

Skull base fracture

[Skull base fractures](#) are of high importance in [neurotraumatology](#).

They occur in 3.5 - 24% of head injuries and are often related to brain injury (in 50% of the cases).

70% of the skull base fractures occur in the anterior fossa, 20% in the middle central skull base and 5% in the middle and posterior fossa.

Skull-base fractures involve one or more of the cribriform plate of the ethmoid bone, orbital plate of the frontal bone, sphenoid bone, occipital bone, and petrous or temporal bone.

The most relevant clinical sign related to skull base fractures is [cerebrospinal fluid leakage](#).

Although the fractures themselves only require reduction and reconstruction when the skull base is severely comminuted and altered, even small fractures and the traumatic shear forces can create tears in the meninges and thus predispose to cerebrospinal fluid leaks.

see [anterior skull base fracture](#).

Complications

[Cerebrospinal fluid leak](#)

Leakage of CSF occurs in 2% of all head injuries and 12–30% of all skull base fractures

[Meningoencephalocele](#).

[Tension pneumocephalus](#).

Treatment

[Skull base fracture treatment](#).

Case report from HGUA



Multiple comminuted left [craniofacial fractures](#).

[Skull fractures](#): left parietal, temporal, and frontal bones, with herniation of brain parenchyma through them. Soft tissue hematoma in the left [facial](#) region with [scalp](#) involvement in the temporal and parietal regions. Fractures of the left zygomaticomaxillary complex: [zygomatic arch](#), anterior and posterior walls of the [maxillary sinus](#), [frontal sinus fracture](#) and hematosinus. Also associated with subcutaneous emphysema adjacent to the fractures.

Sphenoid bone fracture with involvement of both sinus walls, noting a fracture line in the **clivus** extending to the **carotid canal**.

Longitudinal and oblique fracture of the left petrous part, extending to the anterior wall of the **external auditory canal** (CAE)

The left **orbital wall fracture** is associated with inferior and lateral displacement of intraorbital contents, with herniation of extraconal fat into the **maxillary sinus** and slight displacement of the inferior rectus, without thickening of the same.

Zygomaticomaxillary complex fractures: Fractures of the left zygomaticomaxillary complex with inferolateral displacement: **zygomatic arch**, anterior and posterior walls of the **maxillary sinus**, with involvement of the **frontal sinus** and hematosinus.

Skull base fractures affecting the body, walls of the **sinuses**, and greater wing of the left **sphenoid bone**, noting a fracture line in the clivus extending to the carotid canal.

Longitudinal fracture line affecting the petrous part with probable incudomalleolar subluxation and hemotympanum, continuing with a fracture line of the greater wing of the **sphenoid bone**.

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Last update: **2024/06/07 02:55**

