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Removal of Chronic Intravascular Blood Clots using Liquid Plasma JAE-CHUL JUNG, MYEONG YEOL CHOI, IL GYO KOO, ZENGQI YU, GEORGE J. COLLINS, Colorado State University — An electrical embolectomy device for removing chronic intravascular blood clots using liquid plasma under saline environment was demonstrated. We employed a proxy experimental blood clot model of deep vein thrombosis (DVT) and actual equine blood clot. Thermal damage to contiguous tissue and the collagen denaturing via the plasma irradiation were investigated by histological analysis using birefringence of the tissue and verified by FT-IR spectroscopic study, respectively, which showed the high removal rate up to 2 mm per minute at room temperature and small thermal damage less than 200 μm .

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