Medical hypnosis and virtual reality glasses are safe and effective tools to alleviate pain and anxiety in patients undergoing medical procedures

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Introduction:
Patients undergoing medical procedures benefit from distraction techniques to reduce the need for drugs alleviating pain and anxiety. This study investigates if medical hypnosis or virtual reality glasses (VRglasses) as adjuvant method reduces the need for additional drugs.

Methods:
In a prospective, randomised, interventional trial, patients undergoing procedures were stratified in four age groups, and randomly assigned into three arms by means of a closed envelope system. All patients received standard care for pain before the procedure; the control group received further drugs for pain and stress as indicated by the Visual Analog Scale (VAS; threshold 3/10) and ComfortScore (threshold 14/30), two index groups received either medical hypnosis or VR glasses as a plus before and during the procedure. VAS and Comfort were scored continuously and analysed with the Kruskal-Wallis Test. Patients, parents and healthcare providers scored their satisfaction at the end.

Results:
Of 104 included patients 6 to 86 years old, 47% were female. Regardless of age, pain and comfort scores were similar before and at the start of the procedure (VAS 3.7-4.2; Comfort 16-16.7), but as of one minute after starting the procedure, both VAS and Comfort reduced significantly more in both index groups compared to the control (p<0.001), remaining far below the threshold for both pain and stress. There was no advantage of one index group over the other (p0.43). There were no adverse effects. Patients in the VR group were more satisfied than in the standard group (p0.02) or in the hypnosis group (p0.04). There was no significant difference in satisfaction of parents or healthcare providers.

Conclusion:
From the very start of the intervention, the application of either medical hypnosis or VR glasses significantly reduces pain and anxiety in patients undergoing medical procedures. More studies are needed but both are promising safe adjuvant tools to standard pharmacological treatment.

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