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Management Tools for Assessment of Adverse Reactions Caused by Contrast Media at the Hospital

Authors : Pranee Suecharoen, Ratchadaporn Soontornpas, Jaturat Kanpittaya

Abstract : Background: Contrast media has an important role for disease diagnosis through detection of pathologies. Contrast media can, however, cause adverse reactions after administration of its agents. Although non-ionic contrast media are commonly used, the incidence of adverse events is relatively low. The most common reactions found (10.5%) were mild and manageable and/or preventable. Pharmacists can play an important role in evaluating adverse reactions, including awareness of the specific preparation and the type of adverse reaction. As most common types of adverse reactions are idiosyncratic or pseudo-allergic reactions, common standards need to be established to prevent and control adverse reactions promptly and effectively. Objective: To measure the effect of using tools for symptom evaluation in order to reduce the severity, or prevent the occurrence, of adverse reactions from contrast media. Methods: Retrospective review descriptive research with data collected on adverse reactions assessment and Naranjo's algorithm between June 2015 and May 2016. Results: 158 patients (10.53%) had adverse reactions. Of the 1,500 participants with an adverse event evaluation, 137 (9.13%) had a mild adverse reaction, including hives, nausea, vomiting, dizziness, and headache. These types of symptoms can be treated (i.e., with antihistamines, anti-emetics) and the patient recovers completely within one day. The group with moderate adverse reactions, numbering 18 cases (1.2%), had hypertension or hypotension, and shortness of breath. Severe adverse reactions numbered 3 cases (0.2%) and included swelling of the larynx, cardiac arrest, and loss of consciousness, requiring immediate treatment. No other complications under close medical supervision were recorded (i.e., corticosteroids use, epinephrine, dopamine, atropine, or life-saving devices). Using the guideline, therapies are divided into general and specific and are performed according to the severity, risk factors and ingestion of contrast media agents. Patients who have high-risk factors were screened and treated (i.e., prophylactic premedication) for prevention of severe adverse reactions, especially those with renal failure. Thus, awareness for the need for prescreening of different risk factors is necessary for early recognition and prompt treatment. Conclusion: Studying adverse reactions can be used to develop a model for reducing the level of severity and setting a guideline for a standardized, multidisciplinary approach to adverse reactions.

Keywords : role of pharmacist, management of adverse reactions, guideline for contrast media, non-ionic contrast media
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