

Should we use “powerful placebos”?

In this fifth article on complementary medicine, Edzard Ernst debates the value of the placebo effect

In complementary medicine (CM), we regularly encounter therapies which, when tested in placebo-controlled clinical trials, generate no specific therapeutic effects, ie, no effects beyond placebo. The conclusion in such cases is usually that “the treatment is not effective”. Such statements often irritate advocates of the therapy who claim that many people have been helped by it so its value is obvious. The explanation for this apparent contradiction is usually that the treatment, while devoid of specific therapeutic effects, has powerful non-specific effects (see *PJ*, 13 November, p722).

An example for this scenario is homoeopathic arnica, which is frequently advocated for cuts and bruises. The results of rigorous clinical trials collectively show that homoeopathic arnica is not better than placebo.¹⁻³ Yet both placebo and arnica are associated with respectable clinical improvements. Depending on one’s point of view one could, thus, conclude that arnica is ineffective (ie, not better than placebo) or effective (ie, it does reduce pain, swelling, etc, albeit to the same level as a placebo).

All that matters is that patients benefit

Many proponents of CM argue that the distinction between specific and non-specific effects is academic and has no importance from a pragmatic point of view — all that matters in clinical practice is to help patients. If the desired outcome (eg, reduction of pain) is achieved, the mechanism or nature of the effect (ie, specific or non-specific) is fairly irrelevant. Patients want to get better and scientific explanations contribute practically nothing to this process.

At first glance, this argument is disarming and convincing. Essentially, it states that treatments can be useful even if they are pure placebos, provided they generate a sizeable placebo response. On closer inspection, however, the argument turns out to be ill-conceived, misleading and counter-productive.

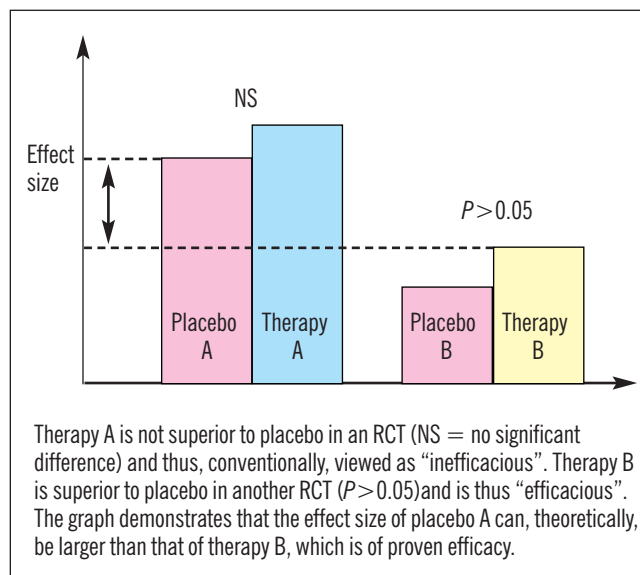
Placebo effects are part and parcel of almost any therapeutic intervention — anything from acupuncture to surgery is associated with placebo effects.² They are thus only a weak justification for promoting a treatment that does not also generate specific therapeutic effects. To put it bluntly, one does not need a placebo to generate a placebo effect. It can, however, be wise to try to maximise placebo responses in clinical practice. And in order to do so, there is no need for a pure placebo therapy.

Administering pure placebos could also result in ethical problems. It usually means knowingly misleading the patient, ie, prescribing a treatment under false pretences. One might argue that this only applies if the therapist (or pharmacist) is aware of the scientific evidence (eg, when he knows the body of evidence showing that homoeopathic arnica is a placebo). Thus uninformed health care professionals would not behave unethically when advocating or, in the case of pharmacists, selling, such preparations. The obvious problem with this type of scenario, however, is that such a person would not be professionally competent, ie, not informed about the best evidence. And this, in turn, could be even more questionable in an ethical sense.

Even if giving a placebo therapy was ethically unproblematic and not less effective than prescribing the best available treatment (this could, for instance, be the case for arnica if no effective treatment for cuts and bruises had yet been identified), such an approach would still have limitations. In judging the therapeutic value of interventions, we also need to consider their risks. Only if they do not outweigh the potential benefits, is it ever ethical to use a given therapy. With pure placebo interventions, the benefit would consist only of the placebo effect which is often not sizeable.⁴

Powerful placebos

Placebo effects also vary according to the type of therapy. Homoeopathic remedies, for instance, have several characteristics which render them a particularly “powerful placebo”: they are slightly exotic, cost money, are regularly promoted by the media (and even the Royal family) and are often administered following a lengthy consultation, which can be therapeutic in itself. Similarly, a number of CM interventions could generate unusually strong placebo effects. One might even postulate that the placebo effect associated with such therapies is larger than the total therapeutic effect of a conventional therapy of demonstrable efficacy. The Figure above is an attempt to depict such a seemingly paradoxical situation. In this scenario, a pure placebo treatment (ie, a therapy devoid of specific therapeutic effects), Therapy A, generates a better clinical outcome than an



Size of the placebo effect of one therapy (A) in relation to the total therapeutic effect of another therapy (B)

efficacious standard treatment, Therapy B. Could this be a situation where the use of a placebo is medically and ethically justified? The answer is probably not. First, the situation depicted is purely theoretical. There is no trial evidence to support this. Second, if we had some evidence along such lines we might suspect that placebo A is superior to therapy B. Yet this would not constitute proof. The logical mistake in the Figure is to compare the results of two different studies that were not designed to be compared. Faced with such a scenario we would need to conduct a trial comparing placebo A with treatment B. In all likelihood, it would not confirm the superiority of the former over the latter.

In clinical practice, we should use the placebo effect wisely to help patients. We might even think of ways to maximise it alongside a treatment that also has specific therapeutic effects. The fact that a given therapy generates a large placebo response is, however, not a sufficient justification for using it if it is devoid of specific therapeutic effects.

References

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