PCNL with Thullium Laser: Video of our First Experience

Introduction and Objective: Percutaneous nephrolithotripsy (PCNL) is a standard treatment for renal calculi >2 cm. Modern flexible nephroscopes and accessories employing the complementary effects of Thullium laser lithotrites can treat these renal calculi in a minimally invasive fashion also. We want to assess the safety and efficacy of percutaneous nephrolithotripsy monotherapy for the management of >2 cm renal calculi using a Thullium laser device.
Materials and Methods: The patient had a renal stone of 25 mm in length and underwent staged percutaneous nephrolithotripsy with Thullium laser device. The stone did not have an infectious etiology. An IVP-CT scan was performed before the procedure. The patient presented with hematuria and pain. PCNL was performed with a WOLF Nephroscope. Thullium Laser (200 W.) drilling was first employed to weaken very hard stones. Low intrarenal pressure was maintained and placement of a stiff safety wire. Visibility was maintained at high level.
Results: The patient was rendered pain and infection-free. There was no require for blood transfusion and there was no change in serum creatinine. Mobile stone-free status was achieved. Outpatient management was sufficient for of the procedure. Operative time was of 132 min/stage and 44 min/calculus. No complications were observed.
Conclusions: Staged percutaneous nephrolithotripsy with Thullium laser device of large renal calculi is feasible. It has starting to replace other drilling devices at this institution.

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