



Profile and Outcome of Polymerase Chain Reaction Confirmed Tuberculosis in a Tertiary Medical Center in Northern Luzon from July 2017 to June 2022 – A five Year Retrospective Study

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Author

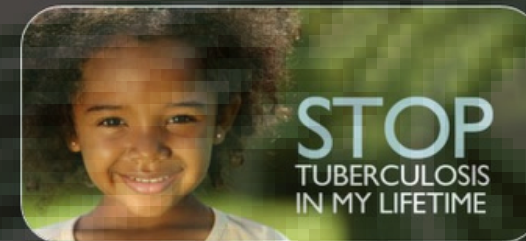
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Childhood Tuberculosis is a persistent neglected global health problem

Due to the following:

- severe underfunding and lack of access to care
- weak reporting systems
- fragile health infrastructure
- workforce shortages
- inadequate child health programs

TB statistics. (2023, February 2)



Little attention is given in childhood TB

- Children rarely contract infectious diseases
- Less involved in the spread of epidemics
- Child health not been given much weight

Marais, B. J., Gijb, R. P., Schaaf, H. S., Beyers, N., Donald, P. R., & Starke, J. R. (2006). Childhood pulmonary tuberculosis. American Journal of Respiratory and Critical Care Medicine, 173(10), 1078–1090. <https://doi.org/10.1164/rccm.2005.11.1609a>

Significance of the Study

Hospital

- Provide baseline data on the extent of childhood TB for the improvement of healthcare delivery for childhood TB

Patients

- Improved outcome as the study highlights the importance of early diagnosis and prompt treatment

Objectives

GENERAL

- Characterize the demographic, clinical profile, and therapeutic outcomes of PCR confirmed Pediatric Tuberculosis patients in a tertiary medical hospital from July 2017 to June 2022.

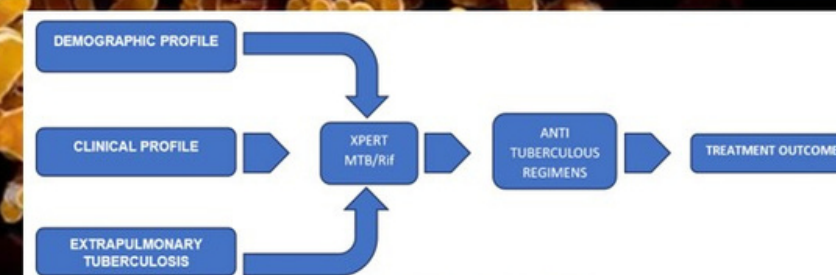
SPECIFIC

To determine:

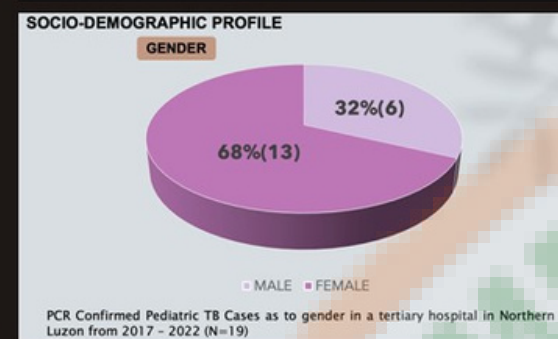
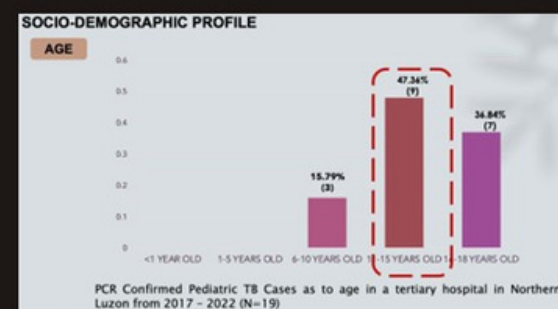
- different social and demographic profiles of the subjects
- clinical profile of the subjects
- clinical outcome after therapy
- frequency of patients with concurrent solitary extrapulmonary TB

Methodology

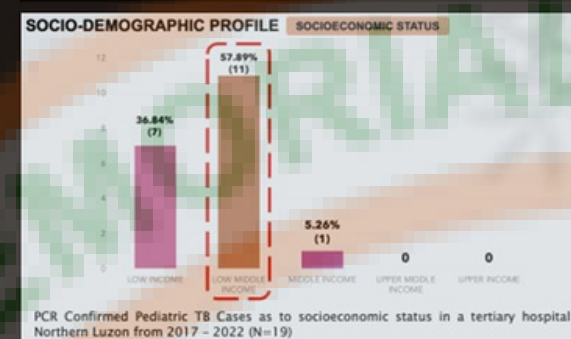
STUDY DESIGN: Descriptive Study
 STUDY SITE: Level 3 Referral Hospital in Northern Luzon
 STUDY DURATION: July 2017 to June 2022
 INCLUSION CRITERIA: 0-18 year old, TB infection confirmed by Xpert MTB/Rif
 EXCLUSION CRITERIA: Negative PCR test; Incomplete medical records
 ETHICAL CONSIDERATION: Approved by the Research Ethics Committee



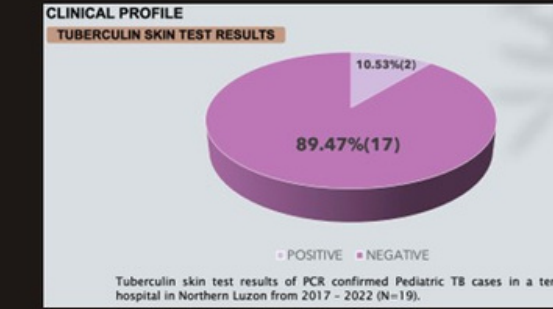
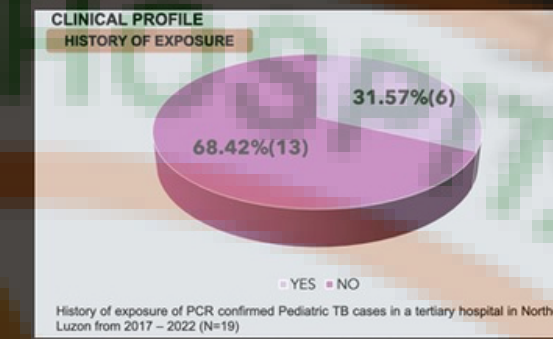
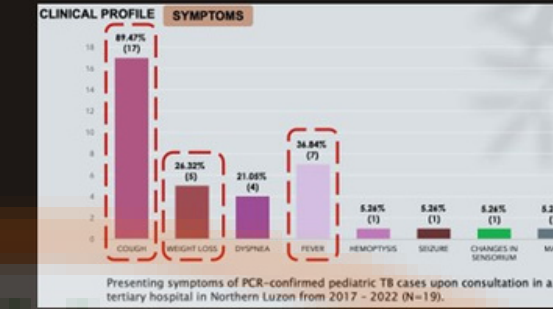
Results



SOCIO-DEMOGRAPHIC PROFILE
MAJORITY (47%) of PCR-confirmed TB cases were 11-15 y/o and mostly **FEMALE (68%)**. As to socio-economic status, **MORE THAN HALF (58%)** belong to **LOW MIDDLE-INCOME** group. Respondents with low income also tend to have in-house contact, some may have lack of understanding about TB transmission and prevention.

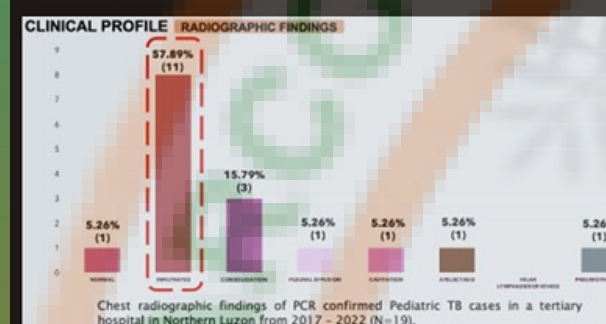


Results



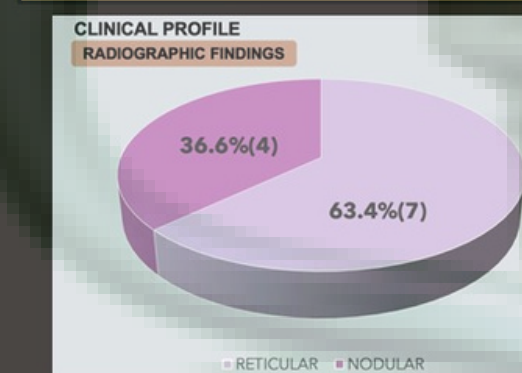
- **COUGH (89%), FEVER (37%) AND WEIGHT LOSS (21%)** are the top three presenting symptoms.
- **MORE THAN HALF (68%)** of PCR confirmed TB cases had **NO HISTORY OF EXPOSURE**
- **LOW YIELD OF TST (10%)** could be attributed to cutaneous anergy, weak immune system, recent live-virus vaccination or viral illness and overwhelming TB.

Results

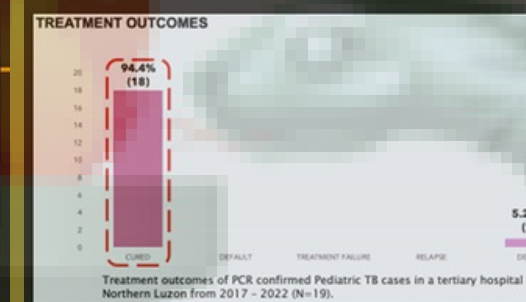


RADIOGRAPHIC FINDINGS
 Majority of the **RADIOGRAPHIC FINDINGS** are **INFILTRATES (58%)**, followed by **CONSOLIDATION (16%)** and **PLEURAL EFFUSION (5%), CAVITATION (5%)** and **ATELECTASIS (5%)**.

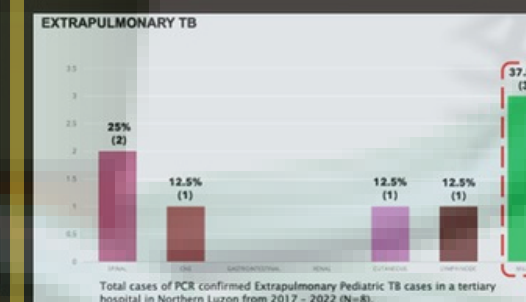
NATURE OF INFILTRATES
 The infiltrates were **MOSTLY RETICULAR (63%)**.



Results



TREATMENT OUTCOME
94% of the PCR confirmed TB cases were **CURED**, **1%** of the patients **DIED**.



OUTCOME OF EXTRAPULMONARY TB
MAJORITY (38%) were **MILIARY TB** followed by **SPINAL DISSEMINATION (25%)** and **CNS (13%), CUTANEOUS (13%)** and **LYMPH NODE (13%)**

Data		Level of Significance
		0,05
Intermediate Calculations		
Sum of Squared Ranks/Sample Size	2683,971	
Sum of Sample Sizes	21	
Number of Groups	3	
Test Result		
H Test Statistic	3,7022	
Critical Value	5,9915	
p-value	0,0295	
Group	Sample Size	Sum of Ranks
2	7	52
17	7	95
6	7	84
		Mean Ranks
		7,42857143
		13,5714286
		8,4

Kruskal Wallis H – Test better demonstrate the effects of varying symptoms at presentation. Since the p-value is higher than the alpha value at 0.05 level of significance, an H test value of 3.70 clearly indicates **no significant difference between the presenting symptoms**.

Conclusion

- TB in the study is more common in adolescents, among females and in low-middle income families.
- Cough is most common presentation, majority denied prior exposure to TB.
- Infiltrates are the common radiographic findings.
- TST yielded very low results.
- Majority completed the treatment and cured, but one died due to a severe illness.
- Most common extrapulmonary manifestation is miliary tb.

Recommendation

- Multi-center study involving a larger-scale population for stronger, more robust results.
- To better track and monitor patient's treatment must be done in the same institution.

