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A Case Report on Management of Artial Fibrillation

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Abstract :

Background: Atrial fibrillation (AF) is the most prevalent sustained arrhythmia, affecting up to 1% of the world's population. The great majority of people with AF have concomitant structural heart disease and comorbidities such hypertension and diabetes mellitus. One out of every ten patients with AF has no significant comorbidities, which is known as "lone AF." Surprisingly, there is a link between high-intensity endurance training and AF. **Patient specific information:** The patient is a 65-year-old woman admitted in AVBRH with the chief complaints of dyspnoea and palpitations, chest pain, dizziness. She was diagnosed as a atrial fibrillation (AF) but no structural cardiac problems. **Main symptoms & important clinical findings:** The present case was seen at the AVBRH on 22/07/2021, with palpitations and moderate shortness of breath, chest pain, dizziness as the primary symptom. All of the patient's medical, family, and psychological histories were collected There was no familial history of atrial fibrillation. There was no history identified in the patient's family, and all of the members are healthy and in good physical shape. All of the members are employed, and most occupations are accessible. There are vacancies in the occupation. The patient's family owns a farm on which they work as farmers. **Medical management:** - The patient was treated with multivitamins, alpha and beta blockers, antipyretics, angiotensin receptor blockers, antibiotics, and vitamin c **Nursing perspective:** administered fluid replacement DNS, RL. administered anticoagulant as per doctor's order checked vitals sign & ECG done.

Conclusion :-. A 65 year old client admitted in AVBR hospital. After that The patient's condition was improved after that early treatment and proper diagnosis. administration of all available therapies was done.
Keywords :- Sports cardiology, Vagal atrial fibrillation, Athlete, Atrial fibrillation , Pulmonary vein isolation , Sports cardiology , Vagal atrial fibrillation .

Introduction :-

Atrial fibrillation (A-fib) is a type of arrhythmia that causes an irregular heart rhythm. It can disrupt the body's regular blood flow, increasing the risk of blood clots and stroke.[1]

The most frequent type of heart arrhythmia is atrial fibrillation. It's caused by aberrant electrical activity in the heart's atria, which causes them to fibrillate. It's known as a tachyarrhythmia, which implies the heart rate is frequently fast. This arrhythmia can be either paroxysmal (lasting fewer than 7 days) or chronic (lasting more than 7 days) (more than 7 days). A pre-existing cardiac condition that can lead to atrial fibrillation (AF), congestive heart failure, thrombosis, and, in rare situations, fatality. [2]

The most frequent clinical arrhythmia in the world is a-fib. According to estimates, it affects up to 3% of the Western population over the age of 20. A-fib is most common in older adults, although it can also occur in children.[3]

It is estimated that 12.1 million people in the united states will have atrial fibrillation in 2030.because the number of atrial fibrillation cases increase with age and women generally live longer than men, more women than men experience atrial fibrillation & account for about 1 in 5 cases of atrial fibrillation .it is more likely to occur in people with other condition such as high blood pressure , hypertension , atherosclerosis or a heart valve problem . Atrial fibrillation can be caused by any process that causes inflammation, stress, damage, or ischemia to the structure and electrical system of the heart. it is a common early postoperative complication of cardiac and thoracic surgery .

Afib without a heart condition Approximately 30% to 45 percent of occurrences of paroxysmal AF and 20% to 25% of cases of persistent AF occur in young patients who have no evidence of underlying illness. Although an underlying condition that may be causing the atrial fibrillation may surface over time, this is considered lone AF.[4]

Patient specific information The patient is a 65-year-old woman. -year-old admitted in AVBRH with the chief complaints of dyspnoea and palpitations, chest pain, dizziness. she was diagnosed as a atrial fibrillation (AF) but no structural cardiac problems. **Primary concern and symptoms of the patient:** The present case was seen at the AVBRH on June 22/07/2021 with palpitations and moderate shortness of breath as the primary symptom. All of the patient's medical, family, and psychological histories were collected There was no familial history of atrial fibrillation. There was no history identified in the patient's family, and all of the members are healthy and in good physical shape. All of the members are employed, and most occupations are accessible. There are vacancies in the occupation. The patient's family owns a farm on which they work as farmers.

Medical, family and psychological history:

There is no previous medical history in this instance. she is a member of a nuclear family. Except for the sufferer, everyone in the family is in good health. Patient appears tired, sad, and frightened. She mentally stable, conscious, well oriented to date , time & place .she had good relationships with both the doctor and the nurses, as well as the patients.

Relevant past intervention with outcome : - there is no any past history, Like TB, Asthma , Hypertension etc. after that hospitalize & the patient condition was improved .

Clinical finding :-

Important clinical findings and a substantial physical examination (PE).

There are no high-risk signs or symptoms identified during a physical examination. However, if you have a main problem, such as palpitations or slight shortness of breath, you should seek medical attention. These signs and symptoms are frequently found in patients. The patient was given an ECG at the time, and after being diagnosed with Atrial Fibrillation, he was freely chosen as a cardiology candidate, gladly submitting his was made, and excision under general anaesthetic was scheduled for a later date.[5]

State of health: unhealthy
State of consciousness: conscious
Body built: thin
Breath order: Present
Hygiene: Good

General Parameter:

Height: 157 cm
Weight: 51 kg

Vital parameter:

Blood pressure: 110/70 mmhg
Temperature: Afebrile 98.8^{o} F
Pulse: 152 beats/min.
Respiration: 24 breath/ min.

Systemic examination:

Respiratory system: bilateral increase breath sounds
Cardiovascular system: S1 and S2 heard, present murmur
Central nervous system: conscious and oriented, no focal neurological deficit

Abdominal examination:

soft and non -tender, no organomegaly

Clinical findings: Since 2 years, I've had palpitations, shortness of breath, tiredness, cough, nausea, breathlessness, weakness, and severe pain, as well as a fever, cough, nausea, breathlessness, weakness, and severe pain. He then proceeded to AVBR Hospital. When her son discovered fever, cough, nausea, breathlessness, and weakness, which was abrupt in onset and non-progressive in nature, since 2 days' breathlessness had been present.

Timeline:- The patient had been complaining of palpitations and slight shortness of breath. after that client was admitted in AVBRH their condition was improved. Early diagnosis & proper treatment is given.

Diagnostic Assessment:- The patient was not visibly disturbed throughout the examination, but her pulse was abnormally erratic, with an average rate of 152 beats per minute. Blood pressure was 110/70 mm Hg, respiratory rate was 24 minutes per minute, and SpO2 was 99 percent on room air. The venous pressure in the jugular vein was not increased. Her calves were soft and no tender, and there was no peripheral oedema. Auscultation of her chest revealed that it was clear. In this investigation like Complete blood count, CT scan, MRI, EKG , various types of ambulatory rhythm monitoring .

Because the ventricle is responding with very little obstruction to excessive atrial activity, the heart rate of fresh onset or untreated atrial fibrillation is often rapid on physical examination. Tachycardia is the most common symptom, with rates as high as 130 beats per minute. When taking a pulse, however, atrial fibrillation is frequently identified. It is critical to assess the efficiency of cardiac activity as soon as possible.

Diagnostic evaluation: On the basis of patient history, physical examination, ECG , chest x-ray , transesophageal echocardiography ,was done. Complete blood count , random blood sugar , ECG , urine test this all investigation done .

Therapeutic intervention: -

The patient was treated with multivitamins, alpha and beta blockers, anticoagulant such as warfarin , antipyretics, angiotensin receptor blockers, antibiotics, and vitamin c, calcium channel blockers etc .

These medications can help to regulate a person's heart rate and avoid blood clots. If any complication occurs some recommended procedure includes: electrical cardioversion ,catheter ablation , surgical ablation , pacemaker placement .

In atrial fibrillation are number of complication & life threatening health issues such as :-

Blood clots, stroke , heart failure , cognitive problems .

The goal of treatment will be to restore normal heart rhythm and avoid complications. The doctors prescribed medication to regulate the heart activity or they were recommend the surgical procedure .

Nursing Perspectives :-

- Cardiac Monitoring & ECG
- Administer drugs as prescribed by doctors' order
- Administer anticoagulant
- Measure all vital signs & oxygenation .
- Follow up with clinician as scheduled .

Preventive management are the patient managing their diet, avoid harmful substance , managing stress , exercise .

Follow-up and Outcomes :- Breathlessness, chest discomfort, and cough palpitation were among the patient's symptoms.

Discussion :-

The most frequent chemicals used to enhance X-ray-based imaging techniques are iodine contrast media. Excess exogenous free iodine in the blood is caused by their consumption., which can lead to thyrotoxicosis in those who already have thyroid problems.[6]

Thyroid hormones operate in a variety of tissues, including vascular smooth muscle and the heart, via various methods. Enhanced thyroid hormone levels result in increased contractile activity of the myocardium, which is mediated by increased production of both myosin heavy chains and calcium ATPase This hyper contractile condition has the potential to cause cardiac rhythm problems. The most prevalent of these cardiac abnormalities is sinus tachycardia, although AF is also fairly common, occurring in 10% to 15% of individuals. [7]

Although it is impossible to rule out the possibility that intravenous amiodarone treatment given. The unique outcome reported in our patient during paroxysmal AF episodes that led to thyroid dysfunction shows that a cascade of events occurred, resulting in the clinical scenario below.

Subclinical thyroid dysfunction was observed on a long-term basis. Exogenous iodine treatment started a hyperthyroid phase, which led to AF, which was aided by the preceding heart anatomical problems. [8]

According to a recent study, approximately one in every 35 New Zealanders aged 35 to 74 has been diagnosed with AF, amounting to more than 60,000 people. And it's likely that many more don't even realise they have it.

As we get older, AF becomes more common, with more than 8% of Kiwis over the age of 85 suffering from it. Mori people are affected more frequently and are diagnosed at a younger age than non-Mori people.[9] Studies related to various aspects of this study were reviewed [10-16].

Conclusion:

This 65year old client was admitted in AVBR hospital. The patient's condition was improved after early treatment and proper diagnosis. Administration of all available therapies was done.

References :

1. Vasko T. Insights into Readmission Rates of Atrial Fibrillation Patients Referred to Bridge.
2. Greenberg JW, Lancaster TS, Schuessler RB, Melby SJ. Postoperative atrial fibrillation following cardiac surgery: a persistent complication. European Journal of Cardio-Thoracic Surgery. 2017 Oct 1;52(4):665-72.
3. Vos T, Abajobir AA, Abate KH, Abbafati C, Abbas KM, Abd-Allah F, Abdulkader RS, Abdulle AM, Abebo TA, Abera SF, Aboyans V. Global, regional, and national incidence, prevalence, and years lived with disability for 328 diseases and injuries for 195 countries, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016. The Lancet. 2017 Sep 16;390(10100):1211-59.
4. Fuster V, Rydén LE, Cannom DS, Crijns HJ, Curtis AB, Ellenbogen KA, Halperin JL, Le Heuzey JY, Kay GN, Lowe JE. Acc/aha/esc 2006 Guidelines for the management of patients with atrial fibrillation–executive summary: A report of the American College Of Cardiology/American Heart Association Task Force On Practice Guidelines And The European Society Of Cardiology Committee For Practice Guidelines Developed In Collaboration With The European Heart Rhythm Association And The Heart Rhythm Society. European Heart Journal. 2006 Aug 1;27(16):1979-2030.
5. Hinton RB, Prakash A, Romp RL, Krueger DA, Knilans TK. Cardiovascular manifestations of tuberous sclerosis complex and summary of the revised diagnostic criteria and surveillance and management recommendations from the International Tuberous Sclerosis Consensus Group. Journal of the American Heart Association. 2014 Nov 25;3(6):e001493.
6. Speck U. X-ray contrast media: overview, use and pharmaceutical aspects. Springer Nature; 2018.
7. Morgan HE, Baker KM. Cardiac hypertrophy. Mechanical, neural, and endocrine dependence. Circulation. 1991 Jan;83(1):13-25.
8. Camm AJ, Kirchhoff P, Lip GY, Schotten U, Savelieva I, Ernst S, Van Gelder IC, Al-Attar N. Guidelines for the management of atrial fibrillation: the Task Force for the Management of Atrial Fibrillation of the European Society of Cardiology (ESC). European heart journal. 2010 Oct 1;31(19):2369-429.

9. Perilla JL, Norris FH, Lavizzo EA. Ethnicity, culture, and disaster response: Identifying and explaining ethnic differences in PTSD six months after Hurricane Andrew. Journal of social and clinical psychology. 2002 Mar 1;21(1):20-45.
10. Sathe, S., Thodge, K., Rajandekar, T., Agrawal, A., 2020d. To find out immediate effect of bhramari pranayama on blood pressure, heart rate and oxygen saturation in hypertensive patients. International Journal of Current Research and Review 12, 193–197. https://doi.org/10.31782/IJCRR.2020.121919
11. Shekhawat, H., Shrivastava, D., Dhurve, K., Shelke, U., Deo, A., 2020. Effect of epidural labor analgesia on fetal heart rate and neonatal outcome. Journal of Datta Meghe Institute of Medical Sciences University 15, 382–386. https://doi.org/10.4103/jdmimsu.jdmimsu_194_20
12. Thakare, P., Ankar, R., Wavare, S., Patil, M., 2020. Ischemic heart disease: Case report. Indian Journal of Forensic Medicine and Toxicology 14, 6618–6622. https://doi.org/10.37506/ijfmt.v14i4.12649
13. Chiwhane, A., Burchundi, S., Manakshe, G., Kulkarni, H., 2020b. Incremental prognostic value of anemia in acute coronary syndrome from a rural hospital in India. Global Heart 15. https://doi.org/10.5334/GH.527
14. James, S.L., Castle, C.D., Dingels, Z.V., 2020b. Global injury morbidity and mortality from 1990 to 2017: Results from the global burden of disease study 2017. Injury Prevention 26, I96–I114. https://doi.org/10.1136/injuryprev-2019-043494
15. Khandekar, A., Acharya, S., Shukla, S., 2020a. Aptitude, awareness, and knowledge of cardiac rehabilitation in patients of acute coronary syndrome after treatment. Journal of Datta Meghe Institute of Medical Sciences University 15, 533–538. https://doi.org/10.4103/jdmimsu.jdmimsu_119_19
16. Schwartz, G.G., Steg, P.G., Szarek, M., Bhatt, D.L., Bittner, V.A., Investigators, 2018. Alirocumab and cardiovascular outcomes after acute coronary syndrome. New England Journal of Medicine 379, 2097–2107. https://doi.org/10.1056/NEJMoa1801174