

Introduction

Multi-drug resistance in *Mycobacterium tuberculosis* infection (MDR-TB) is defined as resistance to both rifampicin and isoniazid and it has multiple complications and carries high risk for mortality, some of these complications like cavitated lesions, bronchiectasis and persistence of positive smears need surgical intervention for sterilization and for a appropriate evolution of the clinical case, we present the results of five patients who underwent surgery or were evaluated in our institution after their intervention.

Methods

We searched in the database of our institution for patients who had diagnosis of MDR-TB and crossed the information with those of the patients who were taken to operation room and underwent pneumonectomy, lobectomy, or resection of lung parenchyma, those patients who presented both criteria had their clinical files individually evaluated for confirmation of diagnosis of pulmonary tuberculosis infection, antimicrobial resistance, the presence of positive smears, presence of immunosupresion, complications after surgery, and mortality. Separately the medical records were evaluated to evaluate the sensitivity profile of each case.

Results

Of the 5 patients who had the diagnosis of MDR-TB that were taken to surgery, 2 of them were men, all of them were in their adult age, 3 were classified as new cases of tuberculosis infection while 2 of them were relapses, 2 pneumonectomies were performed, 2 lobectomies and 1 non-anatomic bilateral resection of upper lobes of both lungs, only one of these patients was operated outside our institution, none of these patients had HIV coinfection or were taking immunosuppressive drugs, 2 patients had persistence of positive smears at the time of the surgery, 3 had cavitated lesions all of them found in the upper right lobe, and one patient had bronchiectasis of both upper lobes; the patient that was operated outside our institution presented the only complication found, he had an empyema. None of the patients died in the postoperative period and are alive until the time of submission of this article.

Results (cont.)

In the analysis of the resistance profile we found that the most common associated resistance was to streptomycin followed by ethambutol, no resistance was reported to second line antituberculous agents

Table 1: Characteristics and indications of surgery in five patients with diagnosis of MDR -TB

Patient	Age	Gender	Immune status	Type of case	Indications for surgery	Surgery	Complications after surgery	Mortality
M.P.Y.	34	F	Normal	Relapse	Relapse despite previous lobectomy	Right pneumonectomy	None	No
J.R.G.	40	M	Normal	Relapse	Bronchiectasis of both upper lobes	Non-anatomic resection of upper lobes	None	No
M.N.A.	39	F	Normal	New Case	Cavitated lesion in right upper lobe, persistence of positive smears	Upper right lobectomy	None	No
R.G.G.	34	F	Normal	New Case	Cavitated lesion in right upper lobe	Upper right lobectomy	None	No
E.L.C.	54	M	Normal	Relapse	Cavitated lesion in right upper lobe with fibrous tracts, persistence of positive smears	Right pneumonectomy	Empyema	No

Table 2: Characteristics of the antibiogram of the patients with MDR-TB that were taken to surgery

Patient Initials	Resistance profile	Sensitivity profile
M.P.Y.	INH, RMP	SM, Am, Ofx, Eto, PZA
J.R.G.	INH RMP	Am, Mfx, Cs, Eto, PZA, EMB
M.N.A.	INH, RMP, SM	EMB, Eto, Am, Cs, Mfx
R.G.G.	INH, RMP, EMB, SM	Eto, Km, Am, Cm, Cs, Ofx, PAS
E.L.C.	INH, RMP, EMB, SM	PZA, Eto, Am, Cfx, Mfx

INH isoniazid, RMP rifampicin, EMB ethambutol, PZA pyrazinamide, SM streptomycin, Am amikacin, Km kanamycin, Cm capreomycin, Cfx ciprofloxacin, Ofx ofloxacin, Mfx moxifloxacin, Eto ethionamide, Cs cycloserine, PAS p-aminosalicylic acid

Conclusions

Surgery is a viable option in the management of MDR-TB, having its best results in patients with structural alterations and persistence of positive smears, favorable results can be achieved in an institution which has a multidisciplinary group that includes thoracic surgeons along with internal medicine, pulmonologists, and infectious disease specialists.

Bibliography

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