DRUG-RESISTANT AND MULTIDRUG-RESISTANT TUBERCULOSIS IN CHILDREN- GETTING TO KNOW OUR POPULATION

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Background

Multidrug-resistant tuberculosis (MDR-TB)-resistance to at least both isoniazid and rifampicin- in children has been estimated in 3,2% worldwide and resistance to at least one first-line anti-TB drug (DR-TB) is reported in 17% of pediatric cases.

We report data on pediatric DR and MDR-TB in a secondary care centre with a high percentage of immigrants from portuguese-speaking african countries in Amadora, Portugal.

Methods

We retrospectively analysed data from children (0-17 years) admitted from 2000 to 2017 diagnosed with *M. tuberculosis* infection by culture (Lowenstein-Jensen and/or Bactec) in which the drug susceptibility test (DST) revealed drug resistance.

Results

Prevalence

*XDR-TB: Extensive Drug Resistant TB- resistance to isoniazid and rifampin, plus any fluoroquinolone and at least one of three injectable second-line drugs

Distribution of cases by year

Demographic data

Country of Origin		Ethnicity	
Portugal	6	African	6
Angola	1	Caucasian	3
Guinea-Bissau	1		
Cape Verde	1		

Tables 1 and 2- Distribution by country of origin and ethnicity of DR-TB Cases

Epidemiological data

Identified Source Contacts

Graphic 3- History of Source contacts and their characteristics

Clinical Characterization

Co-morbidities	
HIV+HBV	1
Asthma	1
Social problems	3

Table 3- Co-morbidities

BCG Immunization Status

Clinical Presentation

Treatment , Follow-up and Outcomes

Case	Resistance Profile	2nd line TB drugs	Treatment duration (months)	Adhesion	Adverse effects of TB drugs	Outcome
1	DR-TB (poliresistance)	✓	5	under treatment	neutropenia; anemia	✓
2	DR-TB		5	irregular*		✓
3	DR-TB		7	under treatment		✓
4	DR-TB		¥	treated¥		¥
5	DR-TB		9	treated		Sequelae:bronchiectasis
6	DR-TB (poliresistance)		9	treated		✓
7	MDR-TB	✓	18	treated	hypoacusia	✓
8	MDR-TB	✕		✕		✕
9	XDR-TB	✓	21	treated	medullary hypoplasia, synovitis	✓

Table 5- Treatment, follow-up and outcomes of the 9 DR-TB cases

*Patient missed several follow-up appointments; ¥ Patient had multiple family members infected, was readmitted a month after the diagnosis, after discharge from 2nd admission started direct observation therapy program in primary care setting, had drug susceptible TB 12 years later as an adult, ✕Patient was lost to follow-up

Conclusions: Our results were similar to those found in previous studies. Second-line anti-TB therapy was associated with more adverse effects but also with a good outcome. Although culture and DST are the gold standard, molecular tests allow earlier detection of TB and multidrug-resistance.