CLINICODEMOGRAPHIC PROFILE AND OUTCOMES OF PEDIATRIC PATIENTS WITH ACUTE RHEUMATIC FEVER AND RHEUMATIC HEART DISEASE AND ASSOCIATION OF CLINICAL PARAMETERS TO MITRAL REGURGITATION SEVERITY IN A TERTIARY HOSPITAL IN MANILA

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BACKGROUND

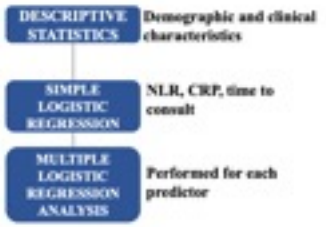
Acute rheumatic fever is caused by group A streptococcus (GAS). With repeated infections, rheumatic heart disease may occur. Diagnosis requires fulfillment of the Jones' criteria. Currently, there is no definitive treatment, hence, early diagnosis and prophylaxis is needed to avoid permanent damage to heart valves.

OBJECTIVES

- This study aimed to describe the clinical and demographic profile and outcomes of pediatric acute rheumatic fever and rheumatic heart disease patients in a tertiary hospital in Manila.
- This study also aimed to describe the patient profile, laboratory and 2D echocardiography results of said patients.
- This study also aimed to correlate laboratory results to mitral regurgitation (MR) severity and to describe the outcome in these patients.

METHODS

This study utilized a cross-sectional analytic design and included patients diagnosed with rheumatic heart disease of acute rheumatic fever who underwent 2D echocardiography from 2021-2023.



RESULTS

The average age is 4-15 years old. Majority (87%) did not have comorbidities and most (50%) had hypertension in their family history. The chief complaint of the majority is joint pain (43.3%). Most (66.67%) of our patients had no cardiovascular symptoms upon first consultation and most (56.67%) sought consult after two weeks of having symptoms. Most (73.33%) of the patients had carditis. Minor criteria met were usually fever (93%). The majority (66.67%) also had a holosystolic murmur. All the patients had an elevated ASO titer, ESR and CRP. Most (56.67%) had left ventricular hypertrophy. Majority of the patients (83.33%) had pathological mitral regurgitation. Half of the patients had an associated aortic regurgitation.

It was found that the NLR significantly predicts if the MR is severe or non-severe.

	Unadjusted			Adjusted (controlling for age and sex)		
	Odds Ratio	p	Nagelkerke R^2	Odds Ratio	p	Nagelkerke R^2
NLR	9.625	0.022	0.309	10.351	0.031	0.374
CRP	1.25	0.83	0.003	1.137	0.905	0.050
Time to Consult	0.213	0.102	0.126	0.210	0.113	0.203

Table 1. Association of NLR, CRP, and time to consult with the likelihood of severe mitral regurgitation. Significant predictor ($p<0.05$) is highlighted in bold.

CONCLUSION

- This study found that the patients in this hospital have a similar clinical course and demographic profile to patients worldwide with acute rheumatic fever and rheumatic heart disease.
- It was also seen that the NLR may predict severity of mitral regurgitation.

RECOMMENDATION

- Further clinical studies to assess the clinicodemographic profile and outcomes of rheumatic fever and rheumatic heart disease pediatric patients and associations between different factors such as time to consult, educational status of parents, and different laboratory tests
- Associations between valvular damage aside from mitral regurgitation
- A database with all rheumatic fever and rheumatic heart disease patients

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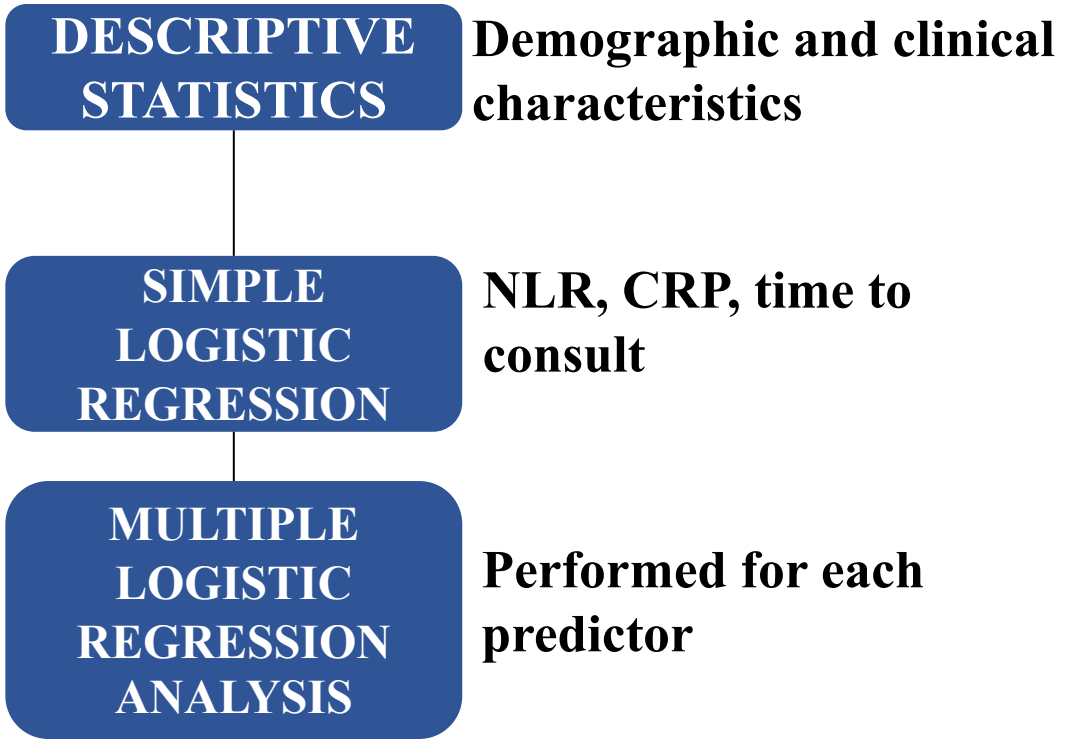

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