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VIRTUAL REALITY DURING UPPER GASTROINTESTINAL ENDOSCOPY

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Medical procedures, outpatient surgery, physical therapy, and rehabilitation and more areas in medicine and in Pshicholoy and Phiatry have benefited from the effectiveness of technologies like VR as a supplemental tool to pharmacological pain management strategies, such as Anesthesia. The present project elaborates on previously reported findings (Mosso et al., 2016) of virtual reality assisted Anesthesia during ambulatory surgeries and more than 300 patients to reduce pain and anxiety.

Methodology: 115 patients were administered an upper GI Endoscopy with local (oral) Anesthesia. Prior to endoscopies, they were divided into two groups, one supplemented with VR (n = 56) and the other without VR (n = 59). The VR group was presented with one of four relaxation environments (forest, cliff, castle, or beach) through head mounted displays. Vital signs including heart rate (HR), respiration rate (RR), and oral secretion were measured before, during, and after endoscopies.

Results: Single factor ANOVAs indicate a reduction in visceral response (heart rate, respiratory rate, and oral secretion) in subsets of patients during upper GI in the VR group compared to the non-VR group. Subjective ratings of pain were also significantly lower. Differences and effect sizes for gender, age, and procedure type are discussed.

Conclusion: VR is an effective supplemental tool to pharmacological agents during diagnostic upper GI. Findings suggest that VR distraction may considerably reduce the need for medication during surgical procedures.