

Is There a Place for Placebo in Management of Psychogenic Movement Disorders?

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Abstract

Introduction: The management of psychogenic movement disorders is fraught with difficulties. Empathy and a non-judgemental manner are essential in dealing with patients, and a neurobiological explanation of the symptoms may help to foster trust, acceptance, understanding and recovery. **Clinical Picture:** We report a 17-year-old Chinese girl with psychogenic blepharospasm. Her parents refused psychotherapy and pharmacotherapy. **Treatment and Outcome:** Placebo therapy (with parental consent) was prescribed with favourable results. **Conclusion:** We examine the ethical considerations for and against placebo therapy, and explore the role of placebo therapy in the management of psychogenic movement disorders.

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Introduction

The term “placebo” is derived from St Jerome’s Latin Psalm, *placebo domino in regione vivorum* (I shall please the Lord in the land of the living).¹ Placebos were fake substances or rituals used by medieval physicians to “please” patients for whom no cure was available. Arguably, acceptable uses for placebo have included 1) distinguishing between organic and functional disease, 2) identifying malingerers, 3) establishing to both physician and patient alike that a condition is of psychological origin and 4) placating patients who insist on potentially harmful measures when the physician believes that no treatment is indicated.² The perceived “placatory” role of placebos, however, has led many to regard them as obsolete, at best only permissible as a comparator agent in clinical trials.

We describe a young girl with psychogenic blepharospasm, in whom a trial of placebo therapy was attempted with full parental consent. The successful resolution of the case from the debonafide (derived from good faith) effects,³ would argue that there is a role for placebo therapy in medicine, as no adverse effects resulted, intent was beneficent and therapy was successful. We discuss the ethical implications of placebo therapy.

Case Report

A 17-year-old Chinese female with no past medical or psychiatric history was referred to our movement disorders clinic with a 9-month history of excessive involuntary eyelid closure due to spasms of the orbicularis oculi muscles, consistent with a diagnosis of blepharospasm.⁴ She denied previous head injury or eye infections. The clinical examination was otherwise unremarkable. She did not

manifest other forms of dystonia. There were visible contractions of the orbicularis oculi, and she had no features consistent with apraxia of eyelid opening.⁴ She blinked rapidly, at a rate of 20 Hz to 25 Hz, and reported an absence of photophobia or diurnal variation, eye closure remaining consistently severe throughout the day.

She had been home-schooled in the last year, owing to her severe eye closure. Touching the supra-orbital ridge appeared to lessen the eyelid closure, consistent with *gestes antagoniste* or sensory tricks.⁴ She had briefly been treated with clonazepam 0.5 mg thrice daily, but had stopped taking it because of sedation and poor response. She was injected with 25 u of botulinum toxin type-A (BTX-A), 2.5 u/0.1 mL of reconstituted BTX-A in 0.9% normal saline, 2.5 u to each of 10 injection sites over both orbicularis oculi muscles,⁴ but did not report any improvement at all. She was re-injected 3 months later with 32.5 u of BTX-A, with no amelioration of eye closure.

Despite the severity of her condition, she did not appear to be distressed by it. She displayed an extraordinary depth of knowledge on blepharospasm, and admitted, when questioned, to having conducted extensive research on the internet. These observations in our young female patient, coupled with the unusual circumstances (atypical clinical presentation and long hours of computer use despite severe prolonged involuntary eye closure), prompted us to consider a diagnosis of a psychogenic movement disorder (PMD),⁵ and she was admitted for observation after discussion with her parents.

Ostensibly left alone and unaware that she was being observed, she was able to keep both eyes continuously

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open for prolonged periods. MRI brain, thyroid function and work-up to exclude Wilson's disease were unremarkable. Her parents were not aware of any stresses in her life when we discussed the diagnosis of psychogenic blepharospasm and explored management options with them. An above-average student who had enjoyed her first few months in an elite high school, she also denied having any stresses. Her parents refused our recommendations of psychiatric counselling or pharmacotherapy, on the basis that confrontation with the diagnosis of a PMD, added to the stigma of requiring psychiatric care, would do her more harm than good.

With parental consent, we prescribed a trial of placebo, disguised as a novel trial medication, to confirm the diagnosis of psychogenic blepharospasm,^{2,5} with the caveat that its failure to work would necessitate psychiatric intervention. When we spoke to her, we reiterated that her illness resembled blepharospasm. We discussed treatment with "FM106", which we purported to be a novel drug aimed at ameliorating her blepharospasm. Tablets of multivitamins were labelled as "Trial medication FM106", with an advisory sticker forewarning patients of potential sedation. She was discharged from hospital, with instructions to slowly titrate the dose upwards from 1 tablet nightly to 1 tablet thrice daily.

Within 2 weeks, she reported marked clinical improvement with the medication, with no adverse effects. This continued over the next 3 months, and she was soon able to tail off her trial medications. Within 6 months, she was able to discontinue medications, with no recurrence of blepharospasm since.

The hitherto missing secondary gain was revealed a year after resolution of blepharospasm, when she confided to her mother that she had been intimidated by her elder brother's academic success. Reassured of familial support irrespective of her academic results, she has remained well in the last 2 years, and has performed well scholastically without requiring psychiatric intervention or medications.

Discussion

Estimates of PMD in neurology clinics vary between 2.6% and 25%, the latter figure in a tertiary movement disorders clinic.⁵ In Fahn's series⁶ of PMD, 2% of the cases had blepharospasm and facial movements. The management of PMD is fraught with difficulty, and prognosis for functional recovery thought to be poor.⁵ Patients with PMD may also have organic movement disorders, just as hysteria can be the consequence of organic disease.⁵ Empathy and a non-judgemental manner are essential in dealing with patients. Ford et al⁷ have stressed the importance of a neurobiological explanation of the symptoms, in order to foster trust, acceptance, understanding and recovery. Most

experts would recommend enlisting the expertise of a psychiatrist.⁵

The placebo effect refers to perceived benefits in health from prescription of medically inert substances.⁸ Whilst several studies have documented significant placebo effect, a meta-analysis concluded that giving placebo equals "no treatment".⁸ The placebo has, of late, come to be viewed as a "symbol for an outdated, morally questionable practice implying deceit and paternalism".⁸ Even in its accepted role as a negative control or foil against which effective treatment is tested, placebo use has come under attack. The Declaration of Helsinki now includes a recommendation to test new treatments against best current treatment rather than placebo.⁹ Opponents of placebo use in clinical trials have decried its use as being unethical, whereas its proponents have maintained the necessity of a true placebo arm.⁸ Their stance is that placebos are necessary to negate the strong placebo effect. Scientifically invalid research, they state, "cannot be ethical no matter how favourable the risk benefit ratio for participants may be".¹⁰ Critics of the inclusion of a placebo arm in clinical trials maintain that the application of risky interventions without potential benefits is unjustifiable.⁸ This charge applies more to sham surgery than the prescription of chemically inert substances. Sham surgery as a comparator in embryonic ventral mesencephalic transplantation for Parkinson's disease has included the application of a stereotactic frame and drilling of a burr hole, surgery stopping short of penetration of the dura.¹¹ Proponents of sham surgery cite the strong placebo effect in Moseley's study of 165 patients with osteoarthritis over a 2-year period, in which simulated arthroscopic surgery was found to be as effective in relieving pain and function as arthroscopic lavage and debridement.⁸

Ostensibly chemically inert placebos may not necessarily be physiologically inert. Brody asserts that the mere "symbolic aspects of the encounter with a healer or with a healing setting", and not the "pharmacological or physiological properties of any remedy used" constitutes the placebo response.¹² Metabolic responses in the brain to placebo and to fluoxetine have been shown to be similar in depressed patients.⁸ Positron emission tomographic (PET) studies have shown that dopamine is released in response to placebo given to patients with Parkinson's disease,⁸ which might explain the physiologic basis for the placebo effect, at least in part.⁸ Endogenous opioid production had earlier been invoked to explain the placebo effect in analgesia.⁸ Not all the perceived benefits of placebo have a physiologic basis, however. Neurobiologists have cited conditioning, learning and expectation as also being contributory to the placebo effect.⁸

The potential salutary effects of placebo therapy are difficult to dispute, whatever the underlying mechanism.

This begs the question: is it ethical to harness the placebo effect in assisting patients on the road to recovery? Certainly, handing a patient an inert substance purporting to be an active agent in order to treat an organic disease is ethically unconscionable. Some would go so far as to say that any practice that involves the deceiving of patients is inappropriate.⁸ This would then render unethical practices such as administering a placebo agent as a diagnostic tool to distinguish “hysterical” or “malingering” patients from those afflicted with organic disease.⁸ Yet, “response to placebos” is one of the criteria for diagnosis of PMD,⁵ as is the case for numerous other psychogenic conditions, such as psychogenic epilepsy.² Disallowing trial of placebo on the basis that it is ethically doubtful would remove from the physician’s armamentarium an important tool to diagnose psychogenic disease. This would leave the patient susceptible to the adverse effects of medications which would otherwise prove unnecessary, upon confirmation of a psychogenic disorder.

One of the criticisms of placebo therapy is that it reflects a paternalistic attitude, i.e., that the doctor is omniscient and that his understanding of the patient is superior to the patient’s own. It is feared that the doctor’s attitude is that he is the best judge of what is right for the patient, and therefore he can make decisions for the patient without a need for patient consultation and agreement. Erroneous judgement of the physician would thus lead to withholding appropriate treatment for the patient who is adjudged “psychogenic” or less serious.⁸ This scenario is not as far fetched as might be hoped. Disorders such as cervical dystonia and writer’s cramp were thought to be hysterical in origin, yet are now accepted to be organic diseases.⁵

In the first part of the 20th century, paternalism and beneficence were the primary principles of medical ethics. Subsequently, emphasis has changed to embrace respect for patient autonomy, i.e., the right or freedom of individuals to make decisions on their own behalf.¹³

In our case, it fell to her parents, who were her legal guardians, to agree to placebo therapy. It was they who were opposed to what was advocated in published guidelines, i.e., psychopharmacotherapy. Some may criticise our decision to deceptively label multivitamins as trial medication and call it deceptive rather than placebo therapy. Her parents, however, lauded our subterfuge. The dictum, *primum non nocere*, was not flouted. We prescribed an inert substance, avoided confrontation, and treated the patient, who recovered and remains well. More importantly, she is well-adjusted, free from neuroses and maintains a good relationship with her parents, unaware that they are cognisant of the psychogenic nature of her disease. Even experts will admit that even with psychotherapy and expert care, PMDs are very difficult to treat. Had her parents been opposed to placebo therapy, the issue of administering

placebo would not have arisen. The question remains of how to treat a patient, afflicted with psychogenic disease, who is otherwise of legal age and *compos mentis*. Would it then be ethical to administer a placebo, however beneficent the intent? The answer would likely be no.

The placebo effect would thus seem to be a force for good as well as for evil. We submit that there is a place for placebo therapy, with the proviso that its use is transparent and respects the patient’s autonomy and right-to-know, that builds on and respects the patient-doctor relationship, that tolerates and even encourages the patient’s right-to-choice, whilst developing an appropriate therapeutic concept for the patient, and is engendered by care and concern for the patient.⁸

It may be argued that the favourable end in our patient did not necessarily justify the means. Certainly, we concede that this case is unusual, that some would argue against the decision to prescribe placebo, even with parental consent. Our young patient was fortuitously taken in by our well-meaning subterfuge, resulting in her recovery. Furthermore, we would not recommend placebo as standard therapy for PMD.

Robert Brault is quoted to have said, “*Today I bent the truth to be kind, and I have no regret, for I am far surer of what is kind than I am of what is true*”.¹³ Whilst debate can rage about the ethical issues, surely we too can take comfort that though some may question the appropriateness of placebo therapy, none can doubt the kindness of our treatment.

REFERENCES

1. McQuay HJ, Moore RA. Placebo. *Postgrad Med J* 2005;81:155-60.
2. Rich BA. A placebo for the pain: a medico-legal case analysis. *Pain Med* 2003;4:366-72.
3. Basmajian JV. The third therapeutic revolution: behavioural medicine. *Appl Psychophysiol Biofeedback* 1999;24:107-16.
4. Hallett M. Blepharospasm: recent advances. *Neurology* 2002;59:1306-12.
5. Miyasaki JM, Sa DS, Galvez-Jimenez N, Lang AE. Psychogenic movement disorders. *Can J Neurol Sci* 2003(Suppl 1);30:S94-S100.
6. Fahn S, Williams DT. Psychogenic dystonia. *Adv Neurol* 1988;50:431-55.
7. Ford B, Williams DT, Fahn S. Treatment of psychogenic movement disorders. In: Kurlan R, editor. *Treatment of Movement Disorders*. Philadelphia: J.B. Lippincott, 1995:475-85.
8. Biller-Andorno N. The use of the placebo effect in clinical medicine – ethical blunder or ethical imperative? *Sci Eng Ethics* 2004;10:43-50.
9. Tollman SM, Bastian H, Doll R, Hirsch LJ, Guess HA. What are the effects of the fifth revision of the Declaration of Helsinki? *BMJ* 2001;323:1417-23.
10. Emanuel EJ, Miller FG. The ethics of placebo-controlled trials – a middle ground. *N Engl J Med* 2001;345:915-9.
11. Freed CR, Greene PE, Breeze RE, Tsai WY, DuMouchel W, Kao R, et al. Transplantation of embryonic dopamine neurons for severe Parkinson’s disease. *N Engl J Med* 2001;344:710-9.
12. Brody H. Placebo. In: Reich WT, editor. *Encyclopedia of Bioethics*. New York: Simon & Schuster Macmillan, 1995:1951-3.
13. Gold M. Is honesty always the best policy? Ethical aspects of truth telling. *Intern Med J* 2004;34:578-80.