CAR Standards for Excretory Urography

Approved: June 1994

These standards were reviewed by the Genitourinary Expert Advisory Panel: Nicholas Cochrane, MD, Montreal, Robin Gray, MD, Calgary, Brian Hardy, MD, Winnipeg, Brahm Hyams, MD, Montreal, Gordon Jones, MD, Halifax, Michel Lafortune, MD, Montreal, Patrick McManamon, MD, St-John's, Pateur Rasuli, MD, Ottawa, Al Rowley, MD, Vancouver, David Schiff, MD, Hamilton, Barry B. Hobbs, MD, London, Chair

I. DEFINITION

Excretory urography (EXU) is the radiographic examination of the abdomen obtained before and after the intravenous injection of iodinated contrast media in order to visualize the renal parenchyma, the collecting system, ureters and the urinary bladder. The information obtained of the morphology and physiology of the urinary tract may detect disease. Alternate names for this procedure include intravenous urography (IVU) and intravenous pyelography (IVP).

II. GOAL

(Using the minimum radiation to the patient). To provide sufficient functional assessment and structural detail to diagnose normal and abnormal urinary tract findings.

III. INDICATIONS

The strength of excretory urography is the depiction of the anatomy and, to some degree, the function of the upper urinary tract and that it provides a survey of the entire urinary tract (excluding the urethra). The more common indications include evaluation of haematuria, and pain probably related to the kidneys and ureters. For these and other possible indications the relative merits of, in particular, ultrasound including doppler, but also CT and nuclear medicine studies, must be considered, so that the patient receives not only the most appropriate examinations in the correct sequence but also the greatest information at the lowest risk.

IV. PHYSICIAN QUALIFICATIONS

That Physicians involved in the performance, supervision and interpretation of excretory urography should be Diagnostic Radiologists and must have a Fellowship or Certification in Diagnostic Radiology with the Royal College of Physicians and Surgeons of Canada and/or the Collège des médecins du Québec. Also acceptable are foreign Specialist qualifications if the Radiologist so qualified holds an appointment in Radiology with a Canadian University.

As new imaging modalities and interventional techniques are developed additional clinical training, under supervision and with proper documentation, should be obtained before radiologists interpret or perform such examinations or procedures independently. Such additional training must meet with pertinent provincial/regional regulations. Continuing professional development must meet with the requirements of the Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada.

V. RADIOLOGIC TECHNOLOGISTS

The Medical Radiation Technologist must have Canadian Association of Medical Radiation Technologists (CAMRT)certification or be certified by an equivalent licensing body recognized by the CAMRT.

Under the overall supervision of the radiologists, the technologist will have the responsibility for patient comfort and safety, for examination preparation and performance, and for image technical evaluation of quality and applicable quality assurance.

The training of technologists engaged in specialty activities shall meet with applicable and valid national and provincial specialty qualifications.

Continued education of technologists is encouraged by the CAMRT and should meet pertinent provincial regulations.

VI. PERFORMANCE

A. Patient Selection and Preparation

Informed consent must be obtained prior to the injection of intravenous contrast material. This should be a shared responsibility between the referring physician and the radiologist or their delegate. The ultimate responsibility rests with the physician personally responsible for performing the examination.

B. Injection of Contrast Material
Intravenous access can be obtained for injection of contrast material into peripheral veins, femoral veins, central lines, existing intravenous lines and heparin lock devices. Care and preparation of intravenous access sites is the ultimate responsibility of the health care professional who accepts responsibility for the injection of the contrast material.

C. Reporting and Communications
The findings on the excretory urogram should be reported in a timely fashion in compliance with the CAR Standard on Communication. Urgent or acute findings with known clinical sequelae should be communicated promptly to the referring physician.

VII. EQUIPMENT AND QUALITY CONTROL

Each imaging facility should have documented policies and procedures for monitoring and evaluating the effective management, safety, and operation of imaging equipment. The quality control program should be designed to minimize patient, personnel and public radiation risks and maximize the quality of the diagnostic information.

The guidelines of the Provincial Ministries for monitoring equipment performance must be followed.

There should be review of the standards for equipment and radiation safety that are currently recognized by such national organizations as the Canadian College of Physicists in Medicine and other appropriate federal and provincial regulatory bodies.

VIII. QUALITY IMPROVEMENT

Procedures should be systematically monitored and evaluated as part of the overall quality improvement program of the facility. Monitoring by period audit should include the evaluation of the accuracy of radiologic interpretations as well as the appropriateness of the examination.

Incidence of complications and adverse events should be recorded and periodically reviewed in order to identify opportunities to improve patient care. The data should be collected in a manner which complies with statutory and regulatory peer review procedures in order to protect the confidentiality of the peer review data.

REFERENCES

1. ACR Standards and Guidelines for the Ultrasound Performance of the Renal/Retroperitoneal Examinations, 1990.

2. Proceedings of the national Uroradiological conference. American college of Radiology, 1974.

3. Society of Cardiovascular and Interventional Radiology: Guidelines for Establishing Credentialing Criteria, 1988.

4. Society of Uroradiology: Committee for Standards.

5. Society of Cardiovascular and Interventional Radiology: Guidelines for Establishing Credentialing Criteria, 1988. (Excerpted from Accreditation Manual for Hospitals. JCAHO, 1989.)

6. ACR Standards for Percutaneous Nephrostomy, 1990.

7. ACR Standards for Peripheral and Visceral Arteriography, 1990.

8. Report of the Committee on Drugs and Contrast Media: Current Criteria for the Use of Water Soluble Contrast Agents for Intravenous Injections, American college of Radiology, 1990.

9. Lewis-Jones HG et al. Urinary tract infection in paediatrics: the role of diagnostic imaging. Review Article. BJR, 1989;62:977-990.

10. McNicholas MJ et al. Ultrasound of the pelvis and renal tract combined with a plain film of abdomen in young women with urinary tract infection: can it replace intravenous urography? BJR, 1990;64:221-224.

11. Gordon M. Urinary tract infection in paediatrics: the role of diagnostic imaging. A review article. BJR 1990;63:507-511.

12. ACR Manual on the Treatment of Contrast Reactions