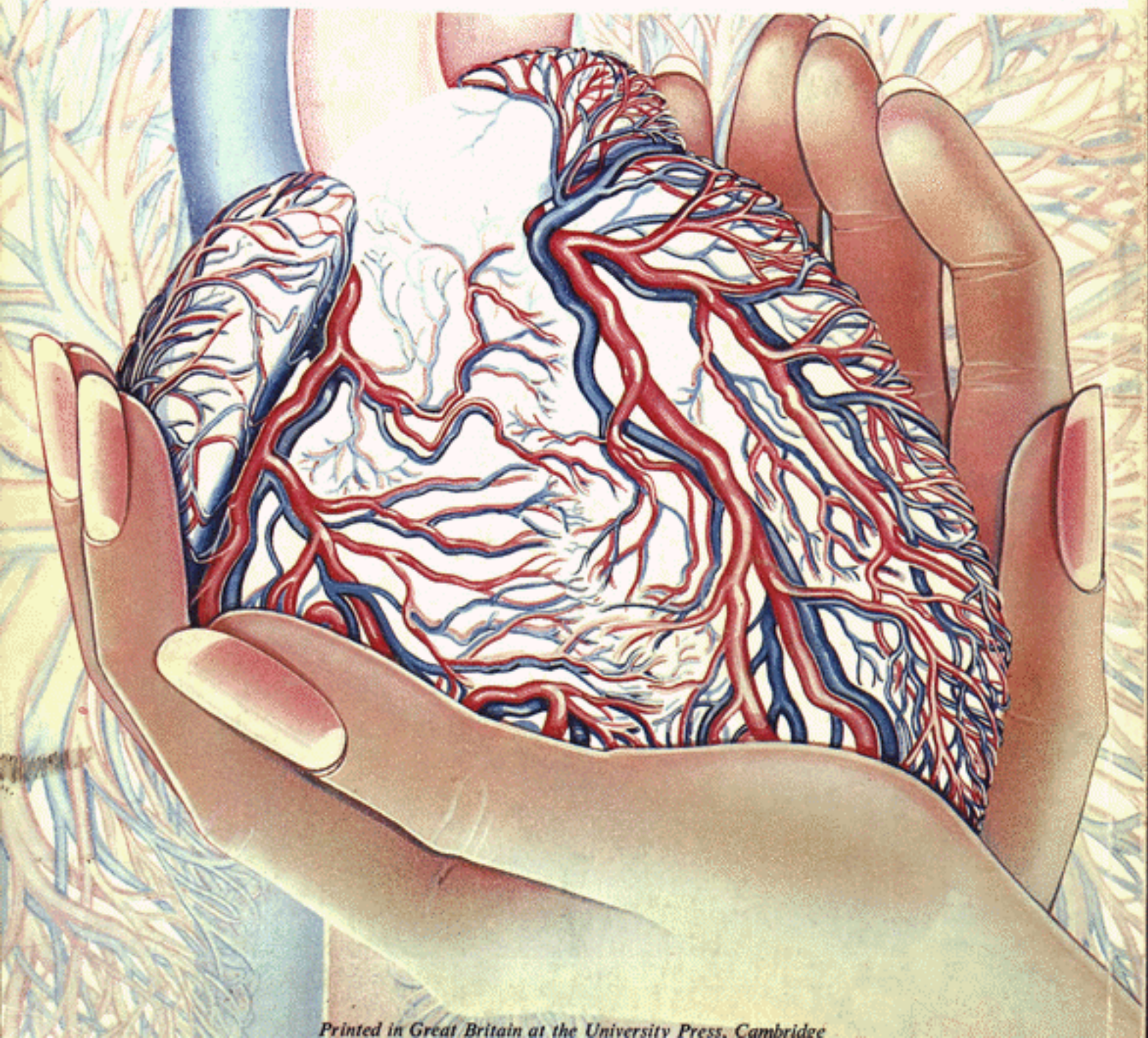

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EFFECTS OF CURRENT STRENGTH AND OF LENGTH OF BASIC DRIVE ON ATRIAL EXCITABILITY.

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An analysis of the influence of current strength (I) and length of basic drive (BDL) on atrial refractoriness (R) was performed in 15 pts with sinus node dysfunction (SND), in 9 pts. with atrial arrhythmias (A) and in 17 age-matched control subjects (C). Effective (ERP) and functional (FRP) refractory periods were measured during atrial pacing (100/min) using: a) variable I (2, 3, 4, 5, 7, 10, 15 mA) and introducing extrastimuli after the 8th paced complex of the basic drive; b) a constant I (5 mA) and introducing extrastimuli after 8 beats, 1 min and 3 mins of the basic drive. A bipolar stimulation with the distal pole as cathode was performed. Our data indicates that: 1) the increase of both I and BDL induces a progressive reduction of ERP and FRP in all groups; 2) a non linear relation does exist between I and R. At I higher than 7 mA ERP and FRP become nearly fixed; 3) 8 beats of atrial pacing are not sufficient to achieve a steady state of R; 4) ERP and FRP are significantly higher in SND than in C and in A at each I and each BDL.

Our findings should be considered when diagnostic and therapeutic electrophysiological procedures are performed in patients with atrial dysrhythmias.