

Case Report



Rare Case Report on Carbimazole Induced Angioedema in Patient with Hyperthyroidism

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ABSTRACT

Carbimazole is an anti-thyroid drug which is commonly used to treat hyperthyroidism. Carbimazole inhibits inorganic iodine uptake and concentration in the thyroid, as well as the production of di-iodothyrosine and thyroxine. When methimazole is converted to its active form, it blocks the thyroid peroxidase enzyme from coupling and iodinating the thyrosine residues on thyroglobulin, lowering thyroid hormone synthesis. Angioedema is an allergy to pollen, animal dander, medicines, food, venom or medications causes a non-painful swelling under the skin, gioedema was a rare side effect of carbimazole. A few case reports suggested carbimazole induced angioedema. Our study had demonstrated similar finding of a case report published in Indian journal of critical care medicine in 2019, carbimazole induced anaphylactic shock. While analyzing narijo adverse reaction probability scale to find the association between angioedema and carbimazole, it was found to be 7. The exact mechanism of carbimazole induced angioedema was not well known. This report shows the importance of clinical pharmacist in tertiary care hospital.

Keywords: Carbimazole, Angioedema, Hyperthyroidism, Anxiety.

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INTRODUCTION

Carbimazole is a medication that is used to treat hyperthyroidism¹. Carbimazole is a prodrug since it is transformed to the active form methimazole, after absorption. Several adverse effects have been observed and they usually appear within the three months of starting therapy. Agranulocytosis, hepatitis, and skin irritation are some of the side effects. A significant adverse reaction like angioedema to carbimazole is possible in rare cases. There is rare chance of presenting angioedema in hyperthyroidic patients on carbimazole^{2,3}. We present a case on angioedema after patient taking carbimazole for past 5 years with hyperthyroidism and resolved after its dose tapering.⁵

Case Presentation

A 76-year-old female with known case of vascular headache, hypertension, bronchial asthma, hyperthyroidism on carbimazole 10mg (Neomeracazole) was admitted in a tertiary care hospital with complaints of cough, headache for past 5 days and facial swelling for 1 month. During reconciliation we noticed facial swelling, thus cross checked the past medical and medication history of the patient. On reconciliation it was found that the patient was hyperthyroidic, on carbimazole for past 5

years. We recommended physician to taper the dose of carbimazole to 5mg. Physician withheld the drug for three days which decreases the facial swelling and later carbimazole dose was tapered to 5mg.

Angioedema was a rare side effect of carbimazole. A few case reports suggested carbimazole induced angioedema. Our study had demonstrated similar finding of a case report published in Indian journal of critical care medicine in 2019, carbimazole induced anaphylactic shock². While analyzing narijo adverse reaction probability scale to find the association between angioedema and carbimazole, it was found to be 7. The exact mechanism of carbimazole induced angioedema was not well known^{4,5}. This report shows the importance of clinical pharmacist in tertiary care hospital.

CONCLUSION

In conclusion, carbimazole is a relatively safe drug. Angioedema is a uncommon side effect which physician should be aware. Early detection allows for quick withdrawal of the offending substance and symptom relief.

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