Colonic content assessment from MRI imaging using a semi-automatic approach

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The analysis of the morphology and content of the gut is necessary in order to achieve a better understanding of its metabolic and functional activity. Magnetic resonance imaging (MRI) has become an important imaging technique since it is able to visualize soft tissues in an undisturbed bowel using no ionizing radiation. In the last few years, MRI of gastrointestinal function has advanced substantially. However, few studies have focused on the colon, because the analysis of colonic content is time consuming and cumbersome. This paper presents a semi-automatic segmentation tool for the quantitative assessment of the unprepared colon from MRI images. The techniques developed here have been crucial for a number of clinical experiments.

http://dx.doi.org/10.2312/vcbm.20191227