

CORRESPONDENCE.

THE DANGEROUS REPUTATION OF ADRENALIN.

To the Editor of THE JOURNAL OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

SIR,—I should like to make a few comments on the Clinical Note in this month's issue,¹ and in so doing I will deal mainly with the use of adrenalin for intranasal operations. As to its use in other circumstances, my opinion is given in an article in *The Practitioner* (June, 1915), to which I would refer any who are interested in the subject. I will now only remark that as the injection of adrenalin into patients not under an anæsthetic, nor undergoing an operation, has so often been followed by symptoms resembling those of severe operative shock,² I am at a loss to understand how it can be advocated as a remedy for this condition.

Briefly then, arterial blood-pressure may be raised (1) by increase in the total volume of blood; (2) by increase in rate and power of the beat in the heart; (3) by contraction of arterioles—and adrenalin does so by (3) rather than (2). Although (2) may occur, either as a direct effect, or perhaps secondarily to (3)—for we are told by physiologists that dilatation of the heart is an incentive to vigorous contraction³—that organ may be unable to meet the call upon its energies which is made by sudden and excessive back-pressure. In some experiments this has actually been observed, the over-distended heart ceasing to beat.

The danger arises only when the drug has entered the general circulation, and is therefore much more likely to result from subcutaneous or submucous injection, than from swabbing or spraying. In the cases recorded in Dr. Levy's paper,⁴ and elsewhere, the former methods are stated to have been used in all but one instance, when spraying was done.

Whatever view may be taken of the part played by chloroform in these disasters, it can only be regarded as a predisposing and contributory cause, the adrenalin injection being the exciting and principal one.

I have no dislike to packing before, or even during, an operation for which I am giving a general anæsthetic; on the contrary, I recommend it, for not only is bleeding and consequent disturbance checked by the adrenalin, but as painful and other impressions from the periphery are reduced or annulled by the cocaine, there is less liability to shock, and by their combined action less anæsthetic is needed. I should, however, protest strongly against submucous injection, and I believe most, if not all, anæsthetists would do the same.

I am,

Yours faithfully,

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¹ See JOURNAL OF LARYNGOL., RHINOL., AND OTOL., February, 1916, p. 40.

² E. g., *The Lancet*, July 18, 1914.

³ Hence commencing arterio-sclerosis is possibly a "protective reaction of the organism" intended to spur a heart already failing. Thus do we wander in doubt!

⁴ *Brit. Med. Journ.*, September 14, 1912.