

Correspondence

Methylphenidate for Hiccups

To the Editor:—Recently, a year-old paper¹ in which methylphenidate was found ineffective in the treatment of hiccups came to my attention. We² had found 20 mg methylphenidate to be highly effective in suppressing hiccups in a variety of patients, compared with a placebo ($P < 0.001$). Gregory and Way¹ did not obtain significant results when using 10 mg of the drug in patients with hiccups during operation, even when they repeated the dose, as was necessary in many cases.

The above-named authors discredited our results but failed to discuss the importance of the following, which may reconcile the differences. 1) They used only half of the dose we used. It is a pharmacological principle that the plasma concentration of a given intravenous dose of drug is unlikely to be achieved by two half-doses given separately. This is particularly true with short-acting drugs. The possibility of tachyphylaxis should also be considered. 2) Their experience was limited to the use of the drug during operation, when hiccups frequently subside without treatment. In the majority of our cases hiccups had been caused by a variety of pathologic conditions and had lasted for hours or days prior to the administration of methylphenidate or placebo. Finally, these authors stated that we gave 10–20 mg of methylphenidate. We remarked very clearly, however, that satisfactory results were obtained after administration of 20 mg to all our patients except one, who received 30 mg. In our experience 10 mg is inadequate for suppression of hiccups.

Methylphenidate is a useful drug in the treatment of a variety of patients with hiccups of short or long duration, whether or not related to operation and anesthesia, provided it is given in adequate dose. Methylphenidate was also effective in 100 per cent of patients who have muscular spasticity during recovery from halothane anesthesia, within two minutes of administration.³ Likewise, it has been dra-

matically effective in other states involving involuntary contraction of striated muscles, such as shivering.^{4,5}

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To the Editor:—In response to Dr. Macris' letter regarding methylphenidate, we would like to re-emphasize the major point of our paper, *i.e.*, that 10–20 mg of methylphenidate was no more effective in the treatment of hiccups than a placebo. It had been reported by Vasiloff *et al.* that 10 mg of methylphenidate was effective in stopping singultus and therefore, was being touted as such by drug company representatives.

Dr. Macris suggests that his results were different from ours for two reasons. First, because with 20 mg of methylphenidate, the plasma level would be greater than with 10 mg. This, of course, is true. However, there were patients in his group in whom hiccups ceased during injection of the drug, before the entire dose was given and apparently in less than a circulation time. Those patients obviously had lower plasma levels than achieved with 20 mg of drug, yet they still got an effect.