

EFFECT OF AMIDOPYRINE ON REACTIVE HYPEREMIA IN HUMAN SUBJECTS—A PRELIMINARY REPORT

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Amidopyrine, phenzone and acetyl salicylates have been shown to antagonize vasodilation and broncho constriction in guinea pigs during anaphylaxis induced by administration of bradykinin (1).

In this study the effect of amidopyrine has been observed on reactive hyperaemia following occlusion of the blood supply of the human fore arm.

MATERIALS AND METHODS

Human plethysmographic studies were conducted according to the technique of Hewlett and Van Zwaluwenburg (2). The observations were made with the subject sitting on a chair and the plethysmograph was secured in the forelimb. The forelimb was placed in a position so as to make an angle of 110° at the elbow joint. This allowed more room for the blood to accumulate in the veins after sudden application of pressure through reservoir. The tracings were recorded with pressures applied in steps of 40, 60, 70, and 80 mm of Hg. for a period of three minutes. The volume of the limb was noted by plugging the part of the limb in large measuring cylinder and read off from the amount of water displaced. The change in volume was calculated from the calibration graph previously prepared.

RESULTS AND DISCUSSION

Perusal of the Table I shows that there is statistically significant reduction ($P = < 0.01$) of hyperaemia after administration of amidopyrine in oral dose of 60 mgm.

TABLE I

Plethysmographic Values After Oral Administration Amidopyrine (60 mg.)

No. of observation	Time	Control values Blood flow/mt/100ml tissue	Time	Reactive hyperaemia blood flow/mt/100 ml	Value of P
15	9 a.m.	3.3 ± 0.21	9-15 a.m.	9.4 ± 0.65	< 0.01
15	12-15 p.m.	3.6 ± 0.23	12-30 p.m.	$5.3 \pm 0.21^*$	< 0.01

* After amidopyrine (60 mg oral dose).

Suppression of reactive hyperaemia in human subjects after three hours could be due to the fact that amidopyrine suppresses the blood flow in reactive hyperaemia. Antagonizing action of amidopyrine has been observed in bronchial constriction (1) and in Schwartzman's phenomenon (3).

CONCLUSION

Amidopyrine suppresses reactive hyperaemia in human subjects.

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