

Photo Essay

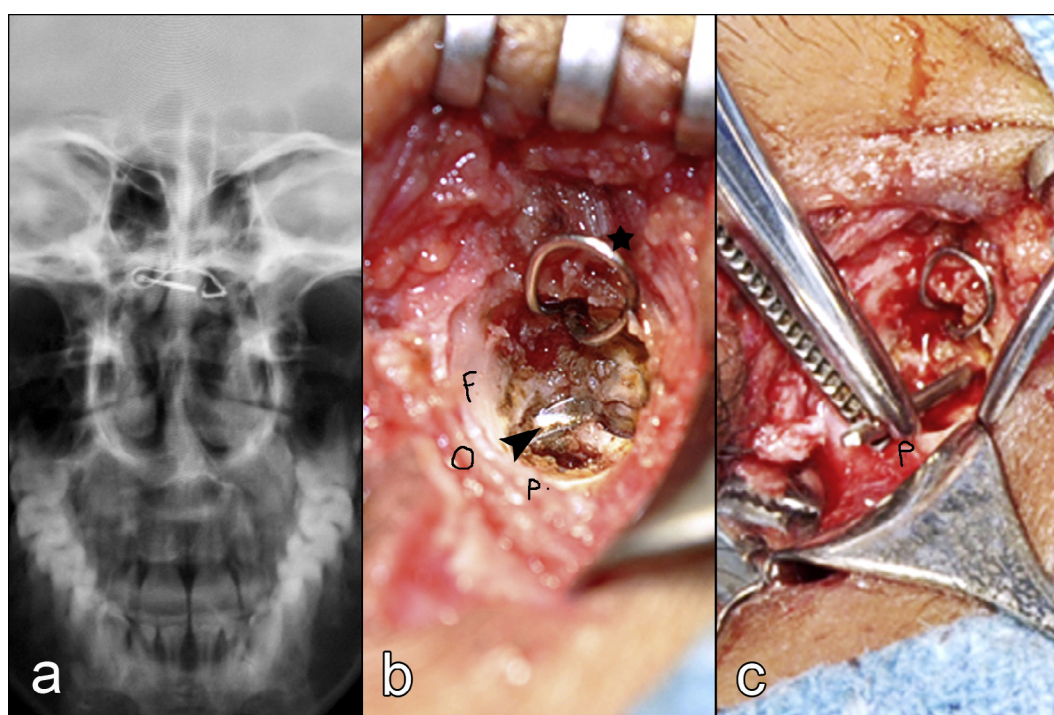
# Lost drill bit during medial canthoplasty for a blepharophimosis syndrome



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A 15-year-old female, a known case of blepharophimosis syndrome, underwent a bilateral medial canthoplasty along with transnasal wiring under a general anesthesia. While drilling the bones for wiring, from the left to the right, the new drill tip accidentally fractured and approximately 2 cm length of it slipped into the drilled bony canal and could not be

visualized. All efforts to locate and retrieve it including the use of transnasal wires failed. An X-ray was quickly obtained which showed the rounded drilling end to be embedded in the lateral wall of nasal bone (Fig 1a). The transnasal wire placed helped with accurate localization, since the cutting edge of the drill was within the loop of the superficially



**Figure 1.** X-ray of the skull and paranasal sinuses showing the fractured drill bit and its relationship with the loop of the transnasal wire (Panel a). Intraoperative photograph following drilling of the bone overlying the drill bit. Note the everted loop of the transnasal wire (black star), the exposed drill bit (black arrow head), the orbicularis muscle (O), the periosteum (P) and frontal process of maxilla (F) (Panel b). Intraoperative photograph of the retrieved drill bit in entirety (Panel c).

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located wire (Fig 1a). The drill tip could not be located on the nasal endoscopic examination since there was no nasal mucosal violation. The loop of the wire was lifted (black star, Fig 1b) and the underlying bone was gently drilled away till the drill bit was visible (black arrowhead, Fig 1b). Gently the tip was maneuvered and retrieved (Fig 1c). Lacrimal system was patent with no visible collateral injury to lacrimal drainage pathways. Medial canthoplasty was completed and the patient later underwent tarso-frontal sling with fascia lata. At one year follow up, the patient was doing well with satisfactory cosmetic and functional outcomes for blepharophimosis.

### Comment

Peri-operative instrument breakage is sporadically reported, however is not very infrequent in orthopedic practice and usually involves the drill bits.<sup>1-3</sup> It is well known that retrieval of such fractured segments is difficult specially if

it gets embedded in the bone as in the present case.<sup>2</sup> Various techniques have been described to retrieve the drill bits and most involve open techniques and are case specific.<sup>1-3</sup> The literature lacks published guidelines owing to the lack of better evidence base.<sup>1</sup> Accurate radiological localization of the lost drill bit and careful removal without violating crucial anatomical boundaries usually results in a successful retrieval. In view of medico legal implications, for cases where extensive drilling or bone work is involved, a rare possibility of instrument breakage should be mentioned as a part of informed consent.

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