

INCOMPLETE LUPUS AND COMPLETE HEART BLOCK IN PREGNANCY

DEPARTMENT OF CARDIOLOGY,OSMANIA GENERAL HOSPITAL

Dr. K Anjani Kiranmayi

Dr.K.Suneetha MD,DM

Dr.O.Adikesava Naidu MD,DM

Dr.Y.V.Subba Reddy MD,DM(Professor&HOD)

INTRODUCTION

- Pregnancy complicated with complete heart block is rare and a high risk condition.
- Permanent cardiac pacing is indicated in symptomatic cases in second trimester.
- The procedural risk of permanent pacemaker implantation is low for both the mother and fetus.
- SLE is a complex autoimmune disease in which organs and cells undergo damage mediated by tissue binding auto antibodies and immune complexes.
- It is a multi systemic disorder which is diagnosed based on the criteria set by the American College of Rheumatology.
- The cardiac manifestations of SLE are pericarditis, myocarditis, endocarditis and conduction defects.
- The prevalence of conduction defects in SLE may be as high as 10-14%.# Third degree AV block is very rare in adults with SLE.^

Moder K, Miller T, Tazelaar H. Cardiac involvement in systemic lupus erythematosus. Mayo Clin Proc 1999;74:275–84.

#Nagyhegyi G, Nadas I, Banyai F, Szongoth M, Luzsa G, Velics V, et al. Cardiac and cardiopulmonary changes in systemic lupus erythematosus. Orvosi Hetilap 1989;130:215–19.

^Martinez-Costa X, Ordi J, Barbera J, Selva A, Bosch J, Vilardell M. High grade atrioventricular heart block in 2 adults with systemic lupus erythematosus. J Rheumatol 1991;18:1926–8.

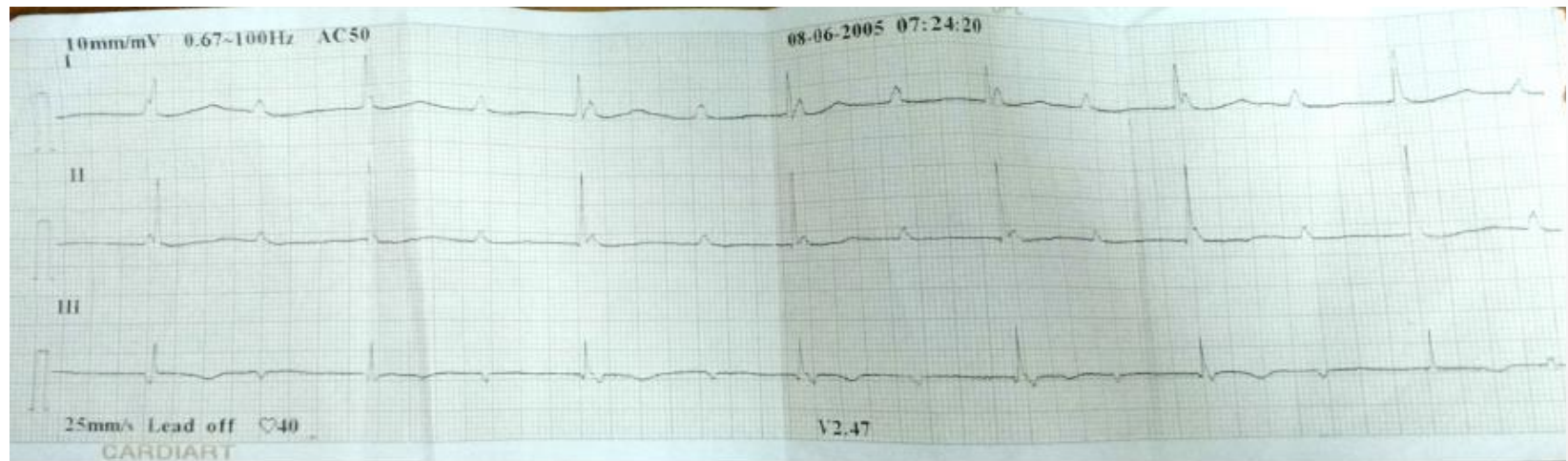
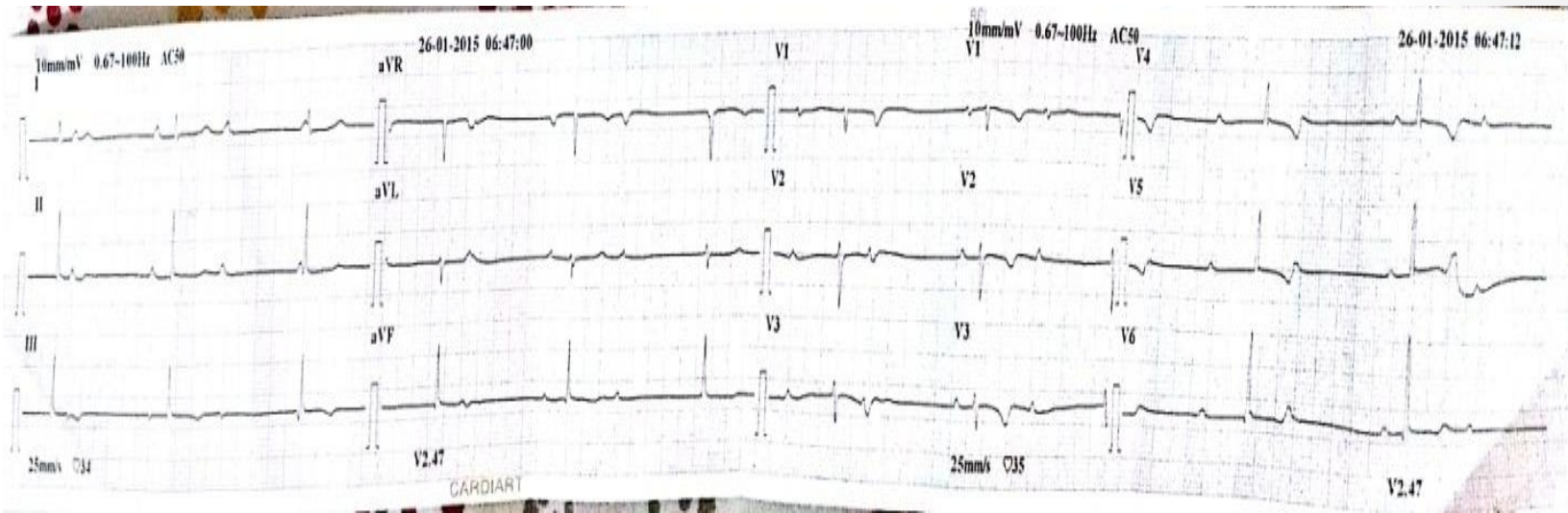
CASE REPORT

- Female aged 23 yr,
- Primi gravida with 28 weeks of GA
- C/o giddiness since 2 months with syncope.
- Evaluated by her obstetrician and advised to take cardiac consultation.
- 2 months later, she came to OGH.
- At this time, she had giddiness
- No history of
 - chest pain,
 - fever
 - any drug usage.
 - joint pains or oral ulcers, rash, photo sensitivity
- Her marital life was 1 year with no past history of abortions.
- She was 4th in birth order of 6 siblings. All the others are healthy.
- There was no family history of heart disease.
- Her mother died due to traumatic cause with no evidence of chronic disease.

O/E:

- Pulse rate : 36 per minute, regular.
- BP : 90/50 mm of Hg.
- On auscultation: s1 varying in intensity, s2 normal.
No murmurs .
- ECG : **complete heart block with AV dissociation with a junctional escape rate of 36 per minute.**
- 2D echo showed no evidence of structural heart disease with normal LV function.
- 2D echo of the fetus did not reveal any structural heart disease and **fetal heart rate was 130 bpm and regular.**

ECG showing CHB

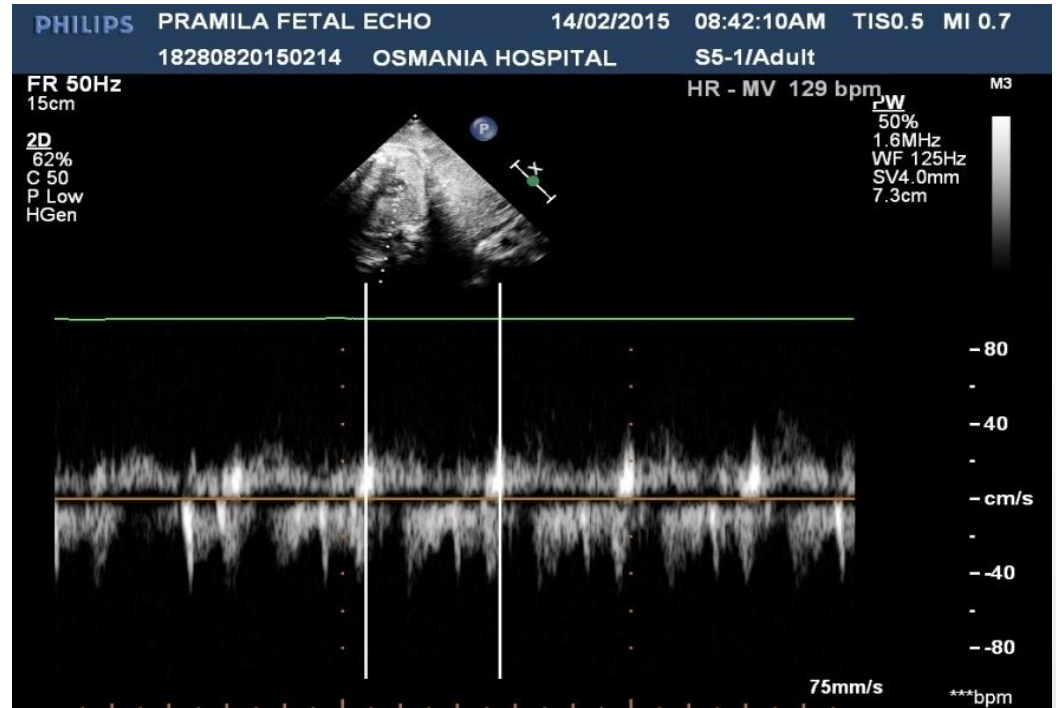
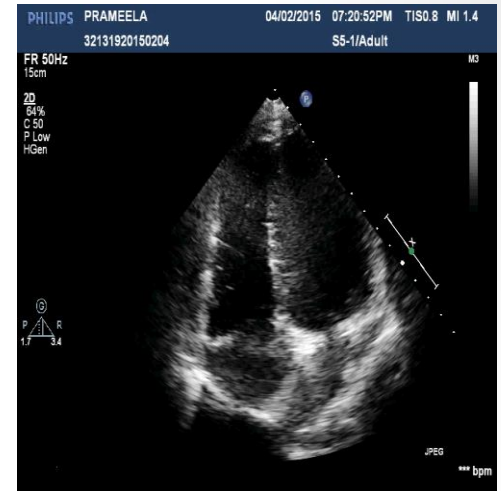
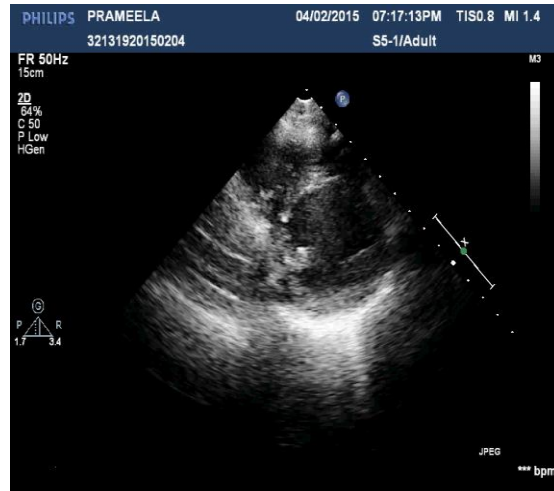
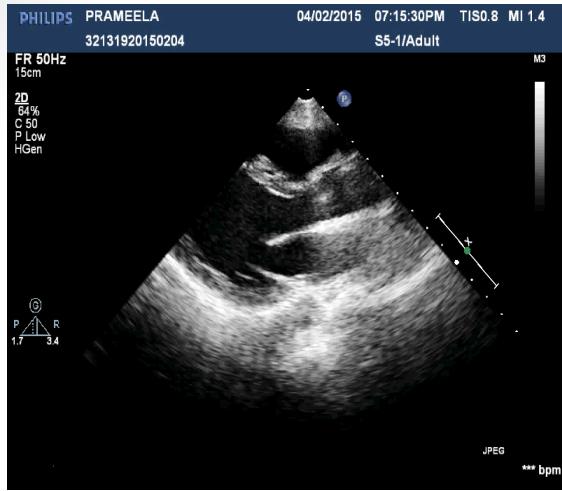


PROVISIONAL CLINICAL DIAGNOSIS

- Primi Gravida with 28 weeks of GA
- Complete Heart Block
- Junctional Escape with Heart Rate 36/min
- Good LV function

INVESTIGATIONS

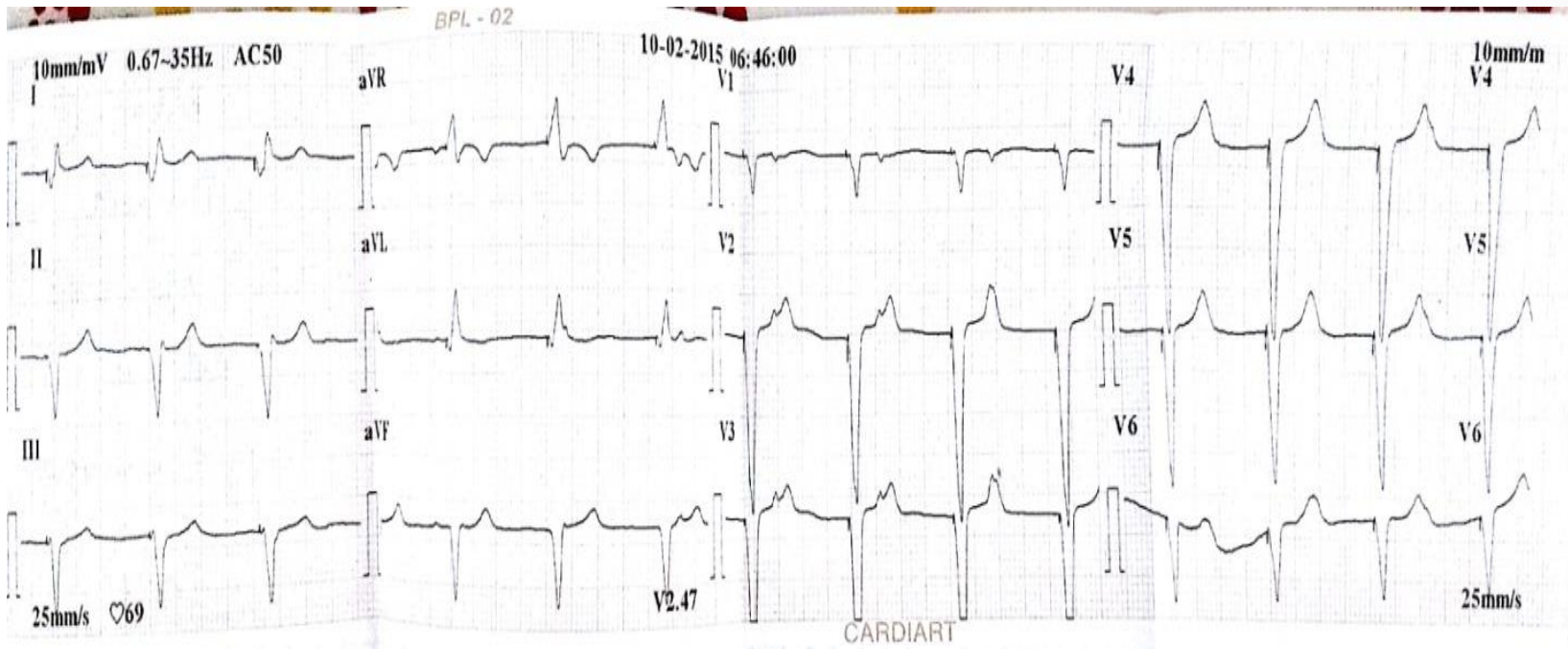
- CBC with peripheral smear –Hb- 9.5g/dl, NC, HC
- ESR and CRP were normal.
- RFT and serum electrolytes - normal
- Thyroid function was within normal limits.
- **ANA positive with IF 3+ intensity with speckled pattern.**
- **Anti-ds DNA was positive with levels of 1.7.**
- Urine analysis did not show any cellular casts and there was no proteinuria, hematuria.



MANAGEMENT

- As the patient was symptomatic, temporary pacemaker insertion done.
- Later, permanent pacemaker implantation was done with VVI mode taking all the radiation safety precautions and heart rate set at 70 per minute.
- There were no further episodes of giddiness or syncope.

ECG AFTER MANAGEMENT



Osmania General Hospital

PRAMEELA, 23/F
221-491
05/07/2015

DR. Y. V. SURBA REDDY
SIEMENS
ACCOM-AIRTIS



DISCUSSION

- Conduction defects in SLE are well described: congenital heart block in infants born to mothers with anti-Ro antibodies is the most widely known.
- Conduction disturbances in adults with SLE are rare but documented, in the form of all types of atrioventricular block, bundle branch block, sinus tachycardia, atrial fibrillation, and atrial ectopic beats.
- Third degree block is very rare in adults with SLE.
- The pathology is thought to be nodal artery occlusive lesions with secondary collagen degeneration and fibrosis of AV and SA nodes.*

* James T, Rupe C, Monto R. Pathology of the cardiac conduction system in systemic lupus erythematosus. Ann Intern Med 1965;63:402–10.

- There were case reports of adults with SLE who presented with complete heart block before the other clinical manifestations.*
- In our case, as the patient presented with symptoms at this age, with no prior documentation of CHB and there is evidence of auto immunity with positive antibodies which are known to cause complete heart block, CHB may be related to auto-immunity.
- As the patient did not satisfy 4 ACR criteria, this is a case of incomplete lupus.
- She is on regular follow-up for any of SLE manifestations.

*High grade heart block in association with SLE:C S Edwards, R Mootoo, A Bhanjii;Ann Rheum Dis 2004;63:606.

*Complete Heart Block as the Initial Manifestation of Systemic Lupus Erythematosus William P. Maier, MD; Hector E. Ramirez, MD; Stephen B. Miller, MD (Arch Intern Med 1987;147:170-171)

FINAL DIAGNOSIS

- Primi Gravida with 28 weeks of GA
- Complete Heart Block
- Good LV function
- Post PPI
- Probably, related to incomplete lupus

CONCLUSION

Complete heart block in pregnancy is a high risk condition. When a young patient presents with CHB, it is important to evaluate auto immune diseases. Prompt management of CHB is essential for the successful outcome of mother and fetus.

THANK YOU