

Complications and Clinical Outcomes of Conventional Surgery Versus Subcutaneous Ureteral Bypass (SUB) in the Management of Feline Ureteral Urolithiasis

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Soft Tissue Surgery

Objectives

To compare complications and outcomes between conventional surgery (ureterotomy or ureteroneocystostomy) and Subcutaneous Ureteral Bypass (SUB) in cats with ureteral obstruction due to urolithiasis.

Methods

This retrospective study included cats with ureteral obstruction from urolithiasis treated surgically between 2015 and 2023. Cats were divided into two groups: one treated with conventional surgery (ureterotomy or ureteroneocystostomy) and the other with SUB. Data collected from medical records included signalment, history, type of surgery, complications, and follow-up.

Results

Forty-two cats were included (median age 6.3 years). Bilateral obstruction occurred in 40% (17/42) of cases. Eleven cats underwent conventional surgery (9 ureterotomies, 2 ureteroneocystostomies), and 31 had a SUB placed. Surgical times were similar between the two groups (mean of 2 hours). No intraoperative complications occurred. In the conventional surgery group, one major immediate postoperative complication (uroperitoneum) was noted, while a long-term complication rate of 54% (6/11) was observed including stenosis (4/6), recurrent urolithiasis (1/6) and bacterial infection (1/6). The long-term complications reported for the SUB group were bacterial infections in 26% (8/31) and mineralization-related obstructions in 22% (7/31). The overall long-term survival rate was 86%.

Statement (conclusions)

In this first retrospective study comparing conventional surgery and SUB placement for the treatment of ureteral obstruction in cats secondary to urolithiasis, both techniques yielded long-term positive outcomes. Conventional surgery had a high long-term complication rate, particularly stenosis requiring further surgery, but remains suitable for selected cases (single urolith). However, the SUB remains the preferred treatment in most cases. Further studies are needed to identify risk factors for complications.