**ECHOCONTRAST INDUCED ANGIOEDEMA**

**R. Samannan**1, M.A. Arif1, U. Bhatti1, E. Munzinger2, S. Mathew2

1Internal Medicine, University of Oklahoma, Oklahoma City, OK, USA

2Cardiology, University of Oklahoma, Oklahoma City, OK, USA

**Introduction:** Echocardiographic Contrast Agents (ECA) are a very useful tool in noninvasive cardiac imaging. Due to patient habitus, echocardiogram becomes technically difficult necessitating the use of contrast agents. Definity is the most commonly used ECA. ECA are generally safe with serious reactions estimated at 0.009%. Here we describe a patient who developed anaphylaxis after administration of Definity during stress echocardiogram.

**Case Description:** A 65year old Caucasian male with a history of asymptomatic atrial tachycardia, hypertension and hyperlipidemia was referred for exercise stress echocardiogram for cardiac risk stratification after developing symptoms of dyspnea on exertion. The patient had no history of drug allergies. 15 minutes after receiving Perflutren containing ECA (Definity he developed swelling of lips and wheezing concerning for anaphylaxis. The patient was emergently given Epinephrine, IV Methyl prednisone and antihistamines and transferred to ntensive care unit. His respiratory distress subsided with above measure and was discharged home the next day. His chart was updated about allergy to echo contrast and the patient was told not to receive any contrast agents in future.

**Discussion:** Anaphylaxis to ECA are secondary to a variant of the type 1 hypersensitivity reaction known as Complement Activation Related Pseudo Allergy (CARPA) reaction. CARPA reactions are not IgE mediated, no previous exposure is necessary, an allergic reaction tends to be milder or absent on repeated exposure, spontaneous resolution is the rule, and there is a higher reaction rate in atopic individuals. CARPA reactions vary from mild to severe. CARPA reactions seem more common when a large bolus of lipid shelled ECA is injected. Treatment includes epinephrine for anaphylactic shock, steroids, bronchodilators and antihistamines based on severity.

**Conclusion:** Eventhough anaphylaxis is extremely rare,It is imperative that sonographers, nurses, and physicians are all trained in the prompt recognition and treatment of these reactions.