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"A BREATHLESS JOURNEY: REVEALING SEVERE RHEUMATIC HEART DISEASE THROUGH POINT OF CARE ULTRASOUND"

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INTRODUCTION

Rheumatic heart disease (RHD) remains a leading cause of valvular heart disease, especially in regions with limited healthcare resources. Mitral stenosis, a hallmark of RHD, often leads to progressive heart failure. Timely diagnosis and intervention are essential to prevent complications and improve patient outcomes. Point-of-care ultrasound (POCUS) is an important tool for rapid, bedside diagnosis in emergency settings.

CASE DESCRIPTION

A 38-year-old female with no significant past medical history presented to the Emergency and Trauma department with a one-month history of progressive dyspnea and abdominal distension. Upon examination, she was found to be tachypneic, with diminished breath sounds over the right lung and generalized edema. Chest radiography revealed a right-sided pleural effusion. Bedside echocardiography demonstrated severe mitral stenosis, moderate mitral regurgitation, and severe tricuspid regurgitation. Additionally, POCUS confirmed the presence of right pleural effusions, as well as peritoneal free fluid. Laboratory investigations were significant for an elevated Anti-Streptolysin O titre (ASOT), indicating a recent streptococcal infection, and positive antinuclear antibody (ANA), suggestive of autoimmune involvement. The patient was diagnosed with decompensated heart failure secondary to severe valvular heart disease, likely due to underlying RHD. She was initiated on intravenous diuretics, lifelong oral Penicillin and a tapering regimen of antiplatelet therapy. The patient was subsequently referred for surgical valvular repair.

DISCUSSION

This case emphasizes the importance of considering rheumatic heart disease (RHD) in young adults presenting with unexplained heart failure. The patient exhibited signs of right-sided heart failure secondary to severe mitral stenosis and tricuspid regurgitation. Point-of-care ultrasound (POCUS) was instrumental in rapidly diagnosing valvular lesions, enabling timely initiation of treatment. POCUS provided immediate bedside assessment, aiding both diagnosis and clinical decision-making. Early identification of RHD facilitates appropriate medical therapy and timely referral for surgical intervention, potentially preventing irreversible cardiac damage and improving outcomes, particularly in resource-limited settings where access to formal echocardiography may be delayed.

CONCLUSION

Timely identification of valvular pathology in acute settings is essential for guiding effective management. This case highlights the role of POCUS in rapidly establishing the diagnosis, enabling early intervention and improved prognosis in young patients with rheumatic heart disease.

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KEYWORDS

rheumatic heart disease, POCUS