



## Renal stone culture: Is it relevant?

Sir,

Recently, we observed that few of our patients after percutaneous nephrolithotomy (PCNL) developed septicemia even though their preoperative mid-stream urine culture was sterile or they were adequately treated if urine culture was positive. In order to decrease the morbidity of percutaneous renal surgery, we designed a prospective study to evaluate the role of culture of

**Table 1: Result of the study**

	No Pts (%)
Total No of Pts	50
Total No of Renal unit	55
Total Pos Culture	23 (41.8)
Total Pos MSU	5(9)
Total Pos Pelvic Urine	15 (27.2)
Total Pos Stone	18 (32.7)

**Table 2: Different organisms found in the culture**

Organism	No of Pts(%)
<i>E. Coli</i>	20 (86.9)
Proteus	2 (8.6)
Klebsiella	1 (4.3)

pelvic urine and renal stone.. Preoperative mid-stream urine (MSU) and pelvic urine (PU) and stone obtained during PCNL were sent for culture in 50 consecutive patients undergoing PCNL at our hospital. Pelvic urine was obtained after initial puncture. Stones obtained during surgery were washed with sterile saline to remove surface contaminant and then crushed in a bottle and sent for culture and sensitivity (C/S). Patient's age ranged from 19 to 65 years with a mean of 45.3 years. There were 33 male and 17 females in the study group. Patients who already had received antibiotics prior to referral were excluded from the study. Results of the study are given in Tables 1 and 2. All the patients with MSU and PU positive cultures had stone culture positivity. Three patients had negative MSU and PU cultures with positive stone culture.

All the related articles available in PubMed were reviewed. Stone culture was positive from 32 to 79% patients.<sup>[1-3]</sup> Prospective clinical study by Mariappan et al,<sup>[4]</sup> showed that midstream urine (MSU) culture and sensitivity test is a poor predictor of infected urine proximal to the obstructing ureteral stone or infected stones. Gault *et al*,<sup>[1]</sup> found that culture of large renal stones is beneficial. Yield of stone culture was maximum in struvite stone. However, culture can be positive in any renal stone.<sup>[2]</sup> Although our study was small in number and non-randomized, clinical application of it brought fruitful results. Treating the patient with antibiotic according to the pelvic urine or stone culture report has reduced the incidence of postoperative fever and septicemia by 89%. We could not find any published Indian study related to the topic. We conclude that stone or pelvic urine culture can be beneficial during percutaneous renal stone surgery with resultant decrease in postoperative morbidity, leading to reduced hospital stay and overall costs.

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