

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

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## BACKGROUND & 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
- 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 AND METHODS

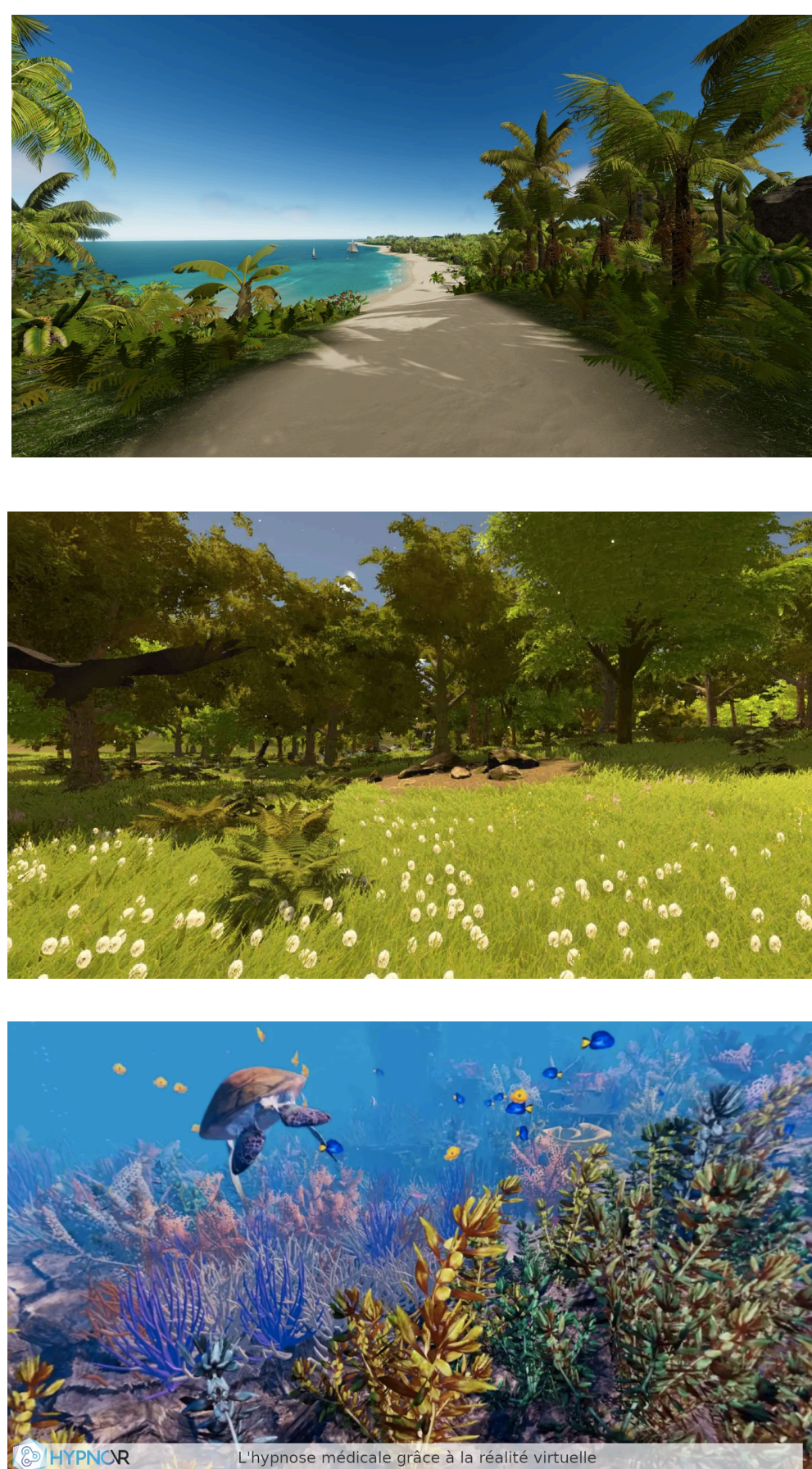
- We enrolled 25 consecutive patients submitted to DJ removal
- Patients with either epilepsy or migraine where excluded from the study
- DJ removal procedures were performed using a single use flexible cystoscope specifically designed for DJ removal (Isiris®; Coloplast, France)
- The VRD was installed 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

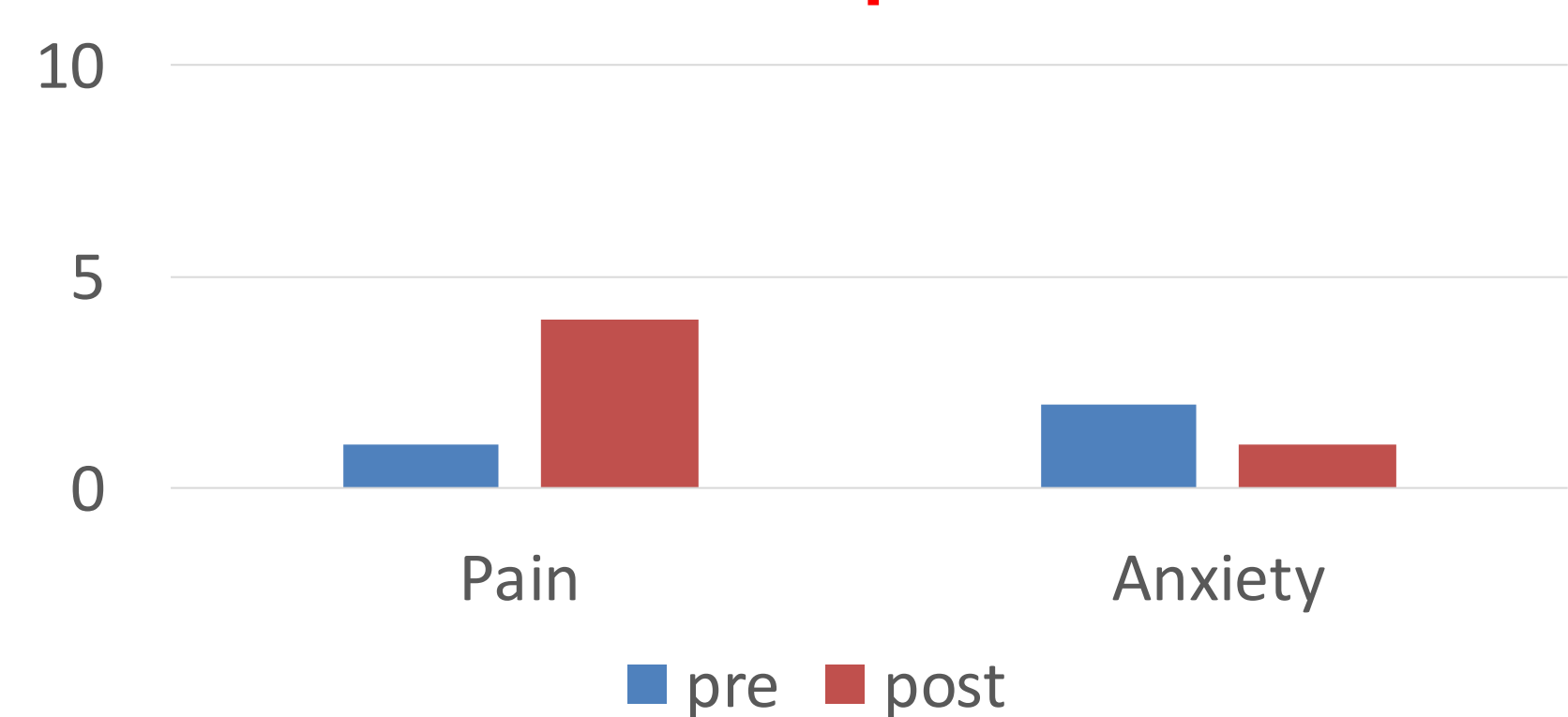
### Descriptive statistics

	Study sample (n=25)
<b>Age (years)</b>	
median (IQR)	49 (48-53)
<b>BMI (kg/m²)</b>	
median (IQR)	26 (24-28)
<b>Extra time for installation (mins)</b>	
median (IQR)	3 (2-4)
<b>First DJ removal (n, %)</b>	
yes	20 (80%)
no	5 (20%)
<b>Side effects (n, %)</b>	
yes	0 (0%)
no	25 (100%)
<b>Would recommend VRD (n, %)</b>	
yes	25 (100%)
no	0 (0%)
<b>Would use VRD again (n, %)</b>	
yes	25 (100%)
no	0 (0%)

### The HypnoVR device



### Pain and anxiety levels before and after the procedure



## 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



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