PP-060

Inhomogeneous cystine stones respond excellently to SWL

S.K. Lildal, K.V. Pedersen, K.H. Andreassen, S.S. Osther, P.J.S. Osther
Urological Research Center, Department of Urology, Fredericia Hospital, Fredericia, Denmark

Introduction: Cystine stones are generally accepted as being SWL resistant. In vitro studies have shown that cystine stones appearing homogeneous by CT required 61% more SWs for comminution than did stones showing regions of low X-ray attenuation (inhomogeneous stones). These findings demonstrate the possible feasibility of using CT to identify cystine stones that will be susceptible to SWL.
Objective: The objective of this study was to evaluate in vivo outcome of SWL in patients with inhomogeneous cystine stones.
Material and Method: 9 patients with known cystinuria were found to have inhomogeneous kidney stones on multislice CT scans. The internal structure of the stones was evaluated on the bone window of the CT scan using magnification, and all stones showed void regions of low X-ray attenuation. The 9 patients (aged ranged from 3 to 84 years) were treated with SWL (Storz Medical Modulith® SLX F2) for 19 individual stones. Stone size ranged from 7 mm to 13 mm.
Results: Complete fragmentation was observed at treatment in all but one patient (88 %). The treatment result was confirmed by non-contrast CT or IVP. The only failure was subsequently treated by retrograde intrarenal surgery (RIRS).
Conclusion: Treatment of inhomogeneous cystine stones with SWL is highly effective. Patients with cystine stones suitable for SWL can be selected by the appearance of the stone on CT.

As published in the *Supplement of AFJU, Volume 18 (2012), 1st ESD "Experts in Stone Disease" Conference* (page 50)