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Destruction of Atherosclerotic Plaque Using Pulse Ultrasound with a Planar Rectangular Ultrasound Transducer

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Abstract : The aim of the proposed study was to evaluate mechanical mode ultrasound using a flat rectangular (3x10 mm2) MRI compatible transducer operating at 5 MHz for destroying atherosclerotic plaque. The system was tested initially in a Hydroxyapatite-polyalactide (HA/PLA) model. An optimized protocol was decided and then applied in atherosclerotic plaque of a rabbit. The plaque in the rabbit was created using a high cholesterol diet. The atherosclerotic plaque was imaged using MRI. This study shows that the destruction of atherosclerotic plaque is feasible.

Keywords : mri, ultrasound, atherosclerotic, plaque, pulse
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