

MDR-TB regimen , Lebanon case studies and discussions

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LEBANON – BACKGROUND

- LOCATED ON THE EASTERN COAST OF THE MEDITERRANEAN SEA
 - 10452 KM SQUARE - 4 MILLION INHABITANTS
 - UPPER MIDDLE INCOME COUNTRY
 - POPULATION GROWTH RATE :1.64
 - POPULATION UNDER 15 YEARS:28%
 - CRUDE BIRTH RATE 20.7/1000
 - CRUDE DEATH RATE 4.3/1000
 - INFANT MORTALITY 26/1000



TB SITUATION IN LEBANON 1

- 8 TB PUBLIC CONTROL CENTERS , 2 AT THE CENTRAL LEVEL IN BEIRUT,6 AT THE PROVINCIAL LEVEL
- TB AND DOTS STRATEGY
THE STRUCURE OF TB SERVICES IS BASED ON TWO LEVELS :
 - CENTRAL LEVEL: INCLUDES 2 TB CONTROL CENTERS , NATIONAL COMMITTEE,CENTRAL COMMITTEE AND SCIENTIFIC COMMITTEE
 - PROVINCIAL AND PERIPHERAL LEVEL WITH 6 TB CONTROL CENTERS RESPONSIBLE FOR PREVENTION,DIAGNOSIS, TREATMENT, RECORDING REPORTING , MONITORING AND SUPERVISION OF DOTS STRATEGY

TB SITUATION IN LEBANON 2

EPIDEMIOLOGY OF TUBERCULOSIS

- ESTIMATED INCIDENCE 10 PER 100000 INHABITANTS
- THE INCIDENCE RATE DECREASED FROM 25 IN 1993 (993CASES) TO 9.8 PER 100000 IN 2005(391 CASES)
- THE IMPACT OF HIV IS NEGLIGIBLE: TB/HIV COINFECTION 1.2/100000 , SEROPREVALENCE 0.2PER 1000 POP
- NATIONAL PRIMARY TB MDR IS 0.66%
- FIRST LAUNCH OF DOTS : END OF 1998
- DOTS ALL OVER :JUNE 2000
- 92% SUCCESS RATE 74% DETECTION RATE
- LAUNCH OF DOTS PLUS : 20 MAY 2005
- PAL STRATEGY: ONGOING

PREVALENCE OF PRIMARY MDR IN LEBANON(July2002-April2004)

TOTAL NUMBER	LEBANESE	NON LEBANESE	LEB + NON LEB
	150	40	190
% MDR	0.66	2.50	1

CULTURE & DST RESULT OF 21 PREVIOUSLY TREATED TB CASES(July2002-April2004)

MOTT(1) NO GROWTH(4) 5 cases	Isonia zid(H)	Rifampin (R)	Streptomy cin(S)	Ethambut ol(E)
LEBANESE(2) Palestinian(3) 5	R	R	R	R
2 (SYR+PAL)	R	R	R	S
Lebanese1	R	R	S	R
Lebanese2	R	R	S	S
Lebanese(1)	R	S	R	R
Lebanese(1)	R	S	S	S
Leb(3)Iraqi(1)	S	S	S	S

PREVALENCE OF SECONDARY MDR TB CASES (2002-2004)

- 10 MDR CASES(5 Lebanese, 4 Palestinian and 1 Syrian)
- THE PREVALENCE IS 62.5%

SELECTION OF MDR-TB PATIENTS(CULTURE & DST)

NEW CASES

- SMEAR STILL POSITIVE AT THE END OF THE 3rd MONTH
- SMEAR POSITIVE IN CONTACT WITH MDR-TB PATIENT
- FAILURE AFTER THE END OF THE 5TH MONTH
- RETURN AFTER DEFAULTER (more than 2 months)

PREVIOUSLY TREATED CASES

- RELAPSE AFTER A FULL COURSE OF TREATMENT OR RETREATMENT
- CHRONIC CASES

TREATMENT OF MDR –TB PATIENTS (1)

- REGIMEN DESIGN :

This regimen

- depends on anti-TB Drugs that were used in Lebanon and on the prevalence of resistance to these drugs.
- should include 2 phases(6 months intensive and 18 months continuation).
- should consist of at least 4 second–line anti-TB drugs ,on a daily basis , of which one is an injectable form and used during the first 6 months.
- should take in consideration the body weight and the medical situation of the patient.

TREATMENT OF MDR –TB PATIENTS (2)

- REGIMEN ADOPTED :

1-Intensive phase: 6 months, Kanamycin, Ethionamide, Cycloserine, Ofloxacin, Ethambutol , Pyrazinamide

2-Continuation phase: 18 months, ethionamide, cycloserine, ofloxacin, ethambutol

- WHERE ARE THE PATIENT TREATED :

1-during the intensive phase: sanatorium

2-during the continuation phase : at home

keep the patient at the sanatorium if: social case, drug side effects or disease complications

FOLLOW-UP MONITORING & SUPERVISION

- During the intensive phase, on monthly basis

- 1-Smear and culture
- 2-blood analysis (liver & kidney)
- 3-eye & ear examinations
- 4-general examination
- 5-chest X-ray every 2 months

- During the continuation phase

- 1-perform smear and culture examination every 2 months
- 2- order chest X-ray every 6 months
- 3- other examinations if needed

DOTS- plus strategy in Lebanon

- Close collaboration with WHO, GLC and IDA
- Second line drugs received in May 2005
- From May 2005 till October 2006, 10 patients were enrolled to the strategy and followed the standard regimen adopted for MDR –TB patients in Lebanon ,plus one patient that his initial phase was started in Jordan
- 9 out of the 10 patients converse their smear and culture between the 3rd and the 6th month of treatment ,except one who is still positive.

THE CASE THAT IS STILL POSITIVE (male 40 years)

- 13/2/1998 :Out patient New S+, 2 ERHZ (S-) , 1 month RH
 - 4/6/1999 : Sanatorium S+, Culture not done,2SERHZ(S-) 1ERHZ
 - 13/3/2000 : Sanatorium S+, Culture and DST= Resistant to ERHZ, sensitive to S,PAS, Ciprofloxacin, clarithromycin – regimen used: S(3 months) with H, Cipro, clarithro for 6 months, smear remain positive, add Ethambutol ,
- DST of 7/11/2000 = Resistant to ERHZ and Cipro, sensitive to S,PAS and Clarithro, readjustment of the treatment: H,E,S and clarithro
- DST of 25/4/2001= Resistant to R,H,Z,S,E and cipro, sensitive to clarithro and PAS
- DST of 4/6/2001 similar to the previous
- leave the Sanatorium in 5/7/2001(S+) under ERHZ Cipro and clarithro
- 12/9/2001 : surgical treatment left lung, followed by 6months ERHZ and 4months RH(UNKNOWN PERIOD)
 - 6/9/2002 : massive hemoptesia, hospitalization in university hospital, treated by PAS, Clarithro,ethionamide,ofloxacin for 6 months
 - 7/2/2004 : Sanatorium , lack of PAS, New treatment : RHZS and Ethionamide , stop S after 2 months (side effect) and H, and then we gave Isosone
 - 8/7/2004 : Add E and Augment in
 - 18/12/2004 : stop augment in , lack of ethionamide but we add PAS and cipro, and one week later we stop R and E,and the last treatment before our DOTS-Plus strategy was Z ISO CIPRO PAS CLARITHRO
 - 24/5/2005 : I,Z,Eth,cyclo,ofl,kana

S= ++ ++ + - - - + + - + - + + + + -

C= + + + + +.....

Intermittent treatment : side effects ++++++

THANK YOU