NORTHERN HEALTH RESEARCH CONFERENCE

October 2, 2020

Recurrent Nephrolithiasis in a Patient with an Ectopic Parathyroid Adenoma

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ABSTRACT:

Introduction
Urolithiasis is a common presenting urologic complaint in North America. For patients with bilateral complicated stones, such as staghorn calculi, simultaneous bilateral percutaneous nephrolithotomy (SB-PCNL) is an effective endourologic procedure. In addition, the initial management for complications of stone disease, such as obstructing stones, may require the placement of ureteral stents, which can become encrusted and difficult to remove. Upon preliminary evaluation for stone disease, patients undergo metabolic workup to rule out systemic disorders, such as hyperparathyroidism. First-line treatment for hyperparathyroidism causing objective manifestations of renal involvement is parathyroidectomy. Recurrent stones after parathyroidectomy should prompt clinicians to evaluate potential causes of failed parathyroidectomy, including an ectopic parathyroid adenoma.

Case Presentation
We present a case of recurrent bilateral staghorn calculi in a 68-year-old male, secondary to persistent hyperparathyroidism post-parathyroidectomy due to a rare ectopic superior mediastinal paraesophageal parathyroid adenoma. Initial management of his severe left renal colic involved the placement of a ureteral stent that became encrusted within two weeks. The patient subsequently underwent SB-PCNL with same-session encrusted ureteric stent removal. Finally, ectopic parathyroidectomy was performed, after which a right-PCNL for a recurrent obstructing stone was successful. Follow-up computed tomography scan revealed no stones in the right kidney, and a recurrent non-obstructing stone in the left kidney that remained unchanged with observation. To our knowledge, this is the first case report of an SB-PCNL and encrusted stent removal in the same operative session.

Conclusions
SB-PCNL is an effective management strategy for extensive bilateral urolithiasis, and the addition of an encrusted ureteric stent removal in the same session may be feasible for experienced endourologists. However, frequent monitoring is required to avoid stent encrustation in patients with extensive metabolic abnormalities. Finally, evaluation of ectopic parathyroid adenoma as a possible etiology should be considered in patients with recurrent urolithiasis after parathyroidectomy.