

INTERSTITIAL MAGNETIC RESONANCE LYMPHOGRAPHY WITH GADOBUTROL IN RABBITS AND AN INITIAL EXPERIENCE IN HUMANS**E. Dimakakos, A. Koureas, V. Skiadas, G. Kostapanagiotou, K. Katsenis, N. Arkadopoulou, A. Giannopoulos, A. Gouliamos, L. Vlahos**

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ABSTRACT

The purpose of this study was first to evaluate gadobutrol as a contrast agent for interstitial Magnetic Resonance Lymphography (MRL) in rabbits, and second, to extend the study to humans, if the initial results were satisfactory. In our experiment, gadobutrol was injected into twelve white New Zealand rabbits. In nine animals, 0.5 ml of gadobutrol was subcutaneously administered through each foot pad of the hindlegs while in the remaining three animals the agent was given in each foot of the forelegs. In four of the nine rabbits, slight local massage was applied at the site of administration. Subsequently, we proceeded to administer 5 ml (4.5 ml gadobutrol mixed with 0.5 ml hydrochloride lidocaine) into the limbs of two healthy humans.

We achieved imaging of four lymph node groups (popliteal, inguinal, iliac and paraortic) in the hind-legs of the nine-rabbit group, whereas, in the forelegs of the remaining three rabbits, three lymph node groups (axillary, parasternal, mediastinal) were depicted. The flow of the contrast agent was significantly faster in the rabbits that received local massage ($P < 0.02$). In humans, normal lymph vessels, as well as inguinal lymph nodes, were depicted in the legs. No side-effects were observed either in the rabbits or humans.