Taichung Armed Forces General Hospital

Intravenous Pyelography Instructions

靜脈注射泌尿系統攝影檢查說明書

This instruction sheet shall be kept by patient (or patient's family)

Introduction to intravenous pyelography (IVP)

IVP uses a water-soluble contrast agent, which is injected intravenously, to visualize the renal pelvis, ureters, and bladder as the agent is metabolized and excreted by the kidneys to assess whether the urinary tract is unobstructed and detect any blockages or other abnormalities in the urinary system.

Precautions before examination

- On the day before the examination, please drink plenty of water and avoid consuming gas-producing food (such as eggs, meat, beans, and dairy products). Please follow the instructions on the information sheet to take a laxative beforehand to clear the gastrointestinal tract, in order to prevent obstruction of the stones in the kidneys and ureters during the examination. The duration of action of the laxative varies with individual differences.
- Please read the preparation instructions carefully, fill out the [Contrast Agent Injection Consent Form] clearly, and bring it on the day of the examination to the registration desk at the department for check-in.
- On the day of the examination, please wear light clothing and do not bring valuable items.
- If you are on chronic medications, such as medications for cardiac diseases, hypertension and thyroid dysfunction, you may continue to take them as scheduled (drugs for diabetes must be suspended to avoid significantly lowered blood sugar).
- If you have an allergy (such as a history of asthma, nasal allergies, or food and drug allergies)**,** please inform the radiographer or nurse in the examination room before the examination.
- If **you may be pregnant**, you must inform your doctor or the radiographer conducting the examination for you.

Examination process

- At the start of the examination, an initial abdominal X-ray must be taken to determine whether the air and residue in the gastrointestinal tract will affect the accuracy of the examination. Based on this, it will be decided whether the examination can continue.
- As the contrast agent starts to be injected, you may feel a sensation of warmth in the body, or dizziness and nausea. These reactions vary from person to person and depend on the nature of the contrast agent used, individual physical conditions, and history of allergies.
- If you experience mild discomfort, taking deep breaths may help alleviate it. For more significant discomfort, the staff will promptly provide appropriate assistance.
- If you feel any discomfort, please inform the staff immediately. The staff will always be there to provide assistance during the examination.
- During the examination, X-ray images will be taken at 5, 15 and 30 minutes after the injection of the contrast agent. The entire examination typically lasts for 30 to 40 minutes. However, the examination may require more images in additional positions or a prolonged period depending on the patient's condition.

☛ Does this examination involve any hazard?

※**Potential side effects of the contrast agent:** (Most patients need intravenous injection of a contrast agent to enhance the visibility of the lesions.)

1. A small number of individuals may experience a warm sensation, nausea, vomiting, dizziness, or sneezing when injected with an iodine-based contrast agent, and these reactions usually resolve in a short period of time. A small number of patients may experience vein swelling and pain. Please do not apply hot compresses. For any discomfort, please return to the original examination room or visit the emergency department for management.
2. Individuals with allergic tendencies may experience more severe reactions, such as generalized urticaria, chills, difficulty breathing, and other symptoms.
3. Individuals with a special constitution may experience laryngeal edema, asthma, low blood pressure, heart and lung failure, shock, and sudden death (with an incidence of approximately 1 in 100,000).
4. Before injecting the contrast agent, the healthcare professional will first establish an intravenous catheter and inject saline to check the patency of the injection vessel. However, a small number of individuals may still experience severe inflammation, ulcer, and local nerve compression reactions, requiring hospitalization, surgical intervention, or skin grafting.
5. Patients with renal insufficiency are advised to discontinue metformin for 48 hours before undergoing a contrast agent-based examination or treatment, and should have kidney function tested 48 hours after injection of the contrast agent. The test must return normal before metformin can be re-prescribed to avoid contrast-induced kidney damage. Please consult your clinician regarding whether discontinuing the medication is necessary.

※ **For all patients undergoing intravenous pyelography in this hospital, a "non-ionic contrast agent" that is less likely to cause adverse reactions is used.**

☛Alternative examinations

Please discuss alternative examinations with your clinician, such as CT scan or urinary tract ultrasound.

☛ Precautions after examination

- Drink plenty of water to help excrete the contrast agent.
- If you experience any discomfort, please inform us immediately for management.

☛ Examination instructions

1. Take the laxative after dinner on the evening before the examination (around 7–9 p.m.), and drink plenty of water.
2. If the examination is in the morning: Breakfast is prohibited (boiled water is allowed) until the examination is completed. If the examination is in the afternoon: Breakfast must be fluid, after which food is prohibited (boiled water is allowed) until the examination is completed in the afternoon.
3. Bring the examination requisition form and consent form to registration desk of the Radiology Department as scheduled to check in and wait for the examination.

Notes:

(1) A variety of laxative brands are offered in this hospital. Please take the one prescribed by your clinician.

(2) If you wish to cancel the examination, please call the registration desk of the Radiology Department promptly at 04-23934191, extension 525415, to pass the opportunity of undergoing this examination to someone who needs it.

Taichung Armed Forces General Hospital
Intravenous Pyelography (IVP) Consent Form

(Please review the examination instructions carefully and wait for the doctor to explain the examination to you before signing the consent form)

* Basic Information
Patient Name_____
Patient Date of Birth_____YYYY_____MM_____DD
Patient Medical Record No._____
Name of Attending Physician_____

I. Examination planned (provide brief explanation if not familiar with the medical terms)

1. Disease name:

2. Name of examination planned:
   Intravenous pyelography (IVP)
3. Reason for the planned examination:

II. Physician statement

1. I have explained the examination to the patient in ways as comprehensible as possible to provide the patient with the relevant information, particularly the following:

☐ Reason why the examination must be performed, method and site of the examination, and risks and success rate of the examination.
☐ Examination complications and possible management methods.
☐ I have clearly informed the patient of the potential allergic reactions to the contrast agent.
☐ Patients with any of the following conditions have an increased risk of allergy. Heart, lung, and vascular diseases (impaired cardiac function, hypertension, arteriosclerosis and emphysema). Cirrhosis, liver dysfunction. Kidney dysfunction, uremia. Asthma. Diabetes mellitus for five years or longer. History of allergies (including reactions caused by the injection of iodine-based contrast agents, and allergies to food, other medications, pollen, or other allergens). A senior age with poor physical condition (72 years or above). A young age (infants or small children of two years or younger)
☐ I have given the patient any other information available related to the treatment.

2. I have provided the patient with adequate time to ask the following questions about the examination and I have answered the questions:

(1) ----------

(2) ----------

(3) ----------

Signature of attending physician:

Date: YYYY MM DD

Time: hh mm

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III. Patient statement

1. The doctor has provided me with explanations and examination instructions, and I have understood the information related to the necessity, steps, and risks of the examination.
2. The doctor has explained to me and I have understood the possible prognosis of the examination and risks if the examination is not performed.
3. The doctor has explained to me that situations that are immediately life-threatening, if any, during the examination will be treated according to appropriate steps.
4. I understand that this examination may be the best option now.

IV. Special precautions :

Please fast for 4 to 6 hours before the examination (boiled water is allowed, and necessary medications may be taken, except for diabetes medications). Diabetic patients may consume food such as candy and chocolate.

Note: Emergency contrast agent injection information

Fasting for less than 4 hours increases the risk of suffocation due to vomiting-induced pulmonary aspiration. However, if this is an emergency, and the patient needs injection of a contrast agent for examination with less than 4 hours of fasting, the healthcare professionals have explained the situation to the patient and his/her family. The patient and family agree to receive the contrast agent injection to undergo the examination despite the insufficient fasting period that is less than 4 hours.

Based on the above statement, I hereby give my consent to this examination. **Statement by woman of childbearing potential: The doctor has clearly informed me of the risks this examination may pose to a pregnant woman and the fetus.**

Signature:_____

Consenter Signature: Relationship to patient:

Address: Telephone:

Date: YYYY MM DD Time: hh mm

Witness: Signature:

Date: YYYY MM DD Time: hh mm

Notes:

I. If the consenter is not the patient, the relationship to the patient should be indicated in the “Relationship to patient” field.

II. The fields for the witness may be left blank if no witness is available.

III. If the patient is a minor, a legal representative should sign the consent form.

Radiology Department of Taichung Armed Forces General Hospital Contrast Agent Injection Consent Form

Examinations involving the intravenous injection of a contrast agent utilize the contrast's effect on the area to be examined to enhance and improve the visibility of the organs or lesions under examination to reach a diagnosis. Conventional ionic iodine-based contrast agents may cause allergic reactions in a small number of patients (the incidence of allergic reactions is 10%). Symptoms include nausea, vomiting, skin rashes, itching, and in a few severe cases, shock or even sudden death (the reported mortality rate is approximately 1 in 100,000, according to international statistics). □ However, if you have any of the following conditions, you have a significantly increased risk of allergy.

□ 1. Heart, lung, and vascular diseases (impaired cardiac function, hypertension, arteriosclerosis and emphysema).
□ 2. Cirrhosis, liver dysfunction.
□ 3. Kidney dysfunction, uremia.
□ 4. Asthma.
□ 5. Diabetes mellitus for five years or longer.
□ 6. History of allergies (including reactions caused by the injection of iodine-based contrast agents, and allergies to food, other medications, pollen, or other allergens).
□ 7. A senior age with poor physical condition (72 years or above).
□ 8. A young age (infants or small children of two years or younger).
□ 9. Critical illness. If you have any of the above conditions, please indicate a ˇ in the corresponding □

Signature of patient or family:_____

If the patient is a minor, a legal representative should sign the consent form.

※Please read these instructions before deciding to sign the examination consent form※

Date: YYYY MM DD Time: hh mm

Name:_____

ID No.:_____

Date of birth:__YYYY____MM____DD

Radiology Department of Taichung Armed Forces General Hospital

Pre-Contrast Injection Risk Assessment Form

※ **Please read the following questions first and complete the known ones. The remaining questions will be completed by the doctor in the examination room.**

Have you ever had a history of allergies in the past? Allergy

☐ None

☐ Previous allergy to a contrast agent injected, and the type of allergy is:_____

☐ Allergy to food, drug or others, and the type is:_____

☐ Not known

Contraindication

☐ None

☐ Severe hyperthyroidism

☐ Severe de-compensated heart failure

☐ Severe hepato-renal dysfunction

☐ Oliguria or anuria

Assessment of high risk conditions

☐ None

☐ Asthma, allergy constitution

☐ Renal dysfunction

☐ Cardiovascular disease

☐ Pulmonary hypertension

☐ Cerebral disease

☐ Thyroid disease

☐ Pheochromocytoma

☐ On metformin for diabetes mellitus

Cre values in last three months:_____(mg/dL)___

Evaluation physician:_____ Date: YYYY MM DD hh mm