



AMERICAN JOURNAL OF PHARMTECH RESEARCH

Journal home page: <http://www.ajptr.com/>

A Case Report On Rheumatic Heart Disease with Cervical Spondylosis and Popular Urticaria

Binu KM^{1*}, Elizabeth AM¹, H. Doddayya¹, SS Antin²

*1.Department of pharmacy practice, N.E.T Pharmacy College, Raichur, Karnataka, India
2.Department of General Medicine, Navodaya Medical College Hospital and Research Centre,
Karnataka, India.*

ABSTRACT

Rheumatic heart disease is chronic condition resulting from rheumatic fever which involves all the layers of the heart and is characterized by scarring and deformity of the heart valves. Around 60% of the acute rheumatic fever further develops in to rheumatic heart disease. Sore throat with fever, carditis, Erythema marginatum, polyarthrititis are the main manifestations. Aggressive treatment with antibiotics and use of analgesics can cure the disease up to certain extent. Awareness of clinicians regarding diagnosis and accurate treatment can reduce the cardiac burden.

Keywords: Rheumatic heart disease, Erythema

*Corresponding Author Email: binum2@gmail.com

Received 17 July 2019, Accepted 22 July 2019

Please cite this article as: Binu KM *et al.*, A Case Report On Rheumatic Heart Disease with Cervical Spondylosis and Popular Urticaria. American Journal of PharmTech Research 2019.

INTRODUCTION

Rheumatic fever (RF) is a diffuse inflammatory disease characterized by a delayed response to an infection by group A beta-hemolytic streptococci (GAS) in the tonsil pharyngeal area, affecting the heart, joints, central nervous system, skin and subcutaneous tissues. It is thought that 40%-60% patients with ARF will go on to developing RHD. Rheumatic heart disease is chronic condition resulting from rheumatic fever which involves all the layers of the heart and is characterized by scarring and deformity of the heart valves. Rheumatic fever is principally a disease of childhood, with a median age of 10 years, although it also occurs in adults (20% of cases). Rheumatic fever occurs in equal numbers in males and females, but the prognosis is worse for females than for males. The disease is seen more commonly in poor socio- economic strata of the society living in damp and overcrowded place. The incidence of RF in developing countries is 27-100/1 lakh/ year¹. Although there are no cases described in the literature of coexistent rheumatic heart disease with cervical spondylosis and popular urticaria. This paper describes for the first time a case with three entities. This case also illustrates the importance of clinicians being aware of insidious onset rheumatic heart disease that result from rheumatic fever years before which may contribute a treatable condition that can reduce the cardiac burden.²

Case Report

The authors present a case of a 60 year old male patient with a history of sore throat with fever of about 2 episodes in last 2 years. He had a history of pain in the neck 9 months back, for which he was in cervical collar and still continuing. The patient was hospitalized in the general medicine department with complaints of Chest pain (L) side since 2 days, sore throat for about 1 week and fever. He was prescribed with Tab. Hifenac MR and Tab. Aciloc from previous hospital, but not on treatment. But he took paracetamol for his fever and pain as a OTC medicine. He did not undergo any surgical procedures for any complaints. His social history reveals that he smokes 1 packet beedi daily since 3 years. He had a known history of drug allergy with analgesics resulted in swelling around both eyes after consumption. His vital signs remained stable and at physical examination rashes at neck region and right elbow region were noted with no other abnormalities of the skin and cardiac auscultation. The remaining physical evaluation showed no other relevant findings.

Investigations

During hospitalization, several examinations were performed.

- WBC count of the patient was increased up to 13,800cells/cu.mm (leukocytosis) which indicates bacterial infection
- ESR count of the patient was increased to 60mm/hr which indicates inflammation
- Cervical spine (AP & LAT) examination revealed cervical spondylosis with bridging anterior osteophytes in C4-C5 with cervical disc lesions.
- Chest X- Ray showed right atrial enlargement with calcification.

Diagnosis

- In this context, diagnosis was done based upon Jones criteria developed in 1944, then revised twice by the American Heart Association (AHA) in 1992 and recently in 2015.
- According to Jones criteria patient should have 2 major or 1 major and 2 minor manifestations.
- Major manifestations : Carditis and Erythema marginatum
- Minor manifestations: Fever associated with sore throat, elevated ESR \geq 60mm/hr, Chest X-ray shows enlarged heart, Leukocytosis.

Based on the subjective and objective evidence patient was diagnosed as **Rheumatic Heart Disease**

Treatment

For Rheumatic fever and Rheumatic heart disease

Sl.No	Prescribed Drugs		Dose/ROA Frequency	Indication
	T. Name	G. Name		
1	Inj . Ampicillin	Ampicillin	500mg IV BD	Infections And Rheumatic Heart Disease
2	Inj .Rantac	Ranitidine	50mg IV BD	Gastro Intestinal Disturbances
3	Tab .Hifenac MR	Aceclofenac + Paracetamol+ Chlorzoxazone	100mg+ 500mg+500mg,PO BD	Mild To Moderate Pain and Fever
4	Tab .Fourts B	Multivitamin	25mg+55mg+25mg+3mg,PO,OD	Vitamin Supplement

2. For cervical spondylosis patient was on cervical collar

3. For the treatment of rashes patient was referred to Dermatology department and diagnosed as popular urticaria and advised treatment as follows;

Sl. No	Prescribed Drugs		Dose/ROA Frequency	Indication	Date of Therapy
	T. Name	G. Name			
1	Elosmooth lotion	Calamine and tight paraffin lotion	80ml Morning-0-night , Topical Application	Rashes and Itching	For 7 days
2	Tab. CPM	Chlorpheniramine	4mg,0-0-1,PO	Allergic Rashes	For 7 days

Outcome and Follow up

There was clear symptomatic improvement of the symptoms observed. Patient was discharged after 14 days and advised for a review after 1 week.

DISCUSSION

Rheumatic fever is currently considered a major cause of rheumatic heart disease which leads to mitral stenosis. However, it is less prevalent in developed countries. This decline is explained by the use of penicillin as primary and secondary prophylaxis as well as by the progressive improvement in living and sanitation conditions, and consequent decrease in the prevalence of infections transmitted by group A Streptococcus. Rheumatic fever results from an autoimmune process that develops after pharyngeal infection by the group A Streptococcus. In heart, mitral valve is most affected structure.^{3,4}

The aetiopathogenesis of rheumatic heart disease is still not fully understood, Several genes appear to be involved in the development of rheumatic fever and rheumatic heart disease with contributions from innate and adaptive immunity. The molecules involved in innate and acquired immune responses are encoded by genes of which the polymorphisms have been associated with rheumatic fever and rheumatic heart disease.⁵

Most pathogens that enter the body are initially recognized by the innate immune system, a non-specific defense system, which recognizes a limited number of specific patterns shared by groups of pathogens. This activation of the innate immune system leads to the production of pro inflammatory cytokines and molecules, which act as signals in the activation of the adaptive immune system. The latter system includes antigen presenting cells that express on their surface molecules of the human leucocyte antigens (HLA) of the major histocompatibility complex (MHC) system, allowing the presentation of antigens to T lymphocytes. These molecules, encoded by genes located on chromosome 6, are subdivided into classes: class I (HLA A, B and C) and class II (such as HLA DR, DQ and DP).³ Several studies point to an association of the rheumatic

disease with different alleles of the HLA system, in particular class II molecules and those encoded by DR and DQ genes.^{5,6}

For the development of the disease, the molecular mimicry between streptococcal antigen (M protein) and human proteins including myosin, tropomyosin, keratin, laminin and vimentin, among others, seems to be fundamental. This similarity plays a central role in the pathogenesis through stimulation of autoreactive T cells, which trigger valvular injury. Several studies show that autoantibodies reactive against streptococcal antigens and human proteins bind to the endothelium resulting in an inflammation process with valvular lesions and cellular infiltration. Cytokines, produced during the process of activation of the immune system, appear to be crucial in perpetuating the inflammatory process and valvular injury, and polymorphisms in genes encoding molecules such as tumour necrosis factor α , transforming growth factor β , interleukin 1 and interleukin 10, among others, have already been identified.⁵

CONCLUSION

This cases illustrates three entities coexist like rheumatic heart disease with cervical spondylosis with popular urticaria and constitutes a treatable condition that can reduce the cardiac burden. This paper also describes the importance of the awareness of clinicians to the diagnosis of rheumatic heart disease after episodes of rheumatic fever.

ACKNOWLEDGMENT

The authors are thankful to the physicians and nursing staffs of Navodaya Medical College and Research Center, Raichur.

REFERENCES

1. URL:<https://www.slideshare.net/mobile/NeeluAryal/rheumatic-heart-disease-78763324>
2. Costa C, Durao D, Peres M, Leal M. A case of rheumatic valvular heart disease and autoimmune gastritis. *BMJ Case Rep* 2014; 10:1-3
3. Carabello B. Modern management of mitral stenosis. *Circulation* 2005; 112:432–7.
4. Carapetis J. Rheumatic heart disease in developing countries. *N Engl J Med* 2007; 357:439–41.
5. Guilherme L, Kohler K, Postol E, Kalil J. Genes, autoimmunity and pathogenesis of rheumatic heart disease. *Ann PediatrCardiol* 2011; 4:13–21.

6. Bajoria D, Menon T. The HLA class II associations with rheumatic heart disease in south Indian patients: a preliminary study. J ClinDiagn Res 2013; 7:302–4.

AJPTR is

- Peer-reviewed
- bimonthly
- Rapid publication

Submit your manuscript at: editor@ajptr.com

