

# Intracranial Foley catheter — Inadvertent malpositioning in setting of severe craniofacial trauma

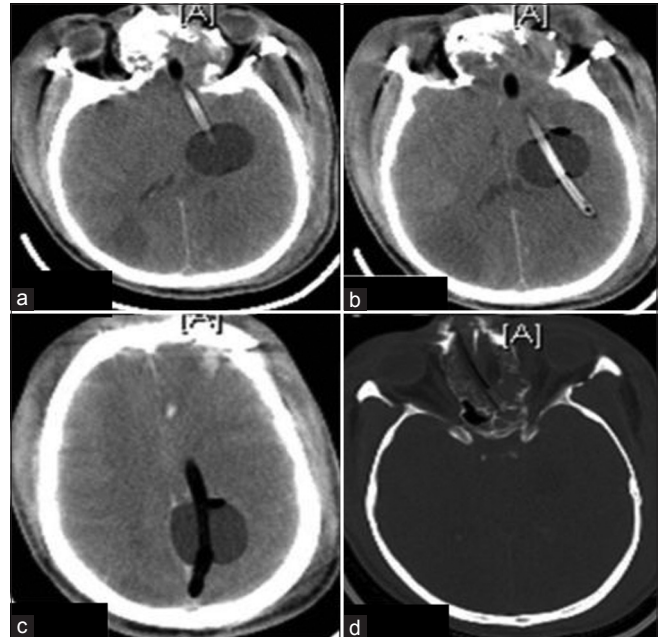
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We would like to report a case of a 40-year-old male who arrived in the emergency department following a road traffic injury with Glasgow coma scale (GCS) of E1V1M5. Patient was intubated for low GCS and threatened airway. Nasal packing with paraffin gauze was done for profuse epistaxis. Plain CT head showed facial and skull base fractures involving ethmoid and cribriform plate. As profuse epistaxis continued, tamponade with Foley balloon catheter placement and inflation in posterior nasopharynx was done after several attempts. However, patient's GCS deteriorated to E1VTM2. A repeat head CT scan showed inflated Foley's lying in left temporoparietal region [Figure 1a and b] with tract of previous attempts of Foley "malposition" in left occipital lobe [Figure 1c]. Bone windows showed trajectory path from right nasal cavity to the brain via the cribriform plate [Figure 1d]. The catheter was slowly deflated and gently removed but the patient did not improve and expired after 48 hours.

## DISCUSSION

In the presence of skull base fractures, placement of any nasal catheter even nasogastric tube is potentially lethal due to risk of intracranial inflammation and migration.<sup>[1]</sup> Attempts of controlling epistaxis with Foley catheter with inadvertent intracranial placement as a rare entity have been reported.<sup>[2,3]</sup> In spite of being a relative contraindication in the setting,<sup>[3]</sup> the ease of availability and use makes Foley catheter an essential option to overcome the emergency. Some important measures need to be exercised for its safe and effective use.<sup>[3,4]</sup> Path



**Figure 1:** Axial sections on plain CT head showing malpositioned inflated Foley catheter in left temporoparietal region (a and b). There is evidence of previous attempted malpositioned Foley in the left occipital lobe (c). Bone window showing trajectory path from right nasal cavity to the brain via the cribriform plate (d).

of insertion should be parallel to floor of nasal cavity along inferior meatus under direct visualization and balloon inflated only after tip identified in oropharynx. Use of large diameter catheters is suggested as they are less prone to intracranial migration. If feasible, lateral skull radiographs preferably with contrast medium in the balloon should be taken during the procedure to confirm the position of tip<sup>[2]</sup> and a repeat CT scan should be done.

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