

The relation of the vagus to auricular paroxysmal tachycardia.**HAROLD L. OTTO.** (Introduced by H. C. Jackson).

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A female, age 23, suffering from mitral stenosis and insufficiency of rheumatic etiology, predisposed to spontaneous attacks of auricular paroxysmal tachycardia lasting five to six hours, was observed during two of these spontaneous paroxysms. The injection of adrenalin chloride (1:1000) in a dose of 1 cc. and repeated again in 15 minutes, never failed, whenever she was not previously subjected to the influence of other drugs, to induce a paroxysm of tachycardia, following approximately 15 minutes after the second injection of adrenalin. These induced attacks of tachycardia were indistinguishable from the spontaneous paroxysms in symptoms, rate, duration and electrocardiography. The inference, therefore, is justifiable that the focus or area of origin of the tachycardias must have been identical in both spontaneous and induced paroxysms. This was repeated four times, and in all the result was the same.

When four milligrams of atropin (a vagal paralyzing dose) were administered hypodermically before the exhibition of the adrenalin, a paroxysm of tachycardia failed to appear. This procedure was performed twice. Atropin, therefore, is not a drug which will induce a paroxysm of auricular tachycardia. It seems that the presence of the reflex vagal stimulation induced by adrenalin was a necessary factor in the induction of the paroxysms, and since spontaneous and induced attacks were alike in every respect, it suggests the vagus as a factor in the induction of the spontaneous paroxysms.

These findings are in harmony with those of Lewis¹ and in opposition to those of Galli² and others on the subject, to wit "that tachycardial attacks can be provoked in man by atropin, and that withdrawal of vagal influence predisposes to paroxysms of tachycardia."

¹ Lewis, Thomas, *Heart*, 1909, i, 43.

² Galli, G., *Heart*, 1920, vii, 111.