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WHAT ARE THE VARIOUS GENERAL ISSUES IN THE PEDIATRIC IMAGING?

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Abstract

A diagnostic tool in the pediatric population is x-ray imaging, but it comes with a number of distinct challenges as compared to the adults imaging, because it requires dedicated imaging protocols, sedation or anesthesia, specific training, and most importantly consideration for radiation exposure if ionizing radiation is being used.

One of the challenges for clinical care personnel is to gain the child's trust and co-operation before and throughout the duration of an examination, to acquire quality images and prevent repeat examinations. Even with a quality examination, the accurate interpretation of images requires a thorough knowledge of the intricate and dynamic face of anatomy and special pathological representations in children. This article attempts to draw attention to various challenges of pediatric imaging and the ways to overcome them.

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EVALUATION OF ADC VALUES IN DISCRIMINATING CONCURRENT DIFFERENTIAL DIAGNOSIS OF GLIOBLASTOMA (GBM), LYMPHOMA (LYM) AND METASTATIC TUMORS USING VOLUME UNDER THE RECEIVER OPERATING CHARACTERISTIC (ROC) CURVE (VUS)

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Abstract

Background:

Distinguishing three types of brain tumors, concurrently, is a problem in diagnostic methods that are relayed on the MRI modalities. Apparent diffusion coefficient (ADC) statistics may be valuable in responding this need. Using statistical methods new interesting findings shine from the horizons of differential diagnosis. The aim is to evaluate the capability of volume under the receiver operating characteristic (ROC) curve (VUS) for concurrent differential diagnosis of glioblastoma (GBM), lymphoma (LYM) and metastatic tumor(s) (MTTs) lesions of brain malignancies.

Materials and Methods:

Investigated MRIs included 57 GBM, 25 LYM and 25 MTT that were pathological diagnosis, after MR imaging. MRIs were taken from tumor regions with or without (T1W) enhancement and from peritumoral edematous (EDEM) regions. ADC maps obtained