



Case Report on Ebstein Anomaly

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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Case Study

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ABSTRACT

Introduction: Ebstein anomaly, also known as Ebstein malformation, is a congenital (existing at birth) heart defect that affects a small percentage of people. The tricuspid valve (the valve that connects the chambers on the right side of the heart) does not close properly in people with Ebstein abnormality [1].

Patient History: A 25-years female patient was admitted in Acharya Vinoba Bhave Rural Hospital in medicine ward. She was admitted with the complaint of breathlessness on exertion, and weakness since 2 months. patient is a known case of severe ASD since birth. After coming to the ward all investigations done like blood test, ECG, 2D Echo, chest x-ray etc. then final diagnosis is conformed as severe ASD with Ebstein anomaly.

Past History: Patient is a known case of ASD. And not having any other history of communicable disease, asthma, tuberculosis.

Management: Tablet- Lasilactone (20/60)) A diuretic, Tablet- Neurobion Fort, Tablet- Pan 40mg a antacid are prescribed the doctor .

Nursing Management: vital sign checked and documented, comfortable position given as patient having breathing difficulty. Fowlers position given. intake and output of patient recorded. Assessed the patient for anxiety, depression.

Conclusion: Patient was admitted to the hospital with the major complaints of trouble breathing and generalised weakness, and her situation was critical. Immediate treatment was initiated by a member of the health team, and all available treatments were administered, and the patient's condition has improved.

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1. INTRODUCTION

Ebstein anomaly is an uncommon birth abnormality that affects the heart (congenital). The flaps (leaflets) of your tricuspid valve are deformed and in the wrong place with this disorder. As a result, the valve is dysfunctional [2].

Blood may flow back through the valve, reducing the efficiency of your heart's work. The Ebstein abnormality can potentially cause cardiac hypertrophy and heart failure [2].

1.1 Incidence

Ebstein abnormality is thought to account for 0.5 percent of congenital heart disease cases. Because mild versions are commonly untreated, the true prevalence is unknown. More cases are being diagnosed as a result of the widespread use of echocardiography [3].

1.2 Objective

To explore knowledge regarding nursing management, pharmacology, and medical management.

2. PATIENT INFORMATION

2.1 Patient Present History

The 25-year female patient was admitted in AVBRH in Medicine Ward and having chief complaints of breathlessness, chest pain, and weakness since 2 months. afterwards all the possible investigation like blood test, **ECG, 2D ECHO**, X-ray etc done. And final diagnosis is confirmed as Ebstein Anomaly

2.2 Past History

Patient is a known case of ASD Since birth and not having any other history of communicable disease, asthma, tuberculosis etc.

2.3 Causes

The exact cause is unknown.

The tricuspid valve lies lower than normal in the right ventricle in Ebstein abnormality. As a result, a portion of the right ventricle is becoming part of the right atrium, causing the right atrium to expand and malfunction [4].

The leaflets of the tricuspid valve are also improperly shaped. Blood can seep backward into the right atrium as a result of this (tricuspid valve regurgitation) [5].

The valve's placement and how well it's created differ from person to person. Some people have a valve that is slightly odd. Others have a significantly leaking valve [6].

3. CLINICAL FINDING

patient unable to perform daily living activities because of weakness, and feeling breathlessness on exertion. And mild chest pain during heavy work.

3.1 Diagnosis Evaluation

1. History collection- Done.
2. Physical examination- Done,
3. Others: ECG, CBC, 2D ECHO, chest x-ray done.

Table 1. Blood Investigation Report

Investigation	Patient Value	Normal Value	Justification
Complete blood count			
1. HB%	11.7%	13-15.5%	Decreased
2. MCV	83.9cub.micron	80-90cub.micron	Normal
3. MCH	28.8 Pico gm.	26.5-33.5 Pico gm.	Normal
4. Total RBC Count	4.05 million/cu.mm	4.4-6.1 million/cu.mm	Normal
5. Total WBC Count	10400 cu.mm	4000-11000 cu.mm	Normal
6. Total plateletcount	2.07 lacs/cu.mm	1.4-4 lacs/cu.mm	Normal
7. Monocytes	03 %	4-10%	Normal
ESR	98		Normal

RTPCR- NEGATIVE
2D-ECO – severe Ebstein seen

3.2 Medical Management

Now patient treatment in the ward is Tablet-Lasilactone a diuretic 20/50mg , Tablet- Pan 40mg an antacid and Tab. Neurobian fort.

3.3 Nutritional Therapy

patient have to take high protein , calcium supplement like dairy products and leafy vegetables, and need to add phosphorus like nuts, meats, beans and milk in the diet. Another important nutrient is iron because irons helps the body use oxygen and grow properly. Vitamin B complex to be taken for more energy which is found in whole grains, fresh vegetables [6,7].

3.4 Surgical Management

Surgical repair of Ebstein anomaly improves functional class and exercise tolerance, eliminates right-to-left intracardiac shunting (if present), and reduces the incidence of supraventricular tachyarrhythmias [8].

- The vast majority of patients can undergo a biventricular repair.
- The application of the bidirectional cavopulmonary anastomosis is reserved for patients with poor right ventricular function.

3.5 Nursing Management

The nurse is in charge of prescribing the medication and assessing their positive and detrimental effects on the patients. The pharmacologic therapy type and dosage is determined by the combination of these effects. Actions to assess clinical effectiveness in nursing include:

Observe patient for breathing difficulty and weakness.

Keep intake and output records to determine negative equilibrium.

4. DISCUSSION

The cardiac abnormalities, such as pulmonary valve stenosis or atresia, atrial septal defect, or ventricular septal defect, might cause Ebstein anomaly [10]. Furthermore, many patients with Ebstein anomaly have an auxiliary (additional) electrical conduction route in the heart, which can contribute to supraventricular tachycardia (abnormally high heart rate) [9]. A study

conducted in 1971 reported that at 13 years of age only 50 percent of clients survived. As well as, the patients with milder forms have a more typical life expectancy [9].

5. STRENGTH

Patient was 25year female tolerate all the medication and well response around 15 days to the therapeutic treatment of the hospital which was given as a treatment.

6. CONCLUSION

The tricuspid valve flaps are improperly formed in Ebstein's anomaly, excessively big, or attached to the heart wall, preventing them from moving [11]. Two of the valve flaps are frequently seen down in the ventricle, where they don't belong. The valve unable open and close properly as a result of these anomalies, and blood might go backwards into the atrium [12]. All Ebstein sufferers must be followed by congenital heart specialists for the rest of their lives. Many Ebstein patients will require rhythm treatment, which may include ablation treatments. Such rhythm abnormalities frequently return, and new rhythm disorders may arise, necessitating continued monitoring [13].

CONSENT

Before taking this case, information was given to the patients and relatives and informed consent was obtained from patient as well as relative.

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Ebstein's Anomaly for Adults: Symptoms & Treatments [Internet]. Cleveland Clinic. [cited 2021 Oct 15]. Available: <https://my.clevelandclinic.org/health/diseases/16946-ebsteins-anomaly-for-adults>
2. Ebstein anomaly: Medline Plus Medical Encyclopedia [Internet]. [cited 2021 Oct 15].

- Available:<https://medlineplus.gov/ency/article/007321.htm>
3. Ebstein's Anomaly | Circulation [Internet]. [cited 2021 Oct 15]. Available:<https://www.ahajournals.org/doi/10.1161/CIRCULATIONAHA.106.619338>
 4. Ebstein Anomaly: Practice Essentials, Background, Pathophysiology. 2021 Jul 22 [cited 2021 Oct 15]; Available:<https://emedicine.medscape.com/article/154447-overview>
 5. Kasatwar A, Bhola N, Borle RKR, Prasad GSV. Incidence of Congenital Cardiac Anomalies in Patients with Cleft Lip and Palate- Its Implications in Surgical Management. Journal of Oral Biology and Craniofacial Research. 2017;8.
 6. Ebstein anomaly | Beacon Health System [Internet]. [cited 2021 Oct 18]. Available:https://www.beaconhealthsystem.org/library/diseases-and-conditions/ebstein-anomaly?content_id=CON-20166496
 7. Ebstein's Anomaly Causes | Stanford Health Care [Internet]. [cited 2021 Oct 18]. Available:<https://stanfordhealthcare.org/medical-conditions/blood-heart-circulation/ebsteins-anomaly/causes.html>
 8. Stulak JM, Dearani JA, Danielson GK. Surgical management of Ebstein's anomaly. Semin Thorac Cardiovasc Surg Pediatr Card Surg Annu. 2007;105-11.
 9. AHA/ACC Guideline for the Management of Adults With Congenital Heart Disease: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines | Circulation [Internet]; 2018. [cited 2021 Oct 18].
 10. Enginoeva LA, Gaidarov IS, Mirzebalaeva DR, Timokhina T, Georgievna FA. and Sokolova AA. "Cardiosurgical Care in Case of Congenital Heart Defects: Modern Approaches and Features of the State of Patients' Health". Journal of Pharmaceutical Research International. 2021;33(33A):218-224. DOI: 10.9734/jpri/2021/v33i33A31790.
 11. Ebstein Anomaly (for Parents) - Nemours Kidshealth [Internet]. [cited 2021 Oct 18]. Available:<https://kidshealth.org/en/parents/ebstein-anomaly.html>
 12. Anatomy and Function of the Heart Valves - Health Encyclopedia - University of Rochester Medical Center [Internet]. [cited 2021 Oct 18]. Available:<https://www.urmc.rochester.edu/encyclopedia/content.aspx?ContentTypeID=90&ContentID=P03059>
 13. Ebstein's Anomaly: A Rare Disease Treated with World-class Care Here at Home [Internet]. Newsroom. 2021 [cited 2021 Oct 18]. Available:<https://news.unchealthcare.org/2021/10/ebsteins-anomaly-a-rare-disease-treated-with-world-class-care-here-at-home/>

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