P094 The use of a virtual reality device (HypnoVR®) during outpatient DJ stent removal procedures: Initial results from a feasibility study

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Introduction & Objectives: Cystoscopic DJ removal is an outpatient procedure generally not requiring anesthesia or sedation. However, patients may experience pain during the procedure, as well as treatment-related anxiety. For these reasons, we aimed to test a virtual reality device (VRD, HypnoVR®, Strasbourg, France) during DJ removal procedure in order to assess its impact in terms of patient-reported pain and anxiety.

Materials & Methods: We enrolled 10 patients with indwelling DJ stent scheduled for stent removal. Patients with either epilepsy or migraine where excluded from the study. DJ removal procedures were performed using a single use flexible cystoscope specifically designed for DJ removal (Isiris®; Coloplast, France). The VRD device was installed and started 10 to 5 minutes before the procedure. Tolerability of pain and treatment-related anxiety represented the primary efficacy outcomes and were evaluated using a visual analogue scale (VAS), the short version of the McGill pain questionnaire (MPQ), and the short version of the Surgical Fear Questionnaire (SFQ). Secondary outcomes were represented by VRD ease of use (VAS) and patient satisfaction with the use of the device.

Results: Median (IQR) age and BMI were respectively 49 (48-53) years and 26 (24-28) kg/m^2. All patients had indwelling DJ stent following ureteroscopy. Most of the patients were DJ naïve (7, 70%). Median extra time for the installation was 3 (2-4) minutes. Median pre-procedure pain (VAS) score and anxiety (VAS) scores were 1 (1-1) and 2 (1-3). Lower post-procedure anxiety levels were recorded, median (IQR) VAS 1 (1-2), although not statistically significant, $p>0.05$. Procedure related median (IQR) pain was 4 (2-5). Similar results were reported for the MPQ and the SFQ. No procedure was stopped due to side effects from. All the patients who were not DJ naïve reported a better experience using the VRD compared to the recalled previous sessions. All the 10 patients would use again the VRD if further DJ removal session were needed in the future.

Conclusions: Our proof of principle study shows that VRD application during DJ removal is safe and feasible. The initial report from patients are positive both in terms of pain and anxiety tolerance. Further comparative studies are needed.