

Ranitidine anaphylaxis: A rare occurrence

Sir,

Anaphylactic reaction to antacid-ranitidine hydrochloride is very rare but can be life threatening. We are reporting a very rare adverse effect of intra-venous ranitidine hydrochloride. Ranitidine hydrochloride, a histamine-2 receptor (H2R) antagonist is the widely used antacid. It produces selective and reversible inhibition of H2R-mediated gastric secretions. This medication is often used intravenously in operating rooms, recovery rooms, and wards. Ranitidine has excellent safety records,^[1] although the incidence of anaphylactic reaction to H2R antagonists and proton pump inhibitors together has been reported as 0.3%–0.7%.^[2]

A 65-year-old male patient 165 cm, 74 kg, with stricture urethra was scheduled for urethroplasty. He was a known case of hypertension on tab losartan potassium-hydrochlorothiazide and amlodipine once daily since 5 years. He had a history of ischaemic heart disease and chronic obstructive pulmonary disease, was on tab glyceryltrinitrate and clopitab once daily since 2 years, he was also on tab deriphyline twice daily. Recently he was diagnosed diabetic for

which he was on tab metformin once daily. He had undergone cholecystectomy under general anaesthesia uneventfully, 15 years back.

Preoperative investigations and examinations were within normal limit. Combined spinal epidural anaesthesia was used for urethroplasty. Intraoperative course was uneventful. Postoperatively, after 90 min, in the recovery room, the patient became drowsy, unresponsive with pulse rate of 38/min, blood pressure 80/60 mmHg, and SpO₂ 86%. On auscultation bilateral ronchi were present. Immediately cardiopulmonary resuscitation was started. Inj. atropine 0.6 mg, inj. adrenaline 1 mg was given intravenously. The patient was intubated and ventilated with 100% oxygen. Inj. hydrocortisone 100 mg, inj dexamethasone 8 mg were given intravenously. The patient was put on dopamine infusion. Blood was sent for investigations. Electrocardiogram and chest radiograph were normal, ABG showed pH-7.21, PCO₂-36 mm PO₂-431 mm, HCO₃-16.5 mEq/L and saturation 100%. Electrolytes were Na 140 mEq/L, K 3.5 mEq/L, and Cl 104 mEq/L. Metabolic acidosis was corrected. The patient was stabilized and shifted to intensive care unit and kept on ventilator, extubated within 24 hours and shifted to ward.

Upon inquiry with the patient's relative about allergic history or such similar episode in the past, they revealed that similar episode was observed 15 years back after open cholecystectomy surgery. The patient's relative then offered his old reports. Those revealed reaction to ranitidine. We arrived to diagnosis of anaphylaxis to ranitidine as that was the only injection given in the recovery room by staff nurse. The patient was sent for skin test and intra-dermal test which came positive for ranitidine that confirmed the diagnosis. He was issued red card stating allergic to ranitidine and his relatives were alerted before discharge.

Ranitidine, an H2R antagonist is commonly used to treat peptic ulcer and gastro-oesophageal reflux disease. Although it is associated with low incidence of adverse reactions, severe anaphylaxis and anaphylactoid reaction to ranitidine has been reported in obstetric^[3] and with pancreatitis^[4] patients.

In the recovery room, this patient developed sudden hypotension, bradycardia, hypoxia, dyspnoea and loss of consciousness with cardiopulmonary collapse. Immediately resuscitation was done. Haemorrhage, delayed high spinal, hypoglycemia, electrolyte imbalance, hypersensitivity to peri-operative drugs,

myocardial infarction and pulmonary embolism were kept in mind. Finally, investigations and inquiry to staff nurse helped us to conclude this serious condition was due to inj. ranitidine given in the recovery room. The skin and intra-dermal tests confirmed the diagnosis. Ranitidine may induce immunoglobulin-mediated anaphylaxis but also non-immunological mechanisms may be involved in hypersensitivity reaction.

Recording in anaesthesia notes and preserving records for further reference is necessary. Educating the patients and their relatives about anaphylaxis to a drug is very important.

Documenting the allergy or sensitivity to specific drugs by use of electronic medical records can prevent such hypersensitivity to the same drug and these records become ubiquitous.^[5]

Clinicians should be aware of possible life-threatening adverse reactions and must be cautious while administering H₂R antagonist to prevent anaphylactic reaction.

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