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Risk in homeopathy: Classification of adverse events and homeopathic aggravations – A cross sectional study among Norwegian homeopath patients

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ABSTRACT

The registration of adverse events is important to identify treatment that might impose risk to patients. Homeopathic aggravation, a concept unique for homeopathy may impose a particular risk, as it is tolerant towards a worsening of the patients' symptoms. The aim of this study was to explore the classification of patient reported reactions as homeopathic aggravations or adverse drug reactions.

Design and setting: In a cross sectional survey, patients were asked to register any reactions they had experienced 14 days after taking homeopathic remedies. Worsening of symptoms was classified as homeopathic aggravation if it was (i) an increase of the patients' existing symptoms (ii) and/or a feeling of well-being that emerged 1–3 days after taking the remedy (iii) and/or headache and/or fatigue accompanying these symptoms.

Results: A total of 26% of the participants reported worsening of symptoms. One third was classified as adverse events. Half of these were graded as minor and the other half as moderate according to the Common Terminology Criteria for Adverse Events. Two thirds were classified as homeopathic aggravations. Of these, 73% were classified as minor and 27% as moderate, giving a tendency towards milder severity for those classified as homeopathic aggravations ($p = 0.065$).

Conclusion: Patients reported a substantial part of the short-term reactions after taking homeopathic remedy as a worsening of symptoms. These reactions were classified as mild and moderate. Hence, the risk connected to homeopathic treatment is minor. More studies are needed to confirm the existence of homeopathic aggravation and how to classify the concept in a clinically meaningful way.

1. Introduction

Patient safety is central for all health care practices, both within conventional medicine as well as Complementary and Alternative Medicine (CAM). Patient safety can be understood as the reduction of the risk of unnecessary harm associated with health care interventions to an acceptable minimum.[1] Risk is generally defined as a compound measure of the probability of an event and the magnitude of the potentially negative outcome of that event.[2] Moreover, risk can be defined as direct and indirect risk.[3] Direct risk is caused by the treatment itself and linked directly to the intervention. This includes traditional adverse effects of an intervention, such as bleeding after acupuncture needling or an allergic reaction after the use of a herb, as well as risk connected to self-management advice from the practitioner.[4] Indirect risk is related to adverse effect of the treatment context, e.g., the CAM practitioner, rather than the intervention. A patient may be harmed by a care context, which prevents the patient from receiving the best possible treatment relevant to her or his health needs, e.g., when patients seek a CAM practitioner for their health complaints which may be effectively treated by conventional medicine (e.g., cancer), and the CAM practitioner, often unwittingly, causes a delay of conventional treatment.[4] Another example is continued care in conventional or CAM settings of unproven effectiveness and/or not in line with the patient's values or preferences whilst delaying more appropriate CAM or conventional care with positive evidence on effectiveness.

The 12 month prevalence of those who visit homeopaths in Central Europe has been found to vary between 2% in Great Britain[5,6] to 15% in Germany.[7] In the Scandinavian countries the prevalence

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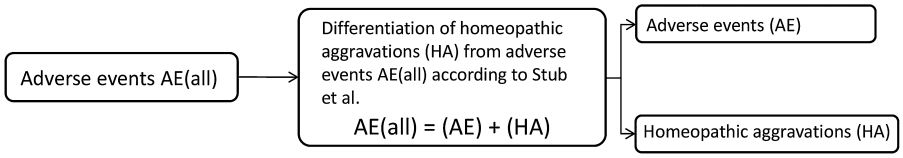

Fig. 1. The relationship between the concepts of all worsening of symptoms, which was prior defined as adverse events [AE(all)], homeopathic aggravations (HA) and adverse events (AE).

of visits varies between 1.3% and 14%.[8,9] According to a Norwegian survey from 2014, the prevalence of the use of homeopathy was 1.7 % in 2014,[10] a decline from 4.3% 10 years earlier. Hence, it is relevant to gather information about potential risks related to homeopathic care, in general, and the use of homeopathic remedies, in particular.

Homeopathic remedies are typically administered at very high dilutions also beyond Avogadro's constant (6.023×10^{23}) which is the threshold where no molecule of the original substance is left in the remedy. Since these remedies most often contain no or very small quantities of pharmacologically active molecules they are thought to represent no major safety concern in terms of direct risk.[11–13] It has been suggested that risk in homeopathy is related to practice more than to the homeopathic remedy.[14]

A systematic review published in 2012 of case studies of adverse effects related to homeopathic practice[15] found 30 cases that reported adverse effects of homeopathic remedies (direct risk). Another eight were related to adverse effects caused by the substitution of conventional medicine with homeopathy (indirect risk).

Homeopathic aggravation is a concept unique for homeopathy. The concept is understood as a temporary worsening of existing symptoms following the administration of a correctly chosen homeopathic remedy, which should be followed by an improvement.[16,17] It has many similarities with the concept of healing crisis that is common in other CAM therapies.[18] A healing crisis is understood as a temporary exacerbation of symptoms on the way to more definite improvement.[19]

The influential Greek homeopath George Vithoulkas defined homeopathic aggravation in a case as the optimal reaction that can be expected from a correct constitutional remedy.[20] The founder of modern homeopathy Samuel Hahnemann makes several comments on the subject. In paragraph 157 in the "Organon" (6th edition) he wrote: "However certain it is that a homoeopathically chosen remedy, because of its appropriateness and the minuteness of the dose, gently removes and destroys its analogous acute disease without manifesting its remaining un-homoeopathically symptoms, i.e., without arousing any new significant complaints. It is nevertheless usual (but only when the dose is not appropriately attenuated) for it to effect some small aggravation in the first hour or first few hours after the remedy is taken and for several hours if the dose is rather too large". It appears that Hahnemann's understanding of this phenomenon was developing as he achieved more experience with potencies in medicine. In the 5th edition in the "Organon" he wrote that the smaller the homeopathic dose the weaker and shorter lived the homeopathic aggravation. However, in the 6th edition he wrote that the higher the dilution of the medicine, the stronger the aggravation tend to be. This latter statement confirms more closely his thesis that a high potency increases the effect of a remedy.[21]

Substantial differences regarding homeopathic aggravation in clinical practice are reported. Some authors estimate that 75% of chronic cases show at one time or another an appreciable aggravation of their symptoms.[21,22] Other authors estimated a frequency of 10–20% in clinical practice.[23] These differences are likely to be at least partly due to the use of different, often not transparent, criteria for homeopathic aggravations.

In two qualitative studies[24,25] medical and non-medical homeopaths were asked about their perceptions of the difference between homeopathic aggravations and adverse effects, based on their clinical experience. Findings from these studies suggest that the most important criteria for homeopathic aggravations were (i) an increase of existing symptoms, (ii) and/or a feeling of well-being that emerges 1–3 days after taking the remedy (iii) and/or headache and/or fatigue accompanying these symptoms. This process was reported by the homeopaths to continue for 4–8 weeks depending on the patient's general health condition and the direction of the change of the symptoms. If the aggravation continued for more than 14 days without a feeling of well-being, it was an adverse effect. The concept of homeopathic aggravation may impose a particular type of risk, as a homeopathic aggravation is tolerant towards a deterioration of the health status as part of an assumed healing process. This makes it important to know more about the frequency and seriousness of homeopathic aggravations. However, there is lack of knowledge, consistency and international agreement on how to best distinguish homeopathic aggravations from adverse drug reactions, and to determine the prevalence thereof.

The aims of the study were therefore:

(1) To describe reactions reported by the patients, two weeks after taking homeopathic remedies and to classify these into no reactions, improvement of symptoms or worsening of symptoms. (2) To grade the severity of the worsening of symptoms according to the Common Terminology Criteria for Adverse Events (CTCAE). (3) To classify the worsening of symptoms into homeopathic aggravations or adverse events.

2. Material and methods

This study was a questionnaire based cross sectional survey. Data were collected between June, 2011 and August, 2012. The study was approved by the Regional Committee for Medical and Health Research Ethics in Northern Norway (2010/3379).

2.1. Operationalization of concepts

The worsening of symptoms, reported by the participants, were classified as adverse events [(AE(all)] before being divided into selected adverse events (AE) and homeopathic aggravations (HA). When HA was deducted from the worsening of symptoms, AE described the deteriorations that were classified as adverse events in the study. Homeopathic aggravation was identified according to the criteria by Stub et al., listed in the introduction[24,25] (Fig. 1).

The symptoms of the participants were classified according to the Common Terminology Criteria for Adverse Events (CTCAE).[26] In this study, adverse events were understood as all diseases, or unwanted and/or harmful reactions that appeared during the study period, regardless of their relation to the actual treatment.[27] Thus, adverse event is a recommended term to describe harmful events occurring during a trial .[28] Moreover, the CTCAE system grades adverse events from 1 to 5, where 1 is mild, 2 is moderate, 3 is severe or medically significant, 4 is life threatening, and 5 is lethal.