Editorial

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Pediatric Radiology

Atul Pathak*,

Department of Drug Development, BioVectra Inc. Charlottetown, Canada, C1A. Email: pathakatul@gmail.com

***Corresponding author:** Atul Pathak, Director, Department of Drug Development, BioVectra Inc. Charlottetown, Canada, C1A. Email: pathakatul@gmail.com

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pediatric Radiology

Paediatric or pediatric radiology is a subspecialty of diagnostic radiology focused on children, from babies through to adolescents and young adults. Adolescents are mentioned paediatric radiologists because developing bodies are more vulnerable to the adverse effects of radiation than are adults of equivalent size.

Paediatric radiologists have specialized knowledge of the illnesses and medical conditions of infants, children and young people. They can quickly and accurately diagnose conditions such as appendicitis and pneumonia, the effects of trauma, or if a child may have a form of cancer.

The use of imaging techniques with children can prevent the necessity for exploratory surgery.

Paediatric radiology employs a variety of techniques such as:

X-rays;

Ultrasound;

CT (computed tomography) scans;

MRI (magnetic resonance imaging) scans;

Nuclear medicine.

Paediatric radiologists are highly trained to know which tests are most appropriate for the kid , and to form sure the testing is safe and administered properly.

If your child needs a medical imaging test or procedure, we have some advice on how the experience can be made less stressful for the whole family.

Paediatric imaging tests include:

Children's Abdominal Ultrasound,

Children's X-ray Examination.

Children's Barium Meal;

Children's Hip Ultrasound for DDH,

Children's Micturating Cysto-urethrogram,

Children's Renal Ultrasound

Ultrasound

The use of ultrasound in pediatric radiology is ubiquitous. Ultrasonography is relatively inexpensive, can be done portably, involves no radiation, and—in skilled hands—can be used to assess an anxious moving child accurately, for whom sedation may pose additional risk. Technically, ultrasound relies on the utilization of variable penetration and attenuation of sound waves by different tissue types. The routine ultrasound examination typically involves the mixture of B-mode (brightness mode) scanning and color or pulsed wave–duplex Doppler sonography to assess flow within vascular structures.

As an initial screening modality, ultrasound is sensitive at evaluating intra-abdominal solid organ viscera and is the initial imaging modality of choice in the evaluation of Wilms' tumor, neuroblastoma, and hepatoblastoma. Pelvic neoplasms, intraperitoneal free fluid, and musculoskeletal soft tissue tumors can all be effectively evaluated by ultrasound. Newer ultrasound imaging techniques believe an outsized array of transducers, which afford high-resolution images independent of the dimensions of the patient and depth of the lesion. Extended field of view image-processing algorithms offer the capability of visualizing large masses in their entirety, along with their relationships to normal structures.

Although not in routine clinical use, three-dimensional ultrasound allows images to be displayed in multiple planes and should be useful in demonstrating relationships between solid organ malignancies and adjacent normal structures.5 the utilization of ultrasound contrast agents, although in common use experimentally, has the potential to feature to the diagnostic information obtained by conventional ultrasound but they're not yet being used routinely in clinical practice.6-8