Ventriculoperitoneal shunt disconnection risk factors

Cervical motion and growth might characterize the chief factors leading to shunt system discontinuity $^{1)}$.

Disconnection of ventriculoperitoneal shunt (VPS) catheter is observed more in multicomponent shunt systems ^{2) 3)}.

In multisegment VPS systems, the weakest points for shunt disconnection are connector site, connector to the ventricular catheter, and connector to chamber site. The causes for shunt disconnection in the multisegment VPS system are excessive traction movements at the cranial end, poor fixation at the cranial site, and break in ligatures. VPS disconnection is not always associated with shunt malfunction, and in such cases, the entire VPS system can be safely removed. VPS system disconnection associated with other ventriculoperitoneal shunt complications that occurred in the same patient at the same time has also been reported in the literature ^{4) 5)}.

Disconnections in the system accounted for 41 (15%) of the malfunctions. The more distal the connection was from the ventricle, the higher the likelihood of disconnection. Furthermore, occipitally placed shunts had a significantly higher tendency to dislocate than frontally placed shunts. ⁶⁾.

11% in the series of Stone et al. $^{7)}\!.$

High tension is sometimes caused in the shunt tube between the two anchor point viz., head and chest wall due to movement of the neck or growth and may induce such dislocation and disconnection of the shunt tube $^{8)}$.

1)

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