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Questions To Our Expert In Contrast Products

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Why did we settle for creatinine, abandoning the Cockcroft formula and express renal function in glomerular filtration rate estimated by the MDRD formula?

Creatinine is not good at estimating renal function as it depends on age and muscle mass. Historically, nephrologists encouraged us to use the Cockcroft forumula which estimates creatinine clearance. This formula should not be used because it is not very accurate and the validity criteria are no longer respected (Jaffé dosage method replaced by enzymatic methods). The four MRDR parameters estimate the glomerular filtration rate; it is easier and probably a bit more accurate. The CKI-EPI is also usable. It is preferable for estimating renal function around 90 ml / min, but identical to the MDRD for the danger zone (30-45 ml/min/1.73m2) we seek.

What recommendations are there for the delay between an injected MRI exam and an injected scanner, in what order, and why?

There is no recommendation from agencies concerning the injection of two contrast media on the same day. The potential risk is an increased renal risk, but the amount of osmoles injected MRI is much lower than the scanner. Although there is no literature available, the injection of the two is possible in the same day, and there is in my opinion no specific time limit or order.

Prevention of nephrogenic systemic fibrosis: is it not excessive, when confined to the use of the most stable products, in single doses, to use creatinine, knowing that if the disclosure is relevant the exam will not be challenged?

For products with low risk, the recommendations of the European Medicines Agency (EMA) indicate that an estimation of renal function by a biological test is generally recommended. The dosage of creatinine is therefore, unlike the high risk products, not mandatory. Indeed, if the GFR (glomerular filtration rate) is less than 30 ml / min, injection is possible, but at a single dose. This interpretation of the term 'generally recommended' may vary between centres and physicians. But effectively, if the indication is formal and the dose should be limited to 1 mmol / kg, the dosage of creatinine will not change the procedure.

At what grade of allergic reaction should you embark on further assessment (determination of histamine and tryptase, skin tests)?

The results of the CIRTACI study* that are currently being published show that the percentage of true allergic reactions (IgE-mediated) increases with the severity of the reaction, but it is still high in grades 1 (hives, angioedema). Apart from two small hive papules spontaneously resolved, we must explore all allergic reactions by blood (especially the dose of tryptase), because it is a major biological argument in the diagnosis of allergy.

Does premedication provide medicolegal protection in patients with an unclear allergy history?

All notions of 'iodine allergy' are unclear since this term does not mean anything, and patients have never been properly examined. When a patient has an unexplored history of previous hypersensitivity reaction, the radiologist may be tempted to 'premedicate' before injecting. This attitude is a false security, and can certainly not be an argument in the case of an eventual legal case. What matters is to have a crash cart ready, procedures displayed, trained personnel and have successfully managed the patient if a reaction should occur. Routine premedication by the appointment secretaries is in my opinion a bad practice. Targeted premedication of patients which is medically focused, or after exploration by the allergist, can of course be considered, but in the knowledge that it may prevent symptoms of low intensity (urticaria, etc.) and can never prevent occurrence of severe anaphylactic shock.

* CIRTACI is the committee of interdisciplinary research and work on imaging contrast agents. Practical worksheets of recommendations for the use of contrast agents have been developed by a working group comprised of radiologists and specialists. They are available on the website of the SFR (www.sfrnet.org section Working Groups Contrast Agent - CIRTACI).

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