Use of fibrin glue in percutaneous nephrolithotomy.

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Abstract:

OBJECTIVES: To report our experience with the use of fibrin glue during tubeless percutaneous nephrolithotomy. We addressed the safety of this approach and evaluated its use for any clinical benefit with respect to length of hospital stay, bleeding, analgesic usage, and urinary extravasation.

METHODS: This was a retrospective review of 43 patients who underwent tubeless percutaneous nephrolithotomy. In 20 consecutive patients (one bilateral), percutaneous tracts were injected with 2 to 3 mL of Tissel Vapor Heated sealant at the conclusion of the procedure. The fibrin glue was instilled during simultaneous removal of the percutaneous sheath. These 20 patients were compared with a control group (23 consecutive patients) in which fibrin glue was not used. The length of hospitalization, hematocrit drop, analgesic use, stone burden, operative times, postoperative complications, and any noted computed tomography scan findings were compared.

RESULTS: Postoperatively, the average length of hospital stay was less in the experimental than in the control group by 0.71 day ($P < 0.05$). Differences in hematocrit drop between the experimental (6.8%) and control (5.6%) groups were not statistically significant. The total analgesic use was less in the experimental group, but the difference was not statistically significant. No statistical difference was found between the operative times for both groups. Postoperative fevers and wound seroma were noted in the experimental group. No abscesses or any significant changes along the percutaneous tracts were seen on postoperative computed tomography scans. In the control group, no procedure-related complications were noted.

CONCLUSIONS: The use of fibrin glue is safe in percutaneous nephrolithotomy procedures and additional prospective randomized studies are needed to evaluate for any clinical benefit.