Claustrophobia—empowering the patient

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Key Points

- *Claustrophobia, a phobic anxiety disorder, is a well-known relative contraindication for MR, and anxiety or fear is triggered by confinement or the prospect of confinement in the MR environment.*
- *Within the field of MR, claustrophobia is generally counteracted by reducing or deflecting attention from triggering stimuli in the MR environment by technical means, which increases relaxation and comfort and thus improves compliance.*
- *Psychological interventions and self-empowerment of patients might become the next level of coping strategies.*

In accordance with the International Statistical Classification of Diseases and Related Health Problems, ICD-10, claustrophobia is a specific (isolated) phobic anxiety disorder where anxiety and fear are evoked predominantly by certain well-defined situations [1]. In the context of magnetic resonance (MR) imaging, the situation triggering claustrophobia is the confinement posed by the narrow bore of the scanner, and in severe cases, even the prospect of confinement may induce anxiety. In other cases, patients may not fear the confinement or restriction itself but rather the anticipated potential consequence of the restriction—with suffocation as one of the worst-case scenarios [2].

Claustrophobia affects 3 to 5% of the general population and is a relative contraindication to MR. In patients scheduled for MR, its reported incidence ranges between < 1 and 37%, and the incidence of claustrophobic events varies, too, much depending on study population and type of MR scanner used. Furthermore, based on the severity of the anxiety disorder, patients may experience different types of claustrophobic events [2–6]. The disorder may for example hinder patients from undergoing adequate diagnostic examinations, require sedation or anaesthesia introducing an additional risk, or result in inadequate image quality or prematurely terminated

examinations not only affecting the diagnostic process but also affecting workflow efficiency and health care costs.

Coping strategies to ease or prevent claustrophobic events have been studied and introduced to MR during the last decades [2–6]. A relaxing environment within the scanner room enforced with light and acoustic effects is aimed at. Furthermore, wider and shorter bores, noise reduction, distraction with music and movies during the examination and fast scanning are efforts to increase compliance with MR examinations. In addition, communication skills of personnel performing MR examinations are imperative to create a soothing atmosphere during the examination [7].

In this issue, Napp et al [8] call attention to audio-guided self-hypnosis as a measure to self-empower patients with the aim to decrease occurrence and severity of claustrophobic events. Patients with high risk for claustrophobia who used audio-guided self-hypnosis had significantly fewer claustrophobic events and needed fewer and less invasive coping actions compared to patients without any empowerment intervention. These results thus suggest a role for audio-guided self-hypnosis in the preparation for MR in patients with claustrophobia-related anxiety.

The audio-guide text used in this study is not provided and patients are not further evaluated prior to MR whether they have reached more focused attention, reduced peripheral awareness and an increased capacity to respond to suggestions—which would be expected in case of hypnosis. However, whether subjected to self-hypnosis or another type of psychological intervention such as cognitive behavioural therapy, it is either way crucial for health care professionals to identify situations where patient compliance may be hampered by factors that might be controlled by engaging the patient in effective coping strategies. The MR community

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has made many advances to help patients with claustrophobia to cope with the triggered anxiety and to avoid claustrophobic events. Using the claustrophobia questionnaire [6, 8] we have the means to identify patients at risk early. Psychological interventions provided by different forms of patient self-empowerment or pre-examination preparation using imaginary or virtual reality exposure and training might represent the next level of coping strategies and are likely in sync with modern demands.

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Declarations

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