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## **Rheumatic (RF) fever and rheumatic heart Disease (RHD) in Damascus University Children's Hospital during the last decade**

**Mohammad Al-Abboud\***

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### **Abstract**

Rheumatic fever and rheumatic heart disease are still common and major public health problems in developing countries, include Syria. For their the study aims to present state and characteristics of RF in the last 10 year. and to determine the rule of ECHO / Doppler in the diagnosis of subclinc RHD.

285 patients with RF who were hospitalized at Damascus University Children's Hospital between Jan .1994 and Dec.2003 were reviewed retrospectively. The assessment included physical and cardiac examination, laboratory, ECG, chest radiography and color ECHO / DOPPLER. Cases of RF diagnosis according to the Jones Criteria were identified in our hospital during the last 10 years.

The average age of patients was 9.54 year / SD, rang 3-13years old ) and the male / female ratio was 1.5:1 . forty one patients (14.4%) were < 6 years of age. Manifestations included rheumatic heart disease RHD (53.3%) polyarthritis 20% which increased to 63.9% and 28.8% respectively after Echocardiogram was done to patients who had unclear murmur or cardio-diagnosis.

Sydenham's chorea ( 6.7%), erythema marginatum (1.4%), subcutaneous nodules (0.4%), fever (54.4%), arthralgia (71.2%).

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Pericardial effusion occurred in 12.5%. There was positive family history of RF in 8.8%. Mitral insufficiency and aortic insufficiency occurred in 95.4% and 57.2% of RHD respectively.

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Both mitral and aortic valves were involved in 57.2% of heart cases. Tricuspid insufficiency developed in 12.5% mitral stenosis developed in 12.5% Normalization or improvement was observed in 55% of mild mitral regurgitation.

Infectious endocarditis was present in 5.3% of the cases of RHD Delayed mortality occurred in 12 (7,9%) of the patients with RHD.

The Results of our study are found to be near and not too far from the result of other studies. Arthralgia has 77% in the Brazilian study, 81.4% in the Turkish study and 67.6 in the Indian one. The cardiac disease also has 62% in the Brazilian, 60.9% in the Turkish study. The mitral regurgitation has proved to be the most common of all disease in all of the studies.

Significantly, the RF was reported lately to be seen in young ages and that is exactly what our study shows.

The positive role of echo should be mentioned, as it managed to increase the number of revealed heart disease especially in the subclinic cases.

And this requires the addition of the word “diagnosed by echo” for the heart disease in very Jones Criteria.

**Key Word:** RF is still common disease in children even in the young ones . Also It show the necessity of echo to be done for each child snuffing from this disease.

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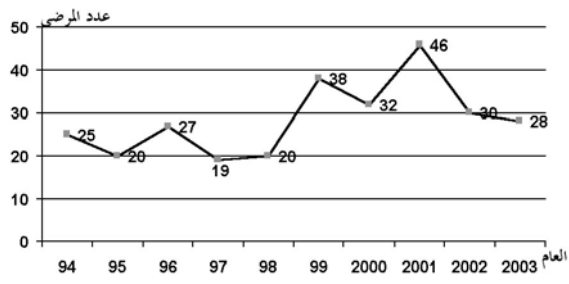
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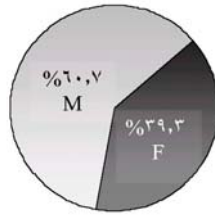
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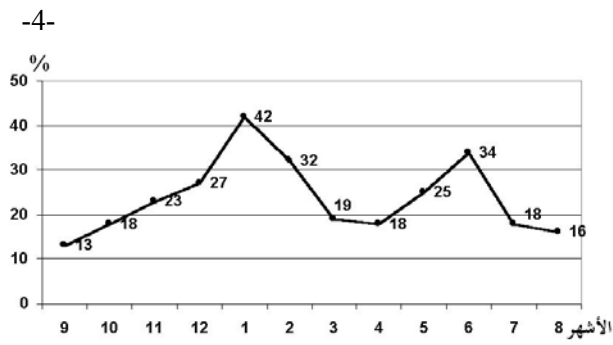
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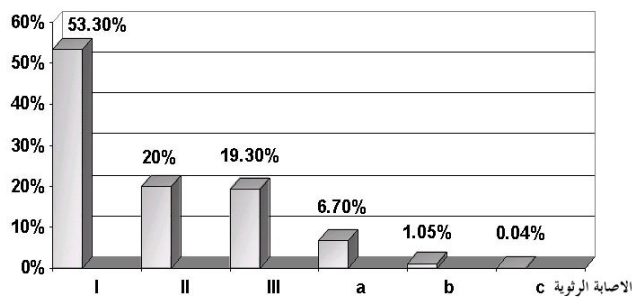
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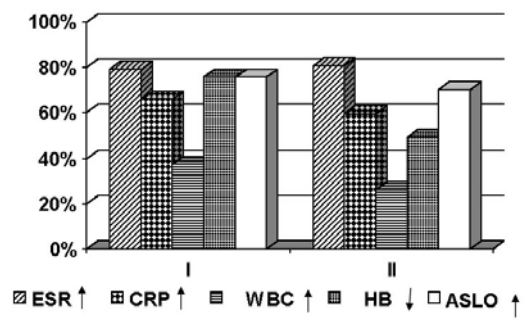
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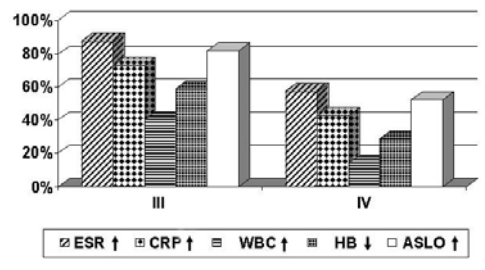
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## References

1. Groves AM Rheumatic fever and rheumatic heart disease : and overview . Trop Doct 1999 Jul, 29 (3) : 129-32 .
2. Olgunturk R. et.al Rheumatic heart disease prevalence among school children in Ankara , Turkey . Turk j Pediatr 1999 Apr-jun;41(2):201-6 .
3. Jose V j , GomathiM .Declining prevalence of rheumatic heart disease in rural schoolchildren in India : 2001-2 . Indian Heart J. 2003 Mar-Apr; 55 ( 2 ) : 158 – 60 .
4. Ravisha MS et.al Rheumatic fever and rheumatic heart disease : clinical profile of 550 case in India .
5. Chokalingam A. et.al Current profile of acute rheumatic fever and Valvulitis in Souethern India . J Heart Valve Dis . 2003 sep;12(5) :573-6 .
6. Saxena A Diagnosis of rheumatic fever : current status of Jones Criteria and role of echocardiography . Indian j Pediatr 2000 Apr ; 67 (4) 283-6 .
7. Chockalingam A. et.al Rheumatic heart disease occurrence , patterns and clinical correlates in children aged less than five years .
8. Pileggi GC . Ferriani VP . Atypical arthritis in children with rheumatic fever .  
J pediatr (Rio 1 ) 2000 jan –Feb ; 76 (1) : 49-54 .
9. Hilario MO et.al The value of echoeardio graply in the diagnosis and follow up of rheumatic carditis in clildren and adoles cents : a 2 year prospective study . J Rheumatol 2000 Apr; 27 (4)1082 – 6
10. Haddad N,Silva MB Mortality du to cardio vascular disease in women during the reproductive ape ( 15 to 49 years ) in the State of Sao Paulo , Brazil , from 1991 to 1995 . Ari Bras Cardiol 2000 Nov , 75 (5) : 375 – 9 .
11. Machado CS et.al Antistreptolysin O titer profile in acute rheumatic fever diagnosis .

- 
- J pediater ( Rio j ) 2001 Mar-Apr ; 77 (2) 105-11 .
12. Oran B et.al Prophylactic efficacy of 3-weekly benzathine penicillin G in rheumatic fever .  
Indian J Pediatr 2000 Mar ; 67 (3) ; 164 – 7 .
13. Eleveli et.al Cardiac involvement in Sydenham's Chorea : Clinical and Doppler Echocardiographic findings . Acta Paediatr 1999 oct; 88 ( 10 ) 1044-7 .
14. Karaslan S et.al Acute rheumatic fever in Konya , Turkey . Pediatr Int 2000 Feb, 42 (1) : 71-5 .
15. Bitar F.F. et.al Rheumatic fever in children : a 15-year experience in a developing country . Pediatr Cardiol 2000 Mar-Apr;21(2) : 119-22 .
16. Khriesat I, Najada AH. Acute rheumatic fever without early carditis : and atypical clinical presentation Eur J Pediatr 2003 Dec; 162 (12) : 868-71 .
17. Kassem AS et.al Reversibility of mitral regurgitation following rheumatic fever : clinical profile and echocardiographic evaluation . Indian J Pediatr 1995 Nov-Dec ; 62 (6) 717-23 .
18. Habib Gs.Saliba WR et.al Rheumatic fever in Nazareth area during the Last decade . Is Med Assoc J 2000 Jan; 12 (6) : 433 – 7 .
13. Uziel Y . Kassem E. et.al The use of naproxen in the treatment of children with RF.  
J Pediatr 2000 Aug ; 137 (2) : 269-71 .
20. Zaman MM et.al. Humoral immune response in a Sample of Bangladeshi children with rheumatic fever . Bangladesh Med.Res Couns Bull 1999 Aug ; 25 (2) : 42-5 .
21. Da Silva CH Rheumatic fever : a multicenter study in the state of Sao Paulo . Pediatric Committee – Sao Paulo. Pediatric Pharmacology society .  
Rev Hosp ClinFac Med Sao Paulo 1999 May-jun ; 54 (3) :85 – 90 .

22. Sethi S,et.al Anti-streptolysin O titers in normal healthy children of 5-15 years .  
Indian Pediatr 2003 Nov ; 40 (11) : 1068 -71 .
23. Tani L Y et.al Rheumatic fever in children younger then 5 years : is the presentation different ? Department of Pediatrics , University of Utah and Primary Children's Medical Center Salt Lake City , UT 84113, USA .  
. pcltaini@ihc.com
24. Lanna CC et.al Sub clinical rheumatic Valvists : a long – term follow – up .  
Cardiol Young . 2003 Oct;13 (5) : 431 – 8 .
25. Carapetis JR et.al Rheumatic chorea in northern Australia ; a clinical and epidemiological study . Arch Dis Child 1999 apr; 80 (4) : 353 -8 .
26. Mercadante MT et al . The psychiatric symptoms of rheumatic fever .  
Am J Psychiatry 2000 Dec ; 157 (12) : 2036-8 .

.2004/5/31:

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.2004/9/28: