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Case Report

Urticaria due to tomato

Ramji Gupta

Department of Dermatology, Indraprastha Apollo hospital, Sarita Vihar, New Delhi- 110076 India

Abstract Two patients of urticaria due to tomato are reported. They developed urticaria whenever they took tomato. Urticaria disappeared completely after they stopped taking tomato. During 6 months of follow-up without tomato in their food, there was no urticaria.

Key words
Urticaria, tomato, provocation test.

Introduction

Cause of urticaria in majority of cases remains unknown. Urinary tract infection,[1,2] inhalant allergens,[3,4] and drugs have been found responsible in some cases. Foods like meat, fish, eggs, milk, wheat, rice, pulses, nuts, potato or anything which contains sufficient amount of protein can occasionally cause urticaria.[5] Urticaria due to vegetables is not frequently reported.[6] Urticaria due to tomato is rare, though it has been reported occasionally.[7-10] Two cases of urticaria due to tomato confirmed by repeated provocation test are being reported.

Case reports

Case 1

A 35-year- old female presented with urticaria of 2 month duration. The urticaria used to occur 2-3 times every week, lasting for 2-3 hours. Her urine showed no abnormalities, hemoglobin was 11gm%, total leukocyte count was 8950/cmm with neutrophil 76%, lymphocyte 18%, eosinophil 5% and basophil 1%. Erythrocyte sedimentation rate (ESR) was 41 mm for 1st hour. Stool showed *Entamoeba histolytica*. She was given tinidazole 500 mg twice daily for 5 days and was asked to prepare diet chart. She developed urticaria for 2 hours on 11th and 15th day when she took tomato. On stopping tomato there was no urticaria during the next 2 weeks; when she was given tomato urticaria developed after 2 hours which subsided in 3 hours. Provocation test with tomato was repeated after 10 days when she again developed urticaria after 1.5 hours lasting for 3 hours. Tomato in all forms was stopped completely with no urticaria during 6 months follow-up.

Address for correspondence
Dr. Ramji Gupta
Department of Dermatology,
Indraprastha Apollo Hospital, Sarita Vihar,
New Delhi- 110076 India
E-mail: drramjigupta@yahoo.co.in

Case 2

A 27-year-old female presented with urticaria of 1 year duration which occurred daily for 15-30 minutes. There was no burning micturation; stool showed no ova or cyst with Hb 11 gm%, total leukocyte count was 9000/cmm with neutrophil 70%, lymphocyte 26%, eosinophil 3% and basophil 1% and ESR 10mm for the 1st hour. Urine was sterile. She was put on complete fast for 48 hours. There was no urticaria at the end of 48 hours. Subsequently she was given one item of food every day. She developed urticaria 2 hour after tomato was given along

with other food items. After 5 days she again developed urticaria 4 hours after taking tomato which lasted for 2 hours. Provocation test was repeated after 20 days with tomato when she again developed urticaria after 1.5 hour lasting for 1 hour. She was asked to stop tomato in the food completely in all forms. There was no urticaria during 5 months follow-up.

Discussion

Occurrence of urticaria in both patients 2-4 hour after taking tomato and complete disappearance after stoppage of tomato and no urticaria during 5-6 months follow-up when they had not taken any form of tomato points out that urticaria was due to tomato. Developments of urticaria during provocation in both patients with tomato confirmed the relationship. Getting complete diet chart and subsequent provocation with suspected agents seems to be simpler and cheaper compared to any other means to find out the cause. Henz and Zuberbier[7] while provoking chronic urticaria patients found that 71% reacted to tomato purees and 44% to stem extract of tomato. Zacharisen *et al*.[8] reported two patients with immediate hypersensitivity reaction to tomato in the form of laryngeal edema. On investigation they found that it was due to IgE binding to 943 KDa protein. Pravettoni *et al*.[10] found lipid transfer protein by immune blotting test responsible for tomato allergy. Thus provocation test still seems to be the simplest and the cheapest test to find out the causative agent.

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