

Introduction

- **Rheumatoid Arthritis**
 - Autoimmune disorder attacking own joints – swelling and pain ⁵
 - Cervical spine needs necessary precaution during intubation – possible subluxations, joint space narrowing, and erosions ²
- **Sjogren's syndrome**
 - Autoimmune disorder attacking glands of the body ⁶
 - Can damage lungs, kidneys, and nervous system ⁶
 - Symptoms: Dry eyes, dry mouth, dry skin, cough, numbness, fatigue, joint pain ⁶

We present the case of a 64 yo woman with a unique autoimmune history to explore the impact of autoimmune diseases on induction, maintenance, and recovery from anesthesia after extensive cardiovascular surgery.

Case Description

- 64 year old woman with an extensive autoimmune and cardiovascular past medical history of: chronic kidney disease, coronary artery disease s/p PCI, diabetic nephropathy, hypertension, hyperlipidemia, rheumatoid arthritis, NAFLD, Sjogren's syndrome, and fibromyalgia who presented with progressive dyspnea
- echo demonstrated torrential tricuspid regurgitation, severe mitral regurgitation, and moderate aortic insufficiency
- scheduled for extensive cardiovascular surgery including: CABGx2, mitral valve replacement, tricuspid valve repair, and epicardial leads placement
- induced with etomidate, midazolam, rocuronium, and fentanyl
- started on milrinone and epinephrine after central line placement
- weaned off cardiopulmonary bypass on epinephrine, vasopressin, norepinephrine, and milrinone and inhaled nitric oxide.
- extubated POD #1 with neuro intact and weaned to milrinone only
- Anesthetic induction, maintenance, and recovery were successful in this patient.

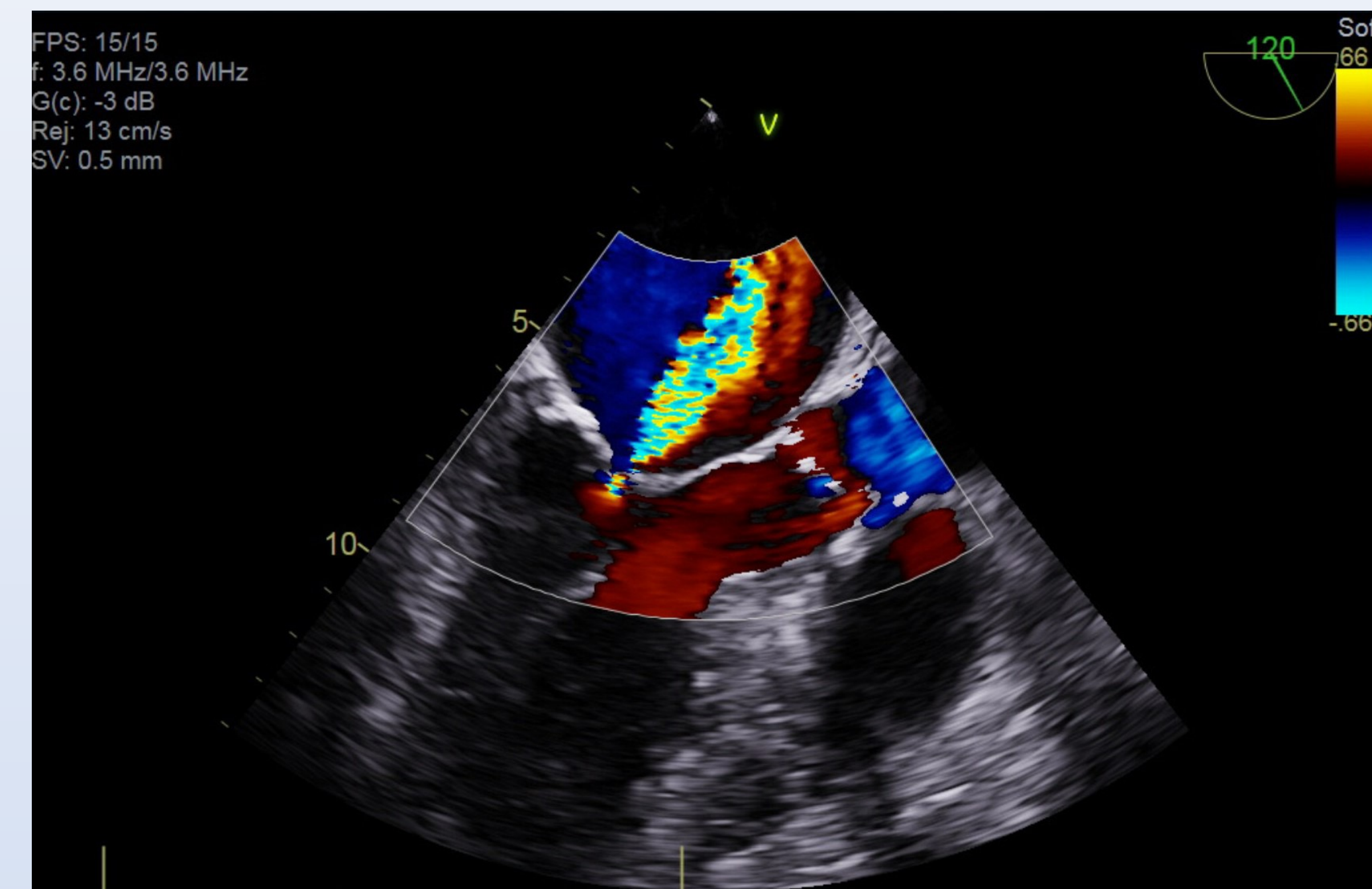


Figure 1: 2D Echo with Color Doppler of Unrepaired Mitral Regurgitation

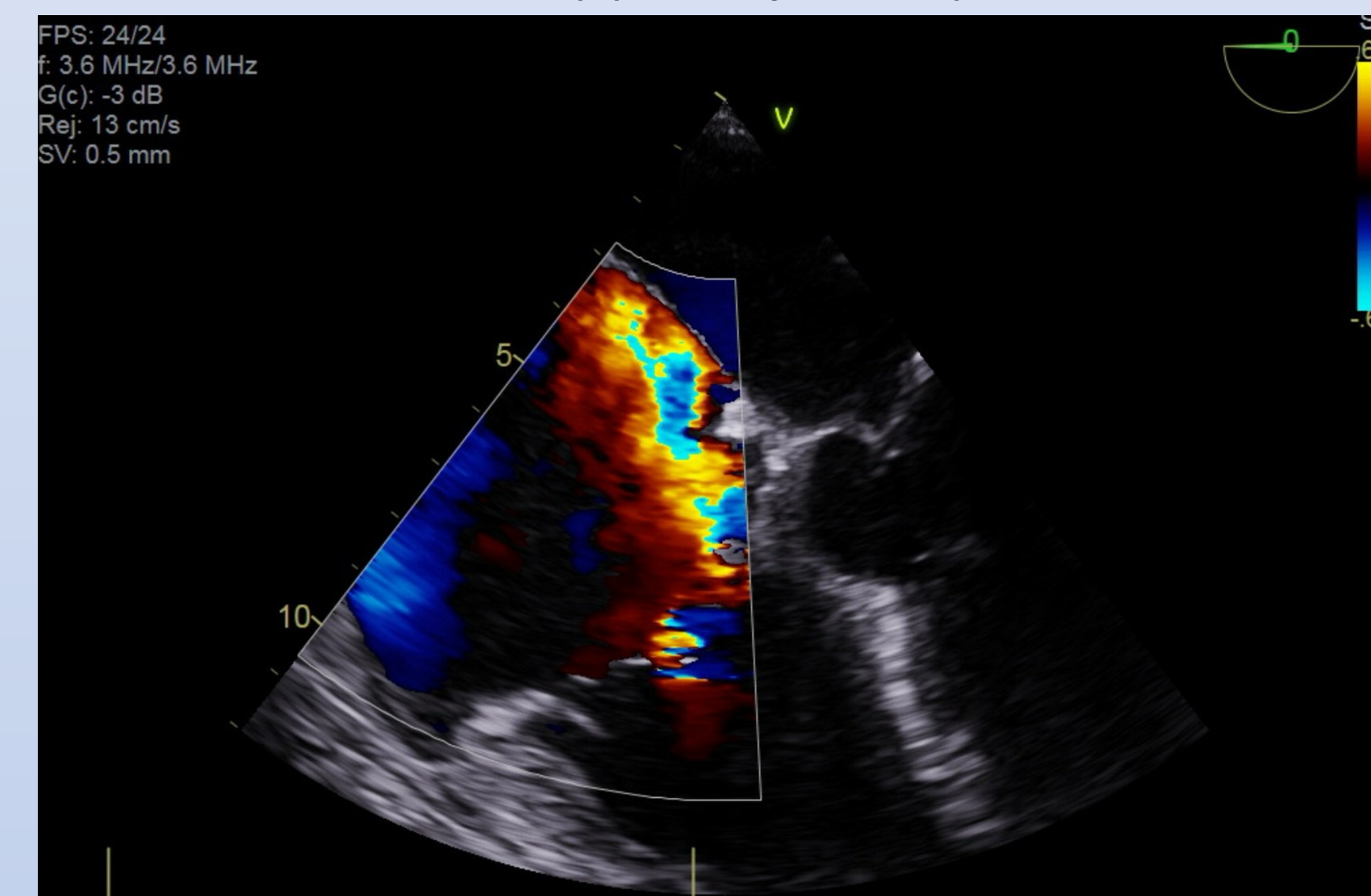


Figure 2: 2D Echo with Color Doppler of Unrepaired Tricuspid Regurgitation

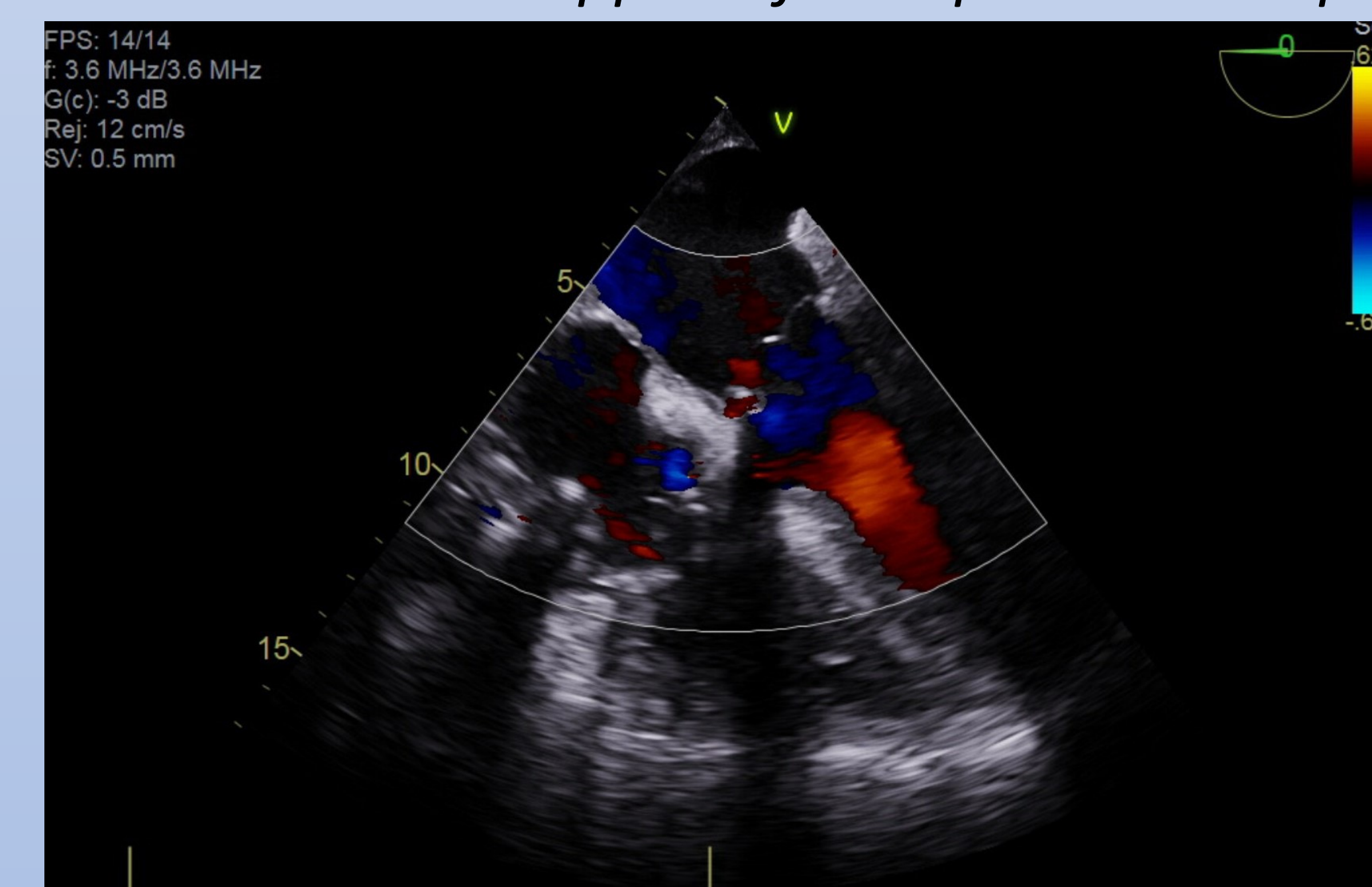


Figure 3: 2D Echo with Color Doppler of Repaired Mitral and Tricuspid Regurgitation

Discussion

Impact of Autoimmune Diseases on Anesthetic Considerations in Induction, Maintenance, and Recovery from Anesthesia

- Retrospective historical cohort study on anesthetic management in patients with Sjogren's syndrome - no statistically significant increase in thromboembolic or microcirculatory post-operative complications or in-hospital mortality ¹
- Review articles regarding perioperative and anesthetic management for patients with rheumatoid arthritis - prone to difficult airway management, cardiac complications, and respiratory and adrenal insufficiencies ^{3,4}
- Few cases have been published overall understanding how autoimmune diseases impact anesthetic requirements and management for cardiovascular surgery.
- With this report, we seek to expand knowledge to improve cardiovascular anesthetic management use in patients with autoimmune diseases.

References

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