FROM TREATMENT DEFAULT TO RESISTANCE: CLINICAL COURSE, MANAGEMENT, CHALLENGES AND OUTCOMES OF A PATIENT TREATED FOR DR-TB (DRUG RESISTANCE TUBERCULOSIS) IN EMBAKASI WEST SUB-COUNTY, NAIROBI KENYA.

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BACKGROUND

Non-adherence(inadequate/interrupted treatment) to Drug-Susceptible Tuberculosis (DSTB) has devastating clinical and public health consequences like prolonged infectiousness, higher failure rates, relapse and amplification of resistance.

The study aimed at highlighting non-adherence to DSTB treatment leading to DR-TB, assessing challenges of managing comorbidity drug interactions and ADR.

OBJECTIVES

- To highlight non-adherence to DSTB treatment leading to DR-TB.
- To assess challenges of managing comorbidity drug interactions and ADR.

Case Study

- A 52-year-old female presented at Umoja Health Centre (UHC) on 23/01/2024 transferred from Mbagathi Hospital, where she was diagnosed with DSTB through Xpert and initiated on medication.
- Treatment and follow-up was continued using 2RHZE/4RH, smear at month 2 was negative and transitioned to continuation phase.
- Patient defaulted at month 4 with unsuccessful tracing efforts. On 20/2/2025 patient re-presented at Mbagathi as a presumptive TB case and diagnosed with DR-TB through Xpert (rifampicin resistance, RR) then referred to UHC for baseline investigations and initiation of BPALm treatment which was through facility DOTs, monthly routine investigations and month 3 evaluation revealed abnormal laboratory parameters compared to baseline.
- Throughout treatment she had vomiting, hypotension and difficulty in breathing at month 6 of treatment CXR reveled pleural effusion.

Sputum Results

Investigation	Baseline	Follow-up/Result
Sputum Smear	Positive (++)	Converted to negative by Month 1
TB Culture	Rifampicin-resistant growth	Culture converted by Month 1

Blood Results

Investigation	Baseline	Follow-up/Result
Haemoglobin (Hb)	9.8 g/dL	8.8 g/dL (anemia)
AST	53.5 U/L	59.3 U/L (elevated)
ALT	19.8 U/L	59.0 U/L (elevated)
Creatinine	93.2 µmol/L	128.6 µmol/L (increased)
eGFR	70 mL/min	47 mL/min (declined)
Viral Load	21 copies/mL	189 copies/mL
CD4 Count	61 cells/µL	Low at baseline

Imaging Results

Investigation	Baseline	Follow-up/Result
Chest X-ray	No pleural effusion	Pleural effusion at Month 6
ECG	Normal	No abnormalities
Echocardiography	Normal	No abnormalities
Renal Ultrasound	Normal	No abnormalities

Management and challenges

Six month of Bedaquiline, Pretomanid, Linezolid, Moxifloxacin ,alongside ART (TDF/3TC/DTG - TAF/3TC/DTG due to renal impairments) pleural tap, and supportive management.

Complications

Anemia, pleural effusion, GI symptoms, hypotension, renal impairments

Outcome

Cured as per smear and culture results, Complications resolved.

Way forward

- Treatment default should be managed as an early warning event and not as a patient failure.
- Rapid identification of barriers , active follow up and patient centered support can prevent treatment interruption and the emergence of drug resistance
- Close lab monitoring is essential during DR TB treatment