

Safety of repeated MDCT with contrast compound in case of previous mild or moderate adverse reaction: a single centre retrospective study

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Aims and objectives

Adverse reactions to intravenous contrast media (CM) agents are uncommon, although relevant due to the growing number of radiologic examinations that use iodinated contrast agents [1].

Reaction may be patient related and risks of acute adverse reaction is usually searched before administration. Reactions are classified according to guidelines in non renal, renal and miscellaneous [2]. Most common non-renal reactions are acute allergic reactions that are usually classified in mild, moderate and severe. In order to reduce acute allergic reactions patient- risk factors are deeply screened before administration according to ESUR guideline [2] as: history of previous acute reaction to contrast media; history of asthma, and history of allergies requiring medical treatment [1,2]. For these reasons ESUR guidelines and some literature recommend premedication with steroids if the examination with CM is considered clinically necessary [3].

We evaluated number and prevalence of adverse contrast reaction using different contrast compound and its natural history in our population, specifically looking to cases of new contrast compound administration was considered clinically necessary.

Methods and materials

We retrospectively studied number of adverse contrast reaction in MDCT in our population of 43680 patients submitted to MDCT with administration of CM

73 patients, who had an adverse allergic reaction to iodinated CM, were analysed from January 2011 to May 2014; 1 patient (0,002%) had a severe allergic reaction requiring resuscitation manoeuvre and was exclude from the sample. 72 (0,164%) patients had a mild or moderate adverse reactions (Fig. 1). Symptoms referred by patients or annotated in patient flow chart are listed in Fig. 2. Different contrast compound responsible for mild or moderate reaction are listed in Fig. 3.

Images for this section:

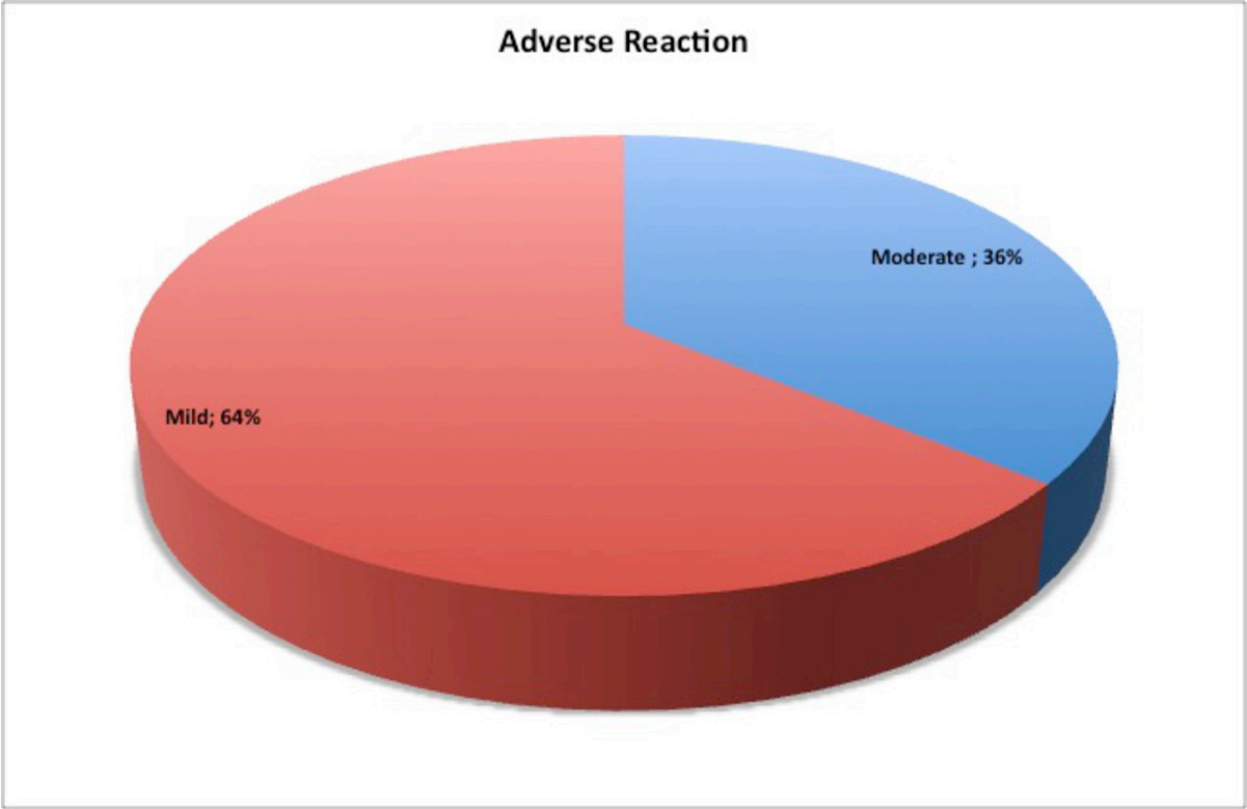


Fig. 1: number of mild or moderate reactions to iodinated CM

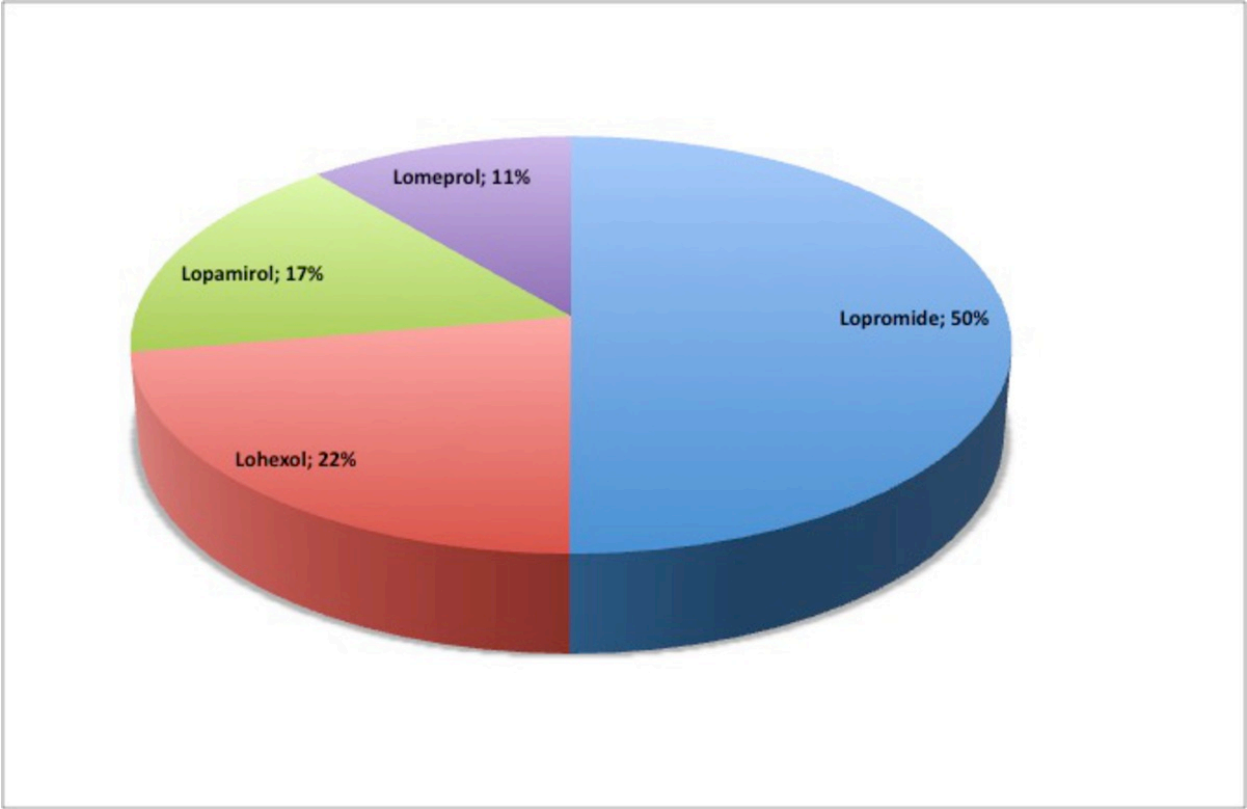


Fig. 2: Contrast media compound used in mild or moderated reaction.

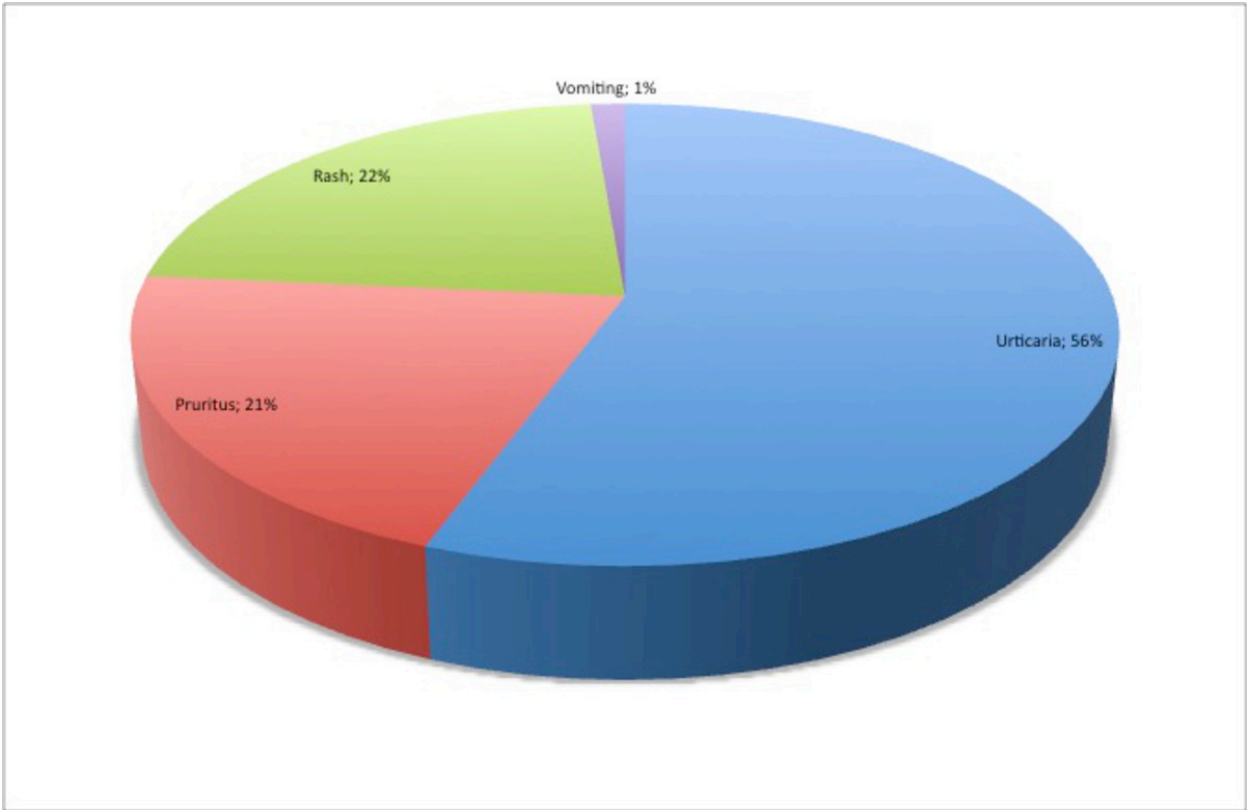


Fig. 3: Symptoms referred by patients with reaction

Results

MDCT with contrast because was considered clinically necessary and repeated after a premedication according with ESUR guidelines (prednisolone 30 mg orally given 12 and 2 hours before contrast medium), in 20 patients (27,39%) using a different contrast compounds. No allergic adverse effect was observed in this population.

Conclusion

Recommended premedication regimen and change of contrast compound may increase safety of administration and reduce allergic reactions in case of repeated MDCT with CM and history of previous mild or moderate allergic reactions.

Personal information

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