Thus practolol (4 mg intravenously) appears to abolish certain ventricular dysrhythmias occurring during anaesthesia without depressing cardiac action.

Blood levels of practolol following intravenous administration

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Blood concentrations of the cardioselective β-adrenoceptor blocking agent practolol (I.C.I. 50172, Eraldin) have been studied in normal volunteers following oral administration. Concentrations in blood were correlated with the percentage inhibition of exercise tachycardia. The peak concentration in blood occurred 1·5–3 h after the oral administration and decayed thereafter with a half life of 10 ± 2 h (Fitzgerald & Scales, 1968).

In the present study intravenous practolol was administered to six volunteer hypertensive patients. The decay curve can only be explained by the use of a three compartmental mathematical model. The initial short half-life of 5 min is due to a rapid tissue equilibration and the later long half-life component of 12 h may be the result of entero-hepatic recirculation. These results are supported by results in animals (Scales & Cosgrove, 1970).

The blood levels required to produce over 30% inhibition of isoprenaline tachycardia (4 μg/min) are greater than 0·5 μg/ml, exercise tachycardia (100 W, 2 min) are over 1 μg/ml. Levels of 1 μg/ml can only be maintained by the administration of 20 mg intravenously at 10 min intervals. A single injection of 20 mg only gives levels above 1 μg/ml for about 5 min.

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Vascular actions of clonidine in man

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Clonidine, an imidazoline derivative, has been recently introduced for the treatment of hypertension. Animal studies indicate an action on sympathetic centres. Surprisingly, the peripheral action on blood vessels is constrictor, probably the result of stimulation of α-adrenoceptors. The drug has been given to man intravenously, but little information is available on the direct effects on human blood vessels.

Clonidine (250–500 ng/min) was infused into a brachial artery of each of twelve normal volunteers, and the effects on hand or forearm blood flow were recorded. There was a prompt dose-related vasoconstriction lasting for the period of the infusion (in one instance for 30 min). This constriction was abolished completely by α-adrenoceptor blocking agents and occurred in the skin vessels rather than the