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Clinical audit of patients with drug resistant tuberculosis (DR-TB) in tertiary hospital

Background/ Rationale

- There were14 000 (5.6%) DR-TB cases out of 249 000 TB cases (2024)
- Ninety percent (90%) of DR-TB patients qualify for 6-month regimen (BPaLL), 71% had treatment success
- There is a challenge with diagnosing patients leading to treatment start delay
- Drug resistant TB (DR-TB) is a major clinical challenge.
- Laboratory diagnosis and improved treatment have been increasingly available.
- Treatment is associated with a lot of side effects which may result in detrimental outcomes.

Objectives and Methods

- The objective was to describe the patients with DR-TB in a tertiary hospital and identify the risk factors and outcomes
- This was a retrospective clinical audit and chart review of patients attending the DR-TB clinic at Dr George Mukhari Academic Hospital.
- Data on demographics, laboratory results, and outcomes were collected using Excel spreadsheet.

Results

- A total of thirty-nine patients seen between 2022 to 2025. There were twenty (51%) males ranging from age 12 to 73 years with median of forty-seven.
- Thirty-four (87%) patients had no previous tuberculosis history. Only five patients (12%) treated previously with drug sensitive tuberculosis, of which four of them completed treatment.
- Six (15%) patients initiated on drug-sensitive TB treatment before changing to rifampicin resistant TB treatment ranging from 1 to 4 months delay.

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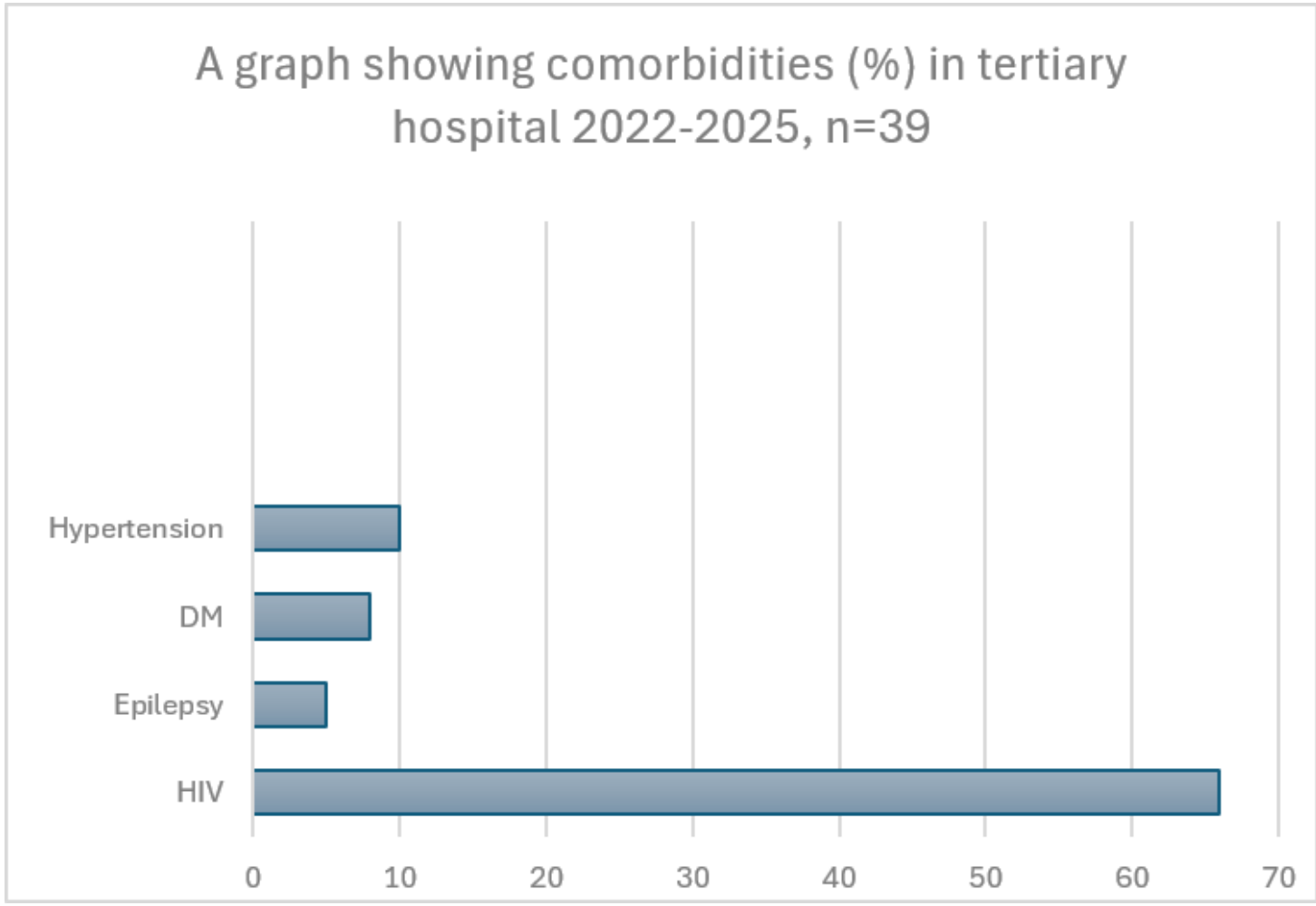
- Twenty-six (66%) patients were HIV positive
- Eighteen (69%) were virally suppressed
- Median CD4 count was 130
- Eighteen were(46%) smokers and two were(5%) IV drug users.



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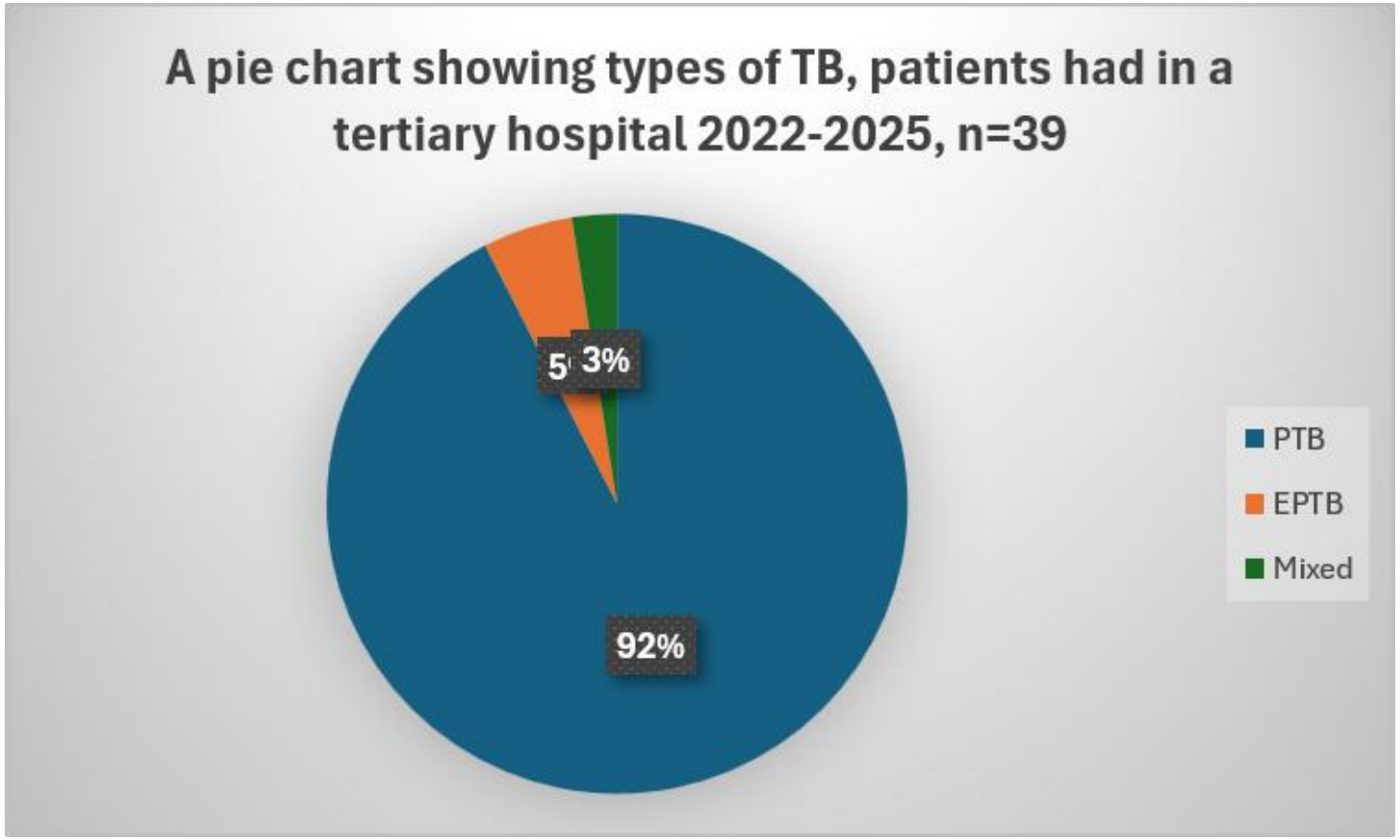
- Thirty-seven (92%) patients had pulmonary TB and the rest had extrapulmonary
- Four (10%) patients had concomitant isoniazid resistance, while the rest had rifampicin resistance



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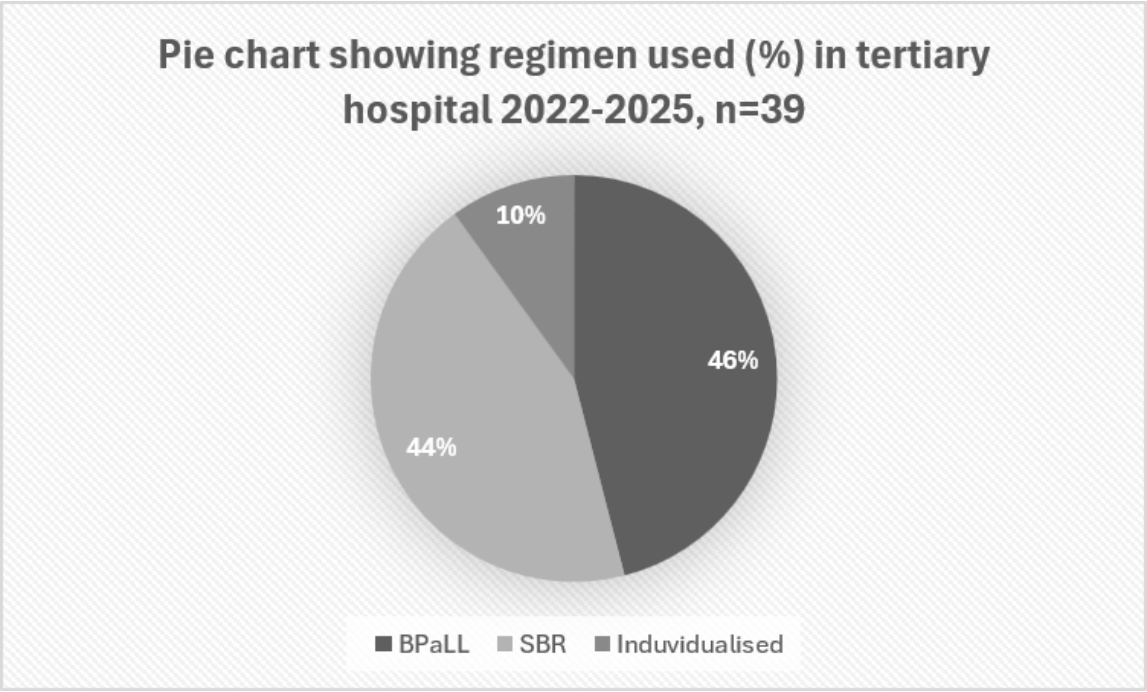
- Eighteen (46%) patients were on a BPaLL regimen, while seven-teen (44%) were on a short bedaquilline based regimen and four (10%) were on a long-individualized regimen
- All these patients were on linezolid



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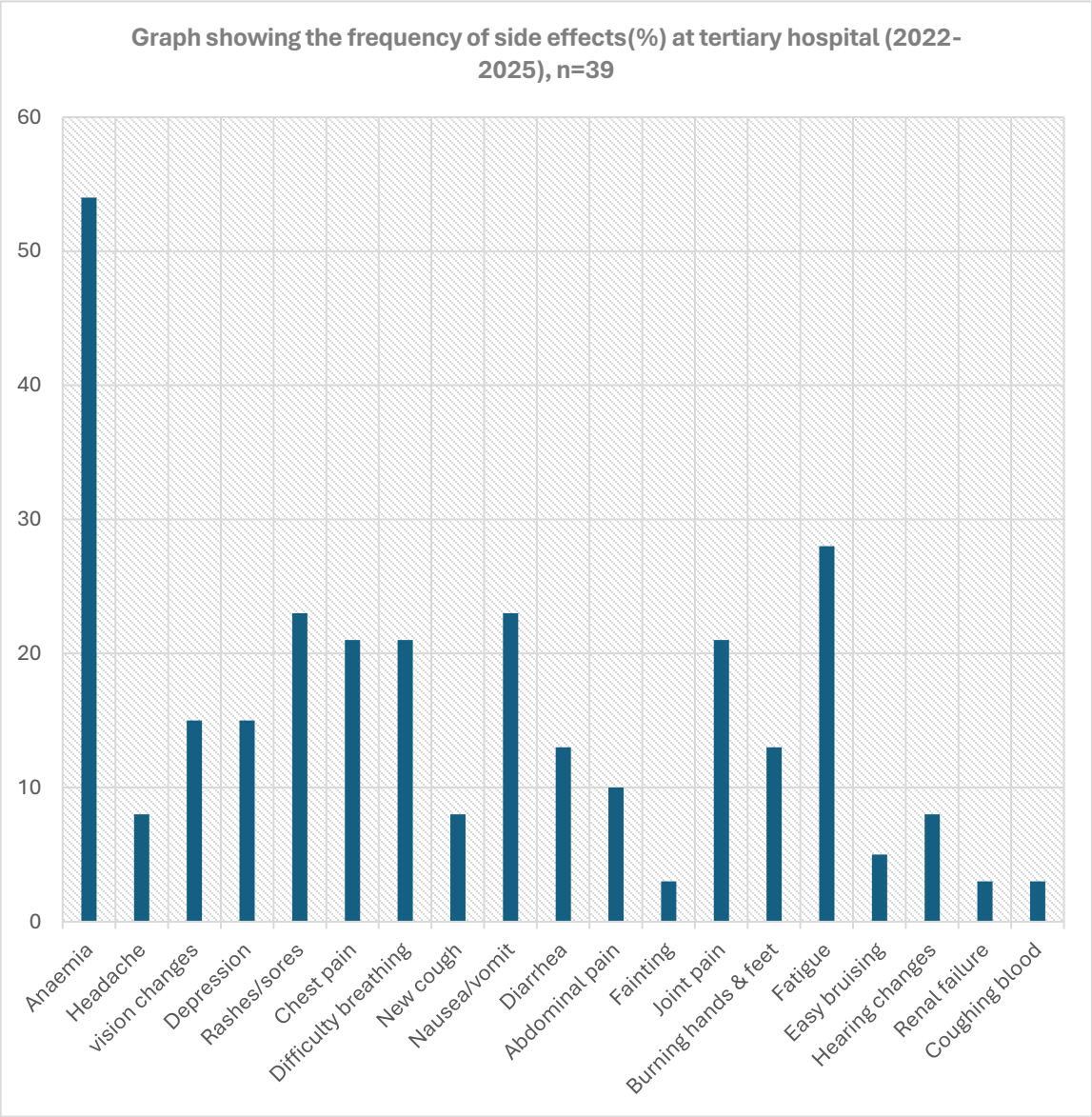
- Twenty-seven (69%) patients developed side effects.
- Most common (59%) was anemia (average baseline HB of 10.6)
- Four (17%) patients had worsening of anemia while seven (18%) had reduction of HB with or without resulting anemia
- Eight (21%) patients had a baseline HB of <8.9 prior treatment



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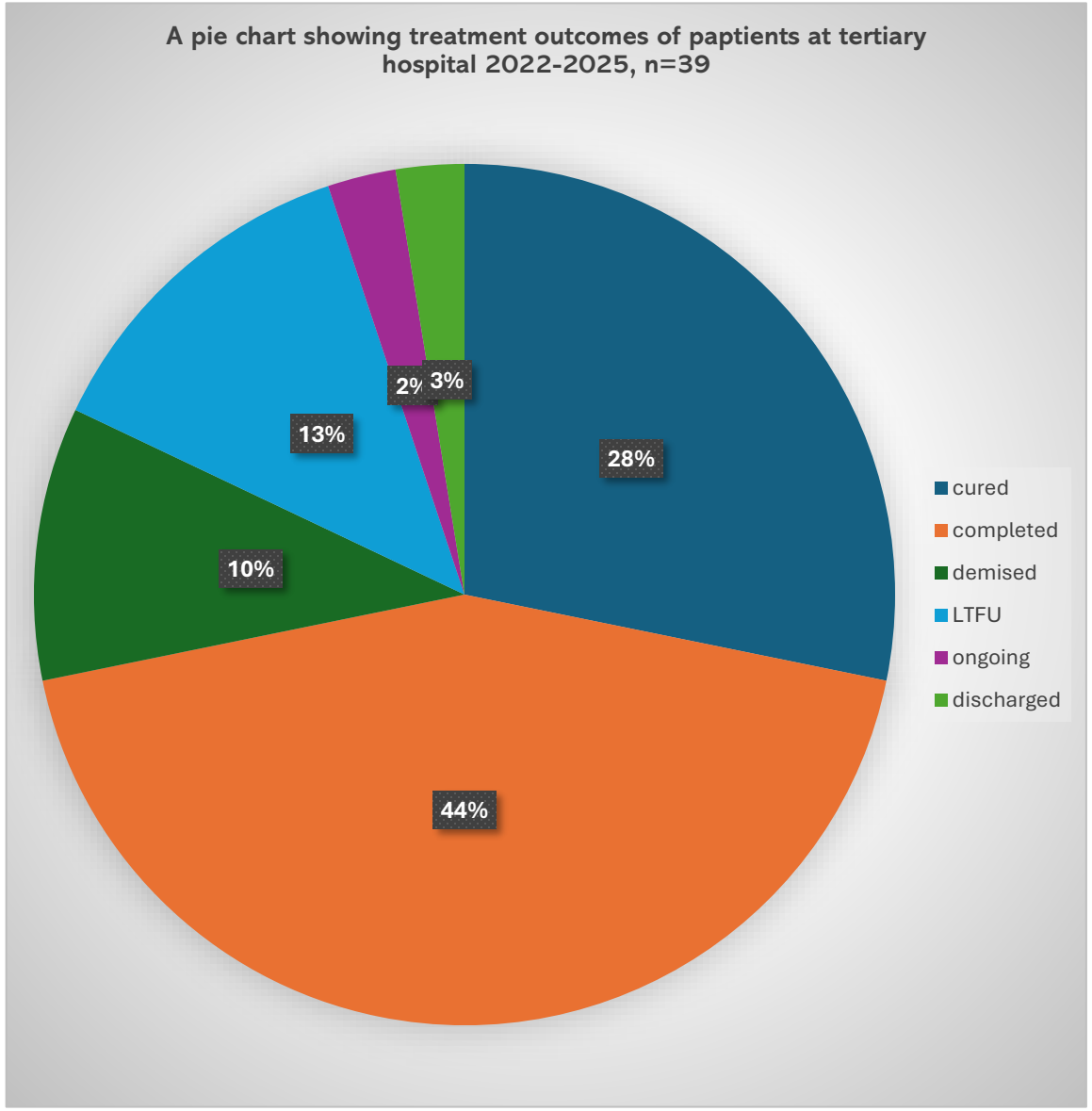
- Forty-four percent(44%) completed treatment, and 28% were cured
- Five (13%) LTFU, with two of them being IV drug users (less than six months of treatment duration). One was in month twelve of treatment
- Four (10%) patients demised, two demised in one month of treatment
- One was discharged after one month of treatment for drug-sensitive TB treatment and another one is still currently on treatment



Interpretation

- Our study shows that males are more affected than females
- There is high rate of patients with no previous TB who develop DR-TB
- Diagnostic challenges noted on the study with treatment initiation delay
- TB of the lungs (95%) was found to be the most common
- Most patients (66%) had TB/HIV co-infection with poor control
- Majority of patients were on BPaLL regimen
- Most common side effect was anemia with worsening of HB on linezolid
- Treatment success was 72% in keeping with national data

Implications/ conclusion

- There is a high rate of patients with anemia requiring transfusion prior to treatment initiation
- IV drug users are a special population that needs an improved strategy for retention of care

References

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