A questionnaire to collect unintended effects of Transcranial Magnetic Stimulation: A consensus based approach

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Aims: Transcranial magnetic stimulation (TMS) has been widely used in both clinical and research practice. However, TMS might induce unintended sensations and undesired effects as well as serious adverse effects [1]. To date, no shared forms are available to report such unintended effects.
This study aimed at developing a questionnaire enabling reporting of TMS unintended effects.
Materials and Methods: A Delphi procedure was applied which allowed consensus among TMS experts [2]. A steering committee nominated a number of experts to be involved in the Delphi procedure. Three rounds were conducted before reaching a consensus. Afterwards, the questionnaire was publicized on the International Federation of Clinical Neurophysiology website to

collect further suggestions by the wider scientific community. A last Delphi round was then conducted to obtain consensus on the suggestions collected during the publicization and integrate them in the questionnaire.
Results: The procedure resulted in a questionnaire, that is the TMSens_Q, applicable in clinical and research practice
Discussion: The TMSens_Q was developed through a Delphi procedure, implemented online, with the goal of reaching a consensus among experts in the field. The questionnaire could be used in research as well as in clinical settings. Reporting information about potentially undesired TMS effects in a standardized format will provide the unique opportunity to quantify the incidence of minor sensory effects, such as discomfort and unpleasant sensations induced by the stimulation, in addition to adverse effects, which are generally reported and collected in medical and research study record. Therefore, the use of this questionnaire might constitute an important starting point for future studies investigating the safety of new TMS protocols.
Conclusions: Routine use of the structured TMS questionnaire and standard reporting of unintended TMS effects will help to monitor the safety of TMS, particularly when applying new protocols. It will also improve the quality of data collection as well as the interpretation of experimental findings. research settings

References:

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