, he became comatose, and although he apparently regained speech three times later, he died after 9 hours (April 7, 1498). As he died at a young age of 27 and had no surviving male heirs, the rule of France by the elder house of Valois ended with his death and passed over to Orleans cadet house of Valois. ^{10,11}
Moctezuma (also called Montezuma), Emperor of the Aztec Empire from 1502/3–1520.	Was arrested by the Spaniards under Hernan Cortez in his capital city of Tenochtitlan. While pleading to his populace to allow safe passage for the Spaniards out of the city, he was hit on the forehead by a stone projectile (thrown from a sling) by one of his infuriated subjects who were against the Spaniards and died three days later (June 29, 1520). Within a year, the Spaniards had conquered the Aztec empire. ¹²
Nasir-ud-Din Muhammad (Humayun) the second emperor of the Mughal Empire from 1530–1540 and again 1555–1556.	Fell from the steps of his library and struck his temple on a stone while he was trying to get up after kneeling in response to a muezzin’s call for prayer when his foot got caught in his robes. He was apparently unconscious initially; later, regained his speech but again worsened and died after three days (January 27, 1556). ¹³ Following his death, his minor son Akbar was appointed king and had a turbulent early phase where he had to fight off Raja Himu and later Sikandar Shah Suri who attempted to dislodge the fledgling empire. ¹⁴
Henry II, King of France from 1547 to 1559.	Suffered head injury in a jousting tournament held to celebrate the peace treaty ensuring the end of the Habsburg–Valois war (Peace of Cateau–Cambrésis). ¹⁵ The lance of opponent splintered against his armor and fragments entered his right eye. After a transient loss of consciousness, he was able to forgive his opponent and walk. Over time, he had worsening headaches and episodes of confusion. Later, he had focal seizures, became unconscious with worsening respiration, and died after 10 days (July 10, 1559). He was the first king to undergo an autopsy that revealed contrecoup contusions in the occipital lobe with liquefactive necrosis and an acute subdural hematoma that was becoming chronic. ^{16,17} He was succeeded by ineffectual rulers and this eventually resulted in the French Wars of Religion (between Protestants and Catholics) where up to 3 million people perished. ¹⁸
Ivan Ivanovich, heir apparent to the throne of Russia, son of Ivan the Terrible.	Was beaten by his father the Tsar Ivan IV (Ivan the Terrible) with the royal scepter (when he confronted his father who had beaten his wife, causing the miscarriage of his unborn child) and became unconscious with a bleeding wound to the temple. He regained consciousness briefly, forgave his father, but again lapsed into coma and died 4 days later (November 19, 1581). The throne thus passed to his feeble-minded brother with whose demise the Rurikid dynasty came to an end and plunged Russia into a period of lawlessness and anarchy called the “Time of Troubles” till the Romanov dynasty took over.

Conflict of Interest

None declared.

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