


## MEDICAL HYPNOSIS AS AN ALTERNATIVE TO PHARMACOLOGIC SEDATION IN MR

Quality Improvement Project  
Initial Experience with Selected Claustrophobic Patients

N. Ferrera, MD; E. Pravatà, MD; F. Del Grande, MD, MBA, MHEM  
Ente Ospedaliero Cantonale Ospedale Regionale di Lugano, Switzerland



RSNA, 27.11.2018, Chicago, USA

## Purpose

- **Claustrophobia** during a MR exam is a **regular problem** in clinical practice
- Claustrophobic patients usually require pharmacologic sedation which has **potential side effects**, is relatively **expensive**, and is **difficult to integrate in the daily workflow**
- The purpose of our quality project was to assess the feasibility of medical hypnosis as an alternative to pharmacologic sedation in claustrophobic patients undergoing a MR exam



## Medical hypnosis: background

Used from the origin of mankind...



...to modern times



### *Did you know?*

The placebo/nocebo effect, well recognized in allopathic medicine, is a form of auto-hypnosis



## Medical hypnosis: background

Medical hypnosis integrates various techniques (imaginative and metaphorical thinking, mindfulness, ...) aimed at increasing the patient's motivation and altering his or her behavioral patterns in order to overcome various difficulties (anxiety, somatoform disorders, chronic and acute pain, etc.)

### **Important characteristics of medical hypnosis:**

- The patient is asked to cooperate actively
- Mutual trust is essential for application of hypnotic techniques
- The patient is completely in control of the situation and can decide whether or not to accept therapist's propositions
- Is characterized by an altered state of wakefulness



## Methods

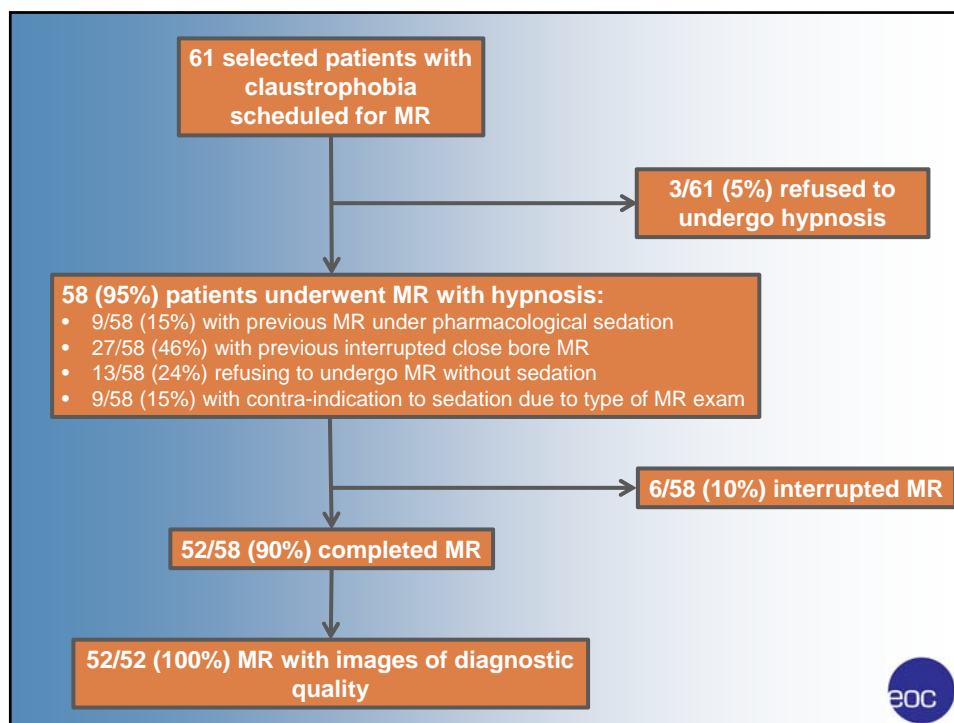
- As a quality improvement project, no authorization from our local ethical committee was required (decision: April 3rd 2018)
- MRI exams using medical hypnosis were accomplished in 61 claustrophobic patients between December 2015 and March 2018 on a wide-bore 3T MR (MAGNETOM Skyra, Siemens Healthcare)
- We assessed the percentage of patients having completed the MR exam with **diagnostic images** (based on the radiologist's report); furthermore, we estimated the **additional length** and **costs of the MR exam using hypnosis** and **patient satisfaction** as compared to MR using pharmacologic sedation

## Methods

- After MR scheduling, every patient was directly contacted by the physician specialized in hypnotherapy who explained the procedure and asked for consent to undergo hypnosis. The day of MR exam, the physician induced a hypnotic trance outside the MR room.

The physician specialized in hypnotherapy remains outside the MR room and is constantly in contact with the patient.





## Results

- **MR completion:** 52/58 patients undergoing MRI (90%) and 52/52 (100%) with images of diagnostic quality
- **MR duration:** approximately 10 minutes longer than standard MR (with pharmacological sedation: 30-40 minutes longer than standard MR)
- **Additional costs:** approximately 160-200 Swiss francs (160-200 USD) for hypnosis and 370-410 Swiss francs (370-410 USD) for sedation
- **Patient satisfaction:** substantial patient satisfaction and self-empowerment was observed

## Conclusions

**As compared to MR under pharmacologic sedation, MR under hypnosis in claustrophobic patients allows:**

- Obtainment of MR images of equal diagnostic quality
- Reduction in the duration of MR exam time (20-30 min shorter)
- Reduction in procedural costs
- Reinforcement of the patient's self empowerment



## Conclusions

**Medical hypnosis can be easily integrated into the daily workflow of MR for selected claustrophobic patients**



Clinical studies are needed to confirm our data and to ascertain the role of hypnosis in selected claustrophobic patients undergoing MR exam.

Corresponding author:

Nicole Ferrera Espinosa, MD. EOC Ospedale Regionale di Lugano

Email: [nicole.ferrera@bluewin.ch](mailto:nicole.ferrera@bluewin.ch)