
Summary and Conclusions

Since the congenital anomalies of the brain are commonly encountered in day to day practice, it is very important for every radiologist to be familiar with the basic imaging findings of common congenital anomalies to make a correct diagnosis necessary for optimum management of these conditions. Magnetic Resonance Imaging (MRI) is very useful in studying these malformations.

Discussion of congenital brain development and anatomical consideration then the physical consideration of conventional MRI and diffusion tensor tractography MR images then the tensor theory used to characterize molecular diffusion in white matter and how the tensor elements are measured experimentally using diffusion sensitive MR imaging. And the reviewing of the techniques for acquiring relatively diffusion-sensitive MR images and computer based algorithms that allow the generation of white matter fiber tract maps from the tensor data. And this provide an overview of current experience and some clinical examples that are ongoing and showing how DTI, and its application to fiber tractography, has elucidated the aberrant connectivity underlying a number of congenital brain malformations. Finally, it has been discussed the possible future role of these white matter maps in the assessment of white matter diseases, congenital brain malformations, and brain function.

The modality has been used extensively in recent years to determine the origin of pathological features that occur in

congenital malformations, and recent developments in imaging techniques that provide more knowledge in these cases in the future and investigate the neuroanatomical basis of congenital brain malformations.