Kidney incision for removal of renal calculi under blocked renal blood flow in 45 cases

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[Foundation Project]: Hainan Medical University Scientific Research Fund Supported Project of the Journal (0020120017)
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Received: 2011-10-08 Revised: 2011-10-20

View from specialist: It is creative, and of certain scientific and educational value.

[ABSTRACT] Objective: To investigate the efficiency of kidney incision for removal of renal calculi under blocked renal blood flow in 45 cases. Methods: During surgery, renal blood vessels were separated first, 1.0 g inosine and 250mL 20% of mannitol i. v. was then injected rapidly. With saline (4 °C) being placed around the kidney, renal blood vessels were blocked by pedicle clamp and renal parenchyma was cut open stones were removed with forceps under direct vision. Results: Stones were all removed in 42 of the 45 patients after the surgery, with a successful rate of 93.3%. Average length of renal blood flow blocking was (42.5 ± 5.2) min; average bleeding volume was (98.0 ± 8.3) mL; postoperative hematuria lasted for an average length of (2.5 ± 0.5) d; and average number of removed stones were (16 ± 3). The stone residual rate was 6.8% and no severe complications occurred before or after the surgery. Six-month IVP 6 showed significantly reduced hydronephrosis, renal pelvis was clearly displayed with no residual stones. Renal function of the patients were significantly improved, neither deteriorated hydronephrosis nor renal atrophy cases was observed. Conclusion: With advantages of low rate of residual stones, kidney incision for removal of renal calculi under blocked renal blood flow is effective on complicate renal calculi cases.

[KEY WORDS] Renal blood flow; Block; Complex renal calculi; Renal incision for removal of calculi