

Stenting in Extracorporeal Shockwave Lithotripsy: Is it Necessary

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Introduction/Purpose: This prospective randomized study was performed to evaluate the value of insertion of a double J (DJ) stent in patients undergoing extracorporeal shockwave lithotripsy (ESWL) for renal stones with diameters less than 2.5 cm.

Materials and Methods: Between November 2005 and January 2007, 38 patients with a mean age of 47.4 years (range 16-73) were included into this study and underwent ESWL for renal stones. In 11 of these patients stents (DJ) were used while in the remaining 27 no stents were utilized. The average stone diameters in stentless and stented groups were 1.54 cm and 1.72 cm, respectively ($p > 0.05$). Double J stent was removed when there was no further passage of the fragments for 6 weeks after stone disintegration. All patients were given oral antibiotics and non-steroidal anti-inflammatory drugs for one week after ESWL treatment. Stone passage and the data of DJ were determined with plain X-ray of the urinary tract (UTP). The severity of lower urinary tract symptoms, loin pain and the need for intravenous or intramuscular analgesics were recorded.

Results: Two patients in the stented and one patient in the stentless group were partially free of stones, while the remaining patients became completely free of stone (92.1%). Steinstrasse were observed in two patients (5.3%); one patient in the stentless group and another one after the removal of DJ stent. Only one patient in the stented group had severe lower urinary tract symptoms which responded neither to oral nor to other forms of analgesics, and therefore DJ stent was removed. The remaining patients were in no need for medications other than the oral therapy.

Conclusions: Placement of DJ stent for the purpose of improving free stone rate or enhancing the passage of the fragments during ESWL is unnecessary in renal stone with diameters less than 2.5 cm. Therefore, we suggest that the use of DJ stents should be limited to certain conditions like solitary kidneys. However, further prospective trials should be designed to define the criteria for stented ESWL.