ORIGINAL RESEARCH PAPER
Volume - 9 | Issue - 11 | November - 2020 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

A CASE OF PUO

Medicine

Dr. Mohan Varughese* Associate Professor & Consultant ; Dept. of medicine , Believers Church Medical College ,Thiruvalla , India. *Corresponding Author

Dr. Blessy Rachal Boban Clinical Pharmacist , Believers Church Medical College ,Thiruvalla , India.

ABSTRACT

Streptococcus mitis is prevalent in the normal flora of the oropharynx, gastrointestinal tract, and skin .Here we discussed a rare clinical presentation of streptococcus mitis in infective endocarditis.

KEYWORDS

INTRODUCTION

Infective endocarditis (IE) is a rare disease that can cause inflammation of the cardiac endocardium and may affect the cardiac valves, mural endocardium, or surface of catheters or devices implanted in the heart (1).

IE is mainly caused by organisms including streptococci, enterococci, staphylococci, and the HACEK organisms (*Hemophilus parainfluenzae, Hemophilus aphrophilus, Actinobacillus [Hemophilus] actinomycetemcomitans, Cardiobacterium hominis, Eikenella* species, and *Kingella* species) (2,3) . incidence of IE in United states is 15 per 1 lakh population. Staphylococcus is the most common organism in 40 % of the cases (4). The incidence of IE in indian population was 14.5 cases per 100000 patient years, which is very high compared to the western incidence of 1.7-6.2 cases per 100000 patient years (5) . Streptococcus mitis is a streptococcus viridans and a normal commensal of oropharynx of humans. It can cause different infectious complications including infective endocarditis, septicaemia and bacteremia **(6).**

Generally endocarditis refers to inflammation on the valve leaflets. The endocardial lining of the atrium and ventricles is also likely involved, following surgery. The process tends to begin on the lines of closure, where the pressure is greatest at the ventricular surface of the semilunar valves and atrial surfaces of the atrioventricular valves (7).

LITERATURE REVIEW

1. Sordelli C et al (Infective endocarditis: Echocardiographic imaging and new imaging modalities**)** - Valvular vegetation appears as an abnormal, echogenic mass, attached to the valve leaflet with an independent motion.[1] Aortic valve vegetations generally appear as an echogenic mass attached to the ventricular side of the leaflet with independent motion and prolapsed into the outflow tract in diastole . Mitral valve vegetations are typically attached to the atrial side of the leaflets with a rapid independent motion and prolapsed into the left atrium in systole . (8)

2. Catto BA et al (Streptococcus mitis: A Cause of Serious Infection in Adults**.)** Twenty strains of *Streptococcus mitis* were isolated from blood or body fluids at the Cleveland Veterans Administration Medical Center. Fifteen (75%) isolates were considered contaminants. Five (25%) were clinically important and associated with a serious infection of the oropharynx or gastrointestinal tract (three of five), endovascular system (one of five), or a prosthetic hip. Four of five patients required surgical intervention for treatment. Two of five died; one death was directly attributable to *S mitis* infection.(9)

3. Starkebaum, M et al. ("The "incubation period" of subacute bacterial endocarditis **)** In 76 cases of streptococcal endocarditis for which the information was given, the median "incubation period" was one week. Symptoms began within two weeks in 64 of these cases (84%). Although there may be a bias toward reporting short incubation periods, it is concluded that the incubation period of subacute bacterial endocarditis is often shorter than is generally realized, and that procedures carried out more than two weeks before onset of symptoms are less likely to be causally related. In postcardiotomy cases, where timing of the bacteremia causing endocarditis is less easy to define, 27% of 122 cases of staphylococcal endocarditis developed within two weeks of surgery.(10)

CASE REPORT

A 48 year old female patient working in a cashewnut factory was admitted with complaints of

1. fever
2. muscle pain
3. generalised weakness
4. loss of appetite
5. decreased food intake
6. significant loss of weight .

1 month

She presented with history of fever associated with chills and rigor for 1 month . No history of cough , palpitations , abdominal pain , burning micturition , joint pain , headache, vomiting .

2 months back, she had a short febrile illness which was subsided without treatment.

Again she was presented with abdominal pain for which she got admitted in a nearby local hospital where undergone USG and Plain and Contrast CT abdomen which showed uterine fibroids and Non obstructive Right Renal calculus. Echo reports showed thickened mitral valve, PML prolapsing , mild MR, Sclerotic Aortic valve ,LV diastolic dysfunction , Normal LV systolic function.

Medical history – no h/o Rheumatic fever in the past. No h/o orthopnea or PND attack.

Family history – she is having a healthy daughter .

Occupational history – working in cashewnut factory for 30 years as a manual labour.

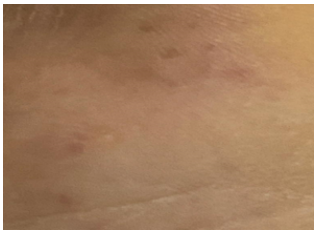
General Examination has showed average built, ill looking.

Vitals :

PR- 110/min , BP- 110/70 mm hg , RR- 22/min, SpO2- 96% , Temp- 101.8 ^{0} F .

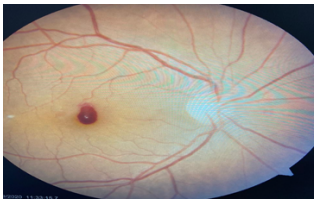
N0 cyanosis, clubbing Grade 3 (figure 1)

.



Sole of the foot – Janeway lesions . (figure 2)

CVS – Left parasternal heave , loud M1 . P2 Normal.
RS – Chest clear .
Abdomen – No hepatosplenomegaly .



Fundus Examination – Roth's spot (figure 3)

Her investigations showed TC – 19700 cells/mm3 , Poly 90 % , Lymphocytes 8% , Hb 8.2 g%, RBC 3.09 million/mm3 , PCV 25.3 % , Platelets: 66,000 lakhs/cmm , CRP- 134.9 mg/L

LFT :
Bilirubin, Total, Serum 0.69 mg/dL
Bilirubin, Direct, Serum 0.18 mg/dL
Bilirubin, Indirect, Serum 0.51 mg/dL
Protein, Total, Serum 5.35 g/dL
Albumin, Serum L 2.17 g/dL
Globulin, Serum 3.2 g/dL
A:G Ratio 0.68
AST (SGOT), Serum 54 U/L
(SGPT), Serum H 41 U/L
Alkaline Phosphatase, Serum 112 U/L
HIV 1 and 2 Ab & P24 Ag,Serum - Non Reactive

ANA profile , Leptospira Ab IgM ELISA ,Dengue test, Mantaux test and Malarial test were found to be negative. Covid 19 Screening Test (RT PCR) -NEGATIVE. Scrub Typhus IgM – NEGATIVE, WEIL FELIX TEST – NON REACTIVE. BRUCELLA ABORTUS , MELITENSIS ANTIBODY – NEGATIVE.

URINE ROUTINE EXAMINATION SHOWED MICROSCOPIC HEMATURIA , 10-12 Nil / Hpf..

Urine C & S – No growth.

Blood C & S was done and organism found as streptococcus mitis. . 2D echo has showed RVHD , AML Dowing with moderate MS , Vegetation attached to atrial side of AML , Good LV systolic function, NO RWMA , Mild TR with no PAH , intact septae , no clot/ effusion.(figure 4)

Hence started Inj . Ceftriaxone 1 gm BD as per sensitivity reports

The patient was finally diagnosed with infective endocarditis , RHD with moderate MS , Moderate MR .

DISCUSSION AND CONCLUSION

Our patient fulfilled the 2 major criteria and 4 minor criteria of DUKE 'S CRITERIA. Literature review showed streptococcus mitis producing infective endocarditis is very rare and normal inhabitant of oropharyngeal flora . Our patient is having a risk factor of RHD with MS , MR identified following admission .patient presented with h/o PUO and investigation showed streptococcus mitis which was sensitive to most of the antibiotics except Erythromycin. We could rule out SLE by ANA profile and lack of other clinical symptoms and patient showed certain classical features of clubbing , roth 's spot and janeway lesion (very rare clinical sign) , could find in this patient. Patient responded to inj. Ceftriaxone 2 gm daily and following up regularly.

REFERENCES

1. Shah T., Hamill R.J., Ramasubbu K. (2020) Infective Endocarditis. In: Carabello B. (eds) Valvular Heart Disease. Cardiovascular Medicine. Springer, London. https://doi.org/10.1007/978-1-4471-2840-3_3
2. Arnold S. Bayer, Ann F. Bolger (1998) Diagnosis and Management of Infective Endocarditis and Its Complications. Circulation. 1998;98:2936– 2948.
3. Wilson WR, Karchmer AW, Dajani AS, Taubert KA, Bayer A, Kaye D, Bisno AL, Ferrieri P, Shulman ST, Durack DT. Antibiotic treatment of adults with infective endocarditis due to streptococci, enterococci, staphylococci, and HACEK microorganisms: American Heart Association. JAMA.1995; 274:1706–1713.
4. Wang A, Gaca JG, Chu VH. Management Considerations in Infective Endocarditis: A Review. JAMA. 2018;320(1):72-83. doi:10.1001/jama.2018.7596.
5. Mylonakis E, Calderwood SB. Infective endocarditis in adults. N Engl J Med. 2001;345:1318–30.
6. J. Mitchell . Streptococcus mitis: walking the line between commensalism and pathogenesis. Molecular Oral Microbiology • April 2011 . 26(2):89-98.
7. Burke AP, Kalra P, Li L, Smialek J, Virmani R. Infectious endocarditis and sudden unexpected death: incidence and morphology of lesions in intravenous addicts and non-drug abusers. J Heart Valve Dis. 1997 Mar. 6(2):198-203. [Medline].
8. Habib G, Badano L, Tribouilly C, Vilacostra I, Zamorano JL. Recommendations for the practice of echocardiography in infective endocarditis. Eur J Echocardiogr 2010;11:202-19. (literature 1)
9. Catto BA, Jacobs MR, Shlaes DM. Streptococcus mitis: A Cause of Serious Infection in Adults. Arch Intern Med. 1987;147(5):885–888. doi:10.1001/archinte.1987.00370050081014 .
10. Starkebaum M, Durack D, Beeson P. The "incubation period" of subacute bacterial endocarditis. Yale J Biol Med. 1977;50(1):49-58.