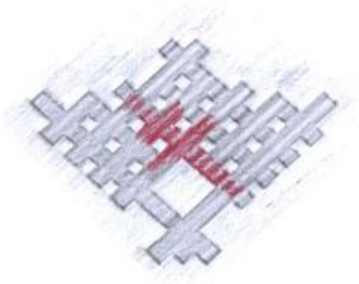
aslimnica
RIGA EAST UNIVERSITY HOSPITAL



Лечение ЛУ-ТБ в специальных ситуациях

Линда Баркане

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Структура лекции

- Беременность
- Почечная недостаточность
- Болезни печени
- Психические заболевания
- Зависимость от алкоголя и наркотиков

ЛЕЧЕНИЕ МЛУ-ТБ И БЕРЕМЕННОСТЬ

ТБ / МЛУ-ТБ И БЕРЕМЕННОСТЬ

- **ТБ и беременность**
  - плохие результаты лечения
  - повышенный риск
    - преждевременные роды
    - низкий вес при рождении
    - ограничение внутриутробного развития
    - перинатальная смерть

J Thorac Dis. 2018 May; 10(5): 3102–3118. doi: 10.21037/jtd.2018.05.11

ТЕСТЫ НА БЕРЕМЕННОСТЬ

- Перед началом терапии у женщин репродуктивного возраста, повторно - по показаниям

Методы предотвращения беременности

- Презерватив
- Гормональные средства (R)
- Медицинская стерилизация

ЛЕЧЕНИЕ МЛУ-ТБ И БЕРЕМЕННОСТЬ I

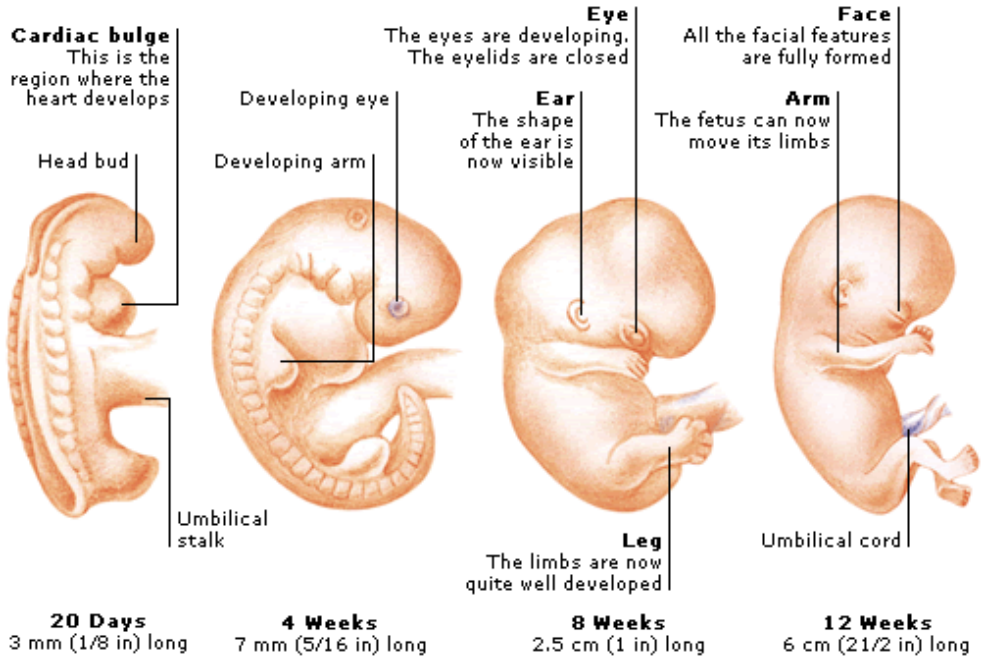
- Беременность не является противопоказанием для лечения МЛУ-ТБ.

- Необходимо оценить срок беременности и тяжесть МЛУ-ТБ.

ЛЕЧЕНИЕ МЛУ-ТБ И БЕРЕМЕННОСТЬ 2

Основные принципы:

1. Польза и риски лечения:
   – Следует по возможности отложить начало лечения на второй триместр.



ЛЕЧЕНИЕ МЛУ-ТБ И БЕРЕМЕННОСТЬ 3

2. В лечении следует использовать, по крайней мере, от трех до четырех эффективных лекарственных препаратов;

3. Избегать инъекционных медикаментов:
   - Риск ототоксичности аминогликозидов;
   - В неизбежных случаях – Cm 3 х в неделю;

ЛЕЧЕНИЕ МЛУ-ТБ И БЕРЕМЕННОСТЬ 4

5. Избегать Eth/Pto:
   - В исследованиях на животных – тератогенный
   - Может усилить тошноту и рвоту.

6. Если жизнь матери под угрозой – рассмотреть возможность легального аборта.

ЛЕЧЕНИЕ МЛУ-ТБ И БЕРЕМЕННОСТЬ 5

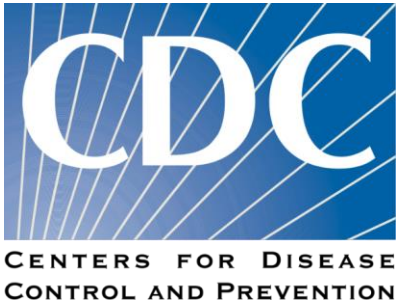
- Нет данных о вреде длительного приёма FQ, Cs/Trd, PAS, Amx/Clv во время беременности;

- После родов – усилить лечение. Можно возобновить инъекционные препараты и Pto;

Table 1. Food and Drug Administration Category and World Health Organization Grouping of Drugs Used for Tuberculosis Treatment

Drug Name	FDA Category[a]	WHO Group[b]	Crosses Placenta (cord: maternal ratio)	Fetal Toxicity	Breastfeeding Compatible	Teratogenic in Reproductive Toxicity Studies	Concerns in Pregnancy and Postpartum
Isoniazid	C	1	Yes	CNS defects	Yes	No	Possible hepatotoxicity
Rifampin	C	1	Yes	Hemorrhage	Yes (minimal passage)	Yes[c]	Possible postpartum hemorrhage; interacts with NNRTIs, PIs, decreases efficacy of hormonal contraceptives
Ethambutol	C	1	Yes	Jaundice	UD (minimal passage)	Yes (low incidence)	. . .
Pyrazinamide	C	1	UD	Jaundice	UD (excreted in breast milk)	UD	. . .
Aminoglycosides							
Capreomycin	C	2	Yes	. . .	UD	Yes[d]	. . .
Streptomycin	D	2	Yes	Ototoxicity, thrush, diarrhea	Yes (minimal passage)	No	. . .
Kanamycin	D	2	Yes	Ototoxicity	Yes (minimal passage)	No	. . .
Amikacin	D	2	Yes	. . .	UD	UD	. . .
Levofloxacin	C	3	Yes	. . .	Yes	No[e]	. . .
Moxifloxacin	C	3	Yes	. . .	UD	No[e]	. . .
Gatifloxacin	C	3	UD	. . .	UD	No	. . .
Ethionamide/ Prothionamide	C	4	UD	Developmental anomalies	UD	Yes	Developmental abnormalities in human case series
P-aminosalicylic acid	C	4	UD	Diarrhea	No	No	. . .
Cycloserine	C	4	UD	. . .	Yes	UD	Congenital sideroblastic anemia
Terizidone	. . .	4	UD	. . .	UD	UD	. . .
Thiacetazone	. . .	5	UD	. . .	UD	UD	. . .
Clofazimine	C	5	UD	Reversible skin pigmentation	UD	No	. . .
Clarithromycin	C	5	Yes (0.15)	. . .	UD	No[f]	. . .
Amoxicillin- clavulanic acid	B	5	Yes (0.56)	Necrotizing enterocolitis, transaminitis	UD	No	. . .
Linezolid	C	5	UD	. . .	UD	No	. . .
Imipenem	C	5	UD	. . .	UD	No	. . .
Rifabutin	B	. . .	UD	. . .	UD	No	. . .
High-dose isoniazid	C	. . .	Yes (0.73)	CNS Defects	UD	No[g]	Possible hepatotoxicity
Bedaquiline	B	. . .	UD	. . .	UD[h]	No	Drug accumulation in tissues
Rifapentine	C	. . .	UD	. . .	UD	Yes[i]	Possible postpartum hemorrhage; interacts with NNRTIs, PIs, may decrease efficacy of hormonal oral contraceptives
Delamanid	Not Approved[j]	. . .	UD	. . .	UD	Yes[j]	Embryofetal toxicity at maternally toxic doses in rabbits; breast milk concentration 4 times higher than blood in rats

Категория A	Контролируемые исследования не выявили риска для плода. Вероятность вредного воздействия на плод мала.	
Категория B	Опыты на животных не выявили риска для плода, исследования на беременных отсутствуют. В эту же категорию входят лекарственные препараты, оказывающие вредное воздействие на плод у животных, но не влияющие на человеческий плод.	Amx/Clv Rifabutin Bedaquiline
Категория C	Исследования на животных выявили неблагоприятное действие на плод, данные о влиянии на человеческий плод отсутствуют. Также к этой группе относятся препараты, исследование которых не проводилось ни на человеке, ни на животных. Препараты категории С должны назначаться только тогда, когда ожидаемая польза от их применения превышает потенциальный риск для плода.	Levofloxacin Moxifloxacin Gatifloxacin Clofazimine Cycloserine Linezolid Imipenem PAS Isoniazid Ethambutol Rifampicin Pyrazinamide Ethionamide Prothionamide Capreomycin
Категория D	Имеются данные о риске для плода, но польза от применения данного препарата оправдывает возможное негативное воздействие на плод. К этой категории препаратов относятся средства, применение которых необходимо либо при угрозе жизни беременной женщины, либо при наличии серьезного сопутствующего заболевания, когда более безопасные препараты отсутствуют или неэффективны.	Streptomycin Amikacin Kanamycin



CENTERS FOR DISEASE CONTROL AND PREVENTION

- **CAUTION: Bedaquiline** may be considered for children, HIV-infected persons, pregnant women, persons with extrapulmonary TB, and persons with co-morbid conditions on concomitant medications when an effective treatment regimen cannot otherwise be provided. Further study is required before general use of bedaquiline can be recommended in these populations.

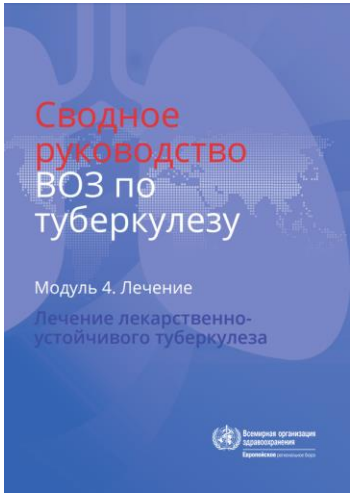
ACCEPTED MANUSCRIPT

Maternal and infant outcomes among pregnant women treated for multidrug/rifampicin-resistant tuberculosis in South Africa

Marian Loveday ✉, Jennifer Hughes, Babu Sunkari, Iqbal Master, Sindisiwe Hlangu, Tarylee Reddy, Sunitha Chotoo, Nathan Green, James A Seddon

Clinical Infectious Diseases, ciaa189, https://doi.org/10.1093/cid/ciaa189

Published: 06 March 2020 **Article history** ▾



- N=108 women.
- 88 (81%) were HIV-infected.
- Favorable treatment outcomes 72 (67%) women.
- Fifty-eight (54%) women received bedaquiline and 49 (45%) babies were exposed to bedaquiline *in utero*.

- **Low birthweight** was reported in more babies exposed to bedaquiline compared to babies not exposed (45% vs 26%; p=0.034).
- Of the 86 children evaluated at 12 months, 72 (84%) had favourable outcomes; 88% of babies exposed to bedaquiline were thriving and developing normally compared to 82% of the babies not exposed.

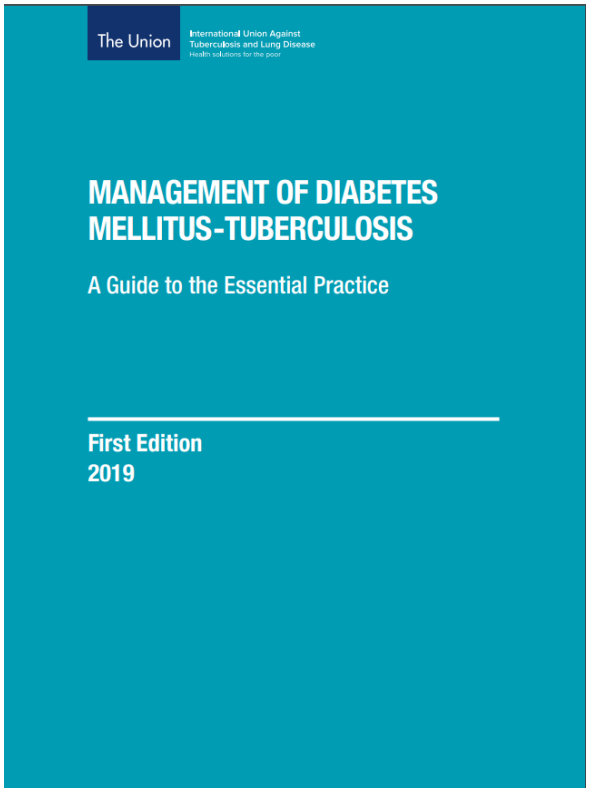
ЛЕЧЕНИЕ МЛУ-ТБ И БЕРЕМЕННОСТЬ [6]

- Не влияет на продолжительность лечения;
- Не рекомендуется кормление грудью – лекарство 2-го ряда проникает в грудное молоко;
- Новорожденный должен получить вакцину БЦЖ.

ЛЕЧЕНИЕ МЛУ-ТБ И САХАРНЫЙ ДИАБЕТ

ЛЕЧЕНИЕ МЛУ-ТБ И САХАРНЫЙ ДИАБЕТ

- Высокий риск менее благоприятного исхода лечения;
- Потенцирует побочные явления:
  - Периферическая полиневропатия
  - Почечная недостаточность
- **ТБ,** Pto усложняет гликемический контроль;



ЛЕЧЕНИЕ МЛУ-ТБ И САХАРНЫЙ ДИАБЕТ$_2$

- При лечении МЛУ-ТБ можно принимать все противотуберкулезные препараты:
  - Более частый контроль креатинина и К.

- Хороший контроль диабета!

- Лечение:
  - Метформин,
  - препараты сульфанилмочевины,
  - Инсулин (HbA1c >10% or FBG >15 mmol/l (>270 mg/dl)).

Table 6.1: Targets for glycaemic control during TB treatment

Measurement	*Target*
Fasting blood (capillary) glucose	<10 mmol/l (<180 mg/dl)
HbA1c	<8%

Table 6.2: Common glucose-lowering drugs used for managing DM in TB patients

Characteristic	*Metformin*	*Sulphonylurea derivates*	*Insulin*
Drug of choice	First choice	Add-on Used in case there is a contraindication or intolerance to metformin	Use if targets for HbA1c or FBG cannot be reached or if there is symptomatic hyperglycaemia
Risk of hypoglycaemia	No	Yes	Yes
Starting dose (od = once a day; bid = twice a day)	500 mg od or bid, titrated to a maximum dose of 2,000 mg daily	Gliclazide 40–80 mg OD Glibenclamide 2.5–5 mg OD Glimepiride 1–2 mg OD Glipizide 5 mg OD	10 units basal insulin per day as the starting point
Interaction with rifampicin	Not clinically relevant	Yes, 30–80% lower efficacy with rifampicin	None
Main side effects	Gastrointestinal Lactic acidosis	Hypoglycaemia	Hypoglycaemia
Use in reduced kidney function (GFR = glomerular filtration rate)	Dose adjustment if eGFR <45 ml/min Contraindication if eGFR <30 ml/min *	Increased risk of hypoglycaemia Preference gliclazide	Can be safely used
Cardiovascular events	Recognised benefit	Neutral	Neutral

* eGFR = estimated glomerular filtration rate.

if measurement of eGFR cannot be done, metformin should not be given to patients with known chronic kidney disease without approval from their treating physician.

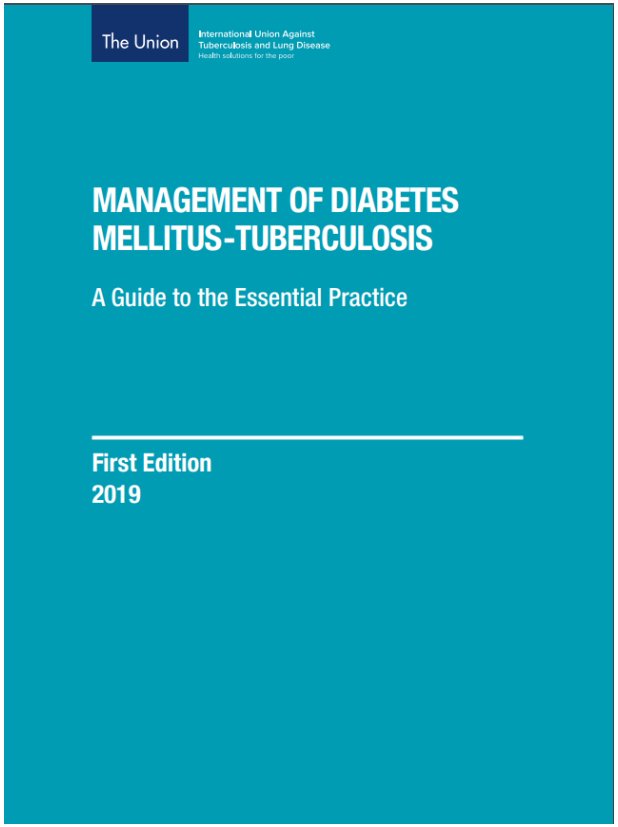
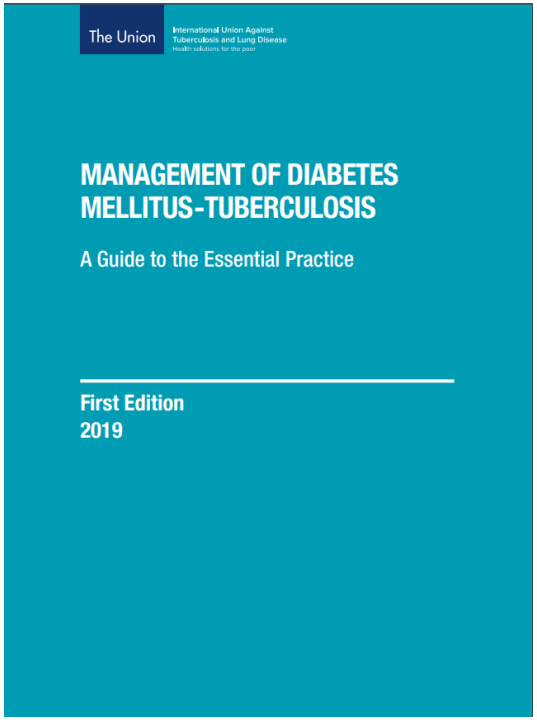


Table 6.3: Management of HbA1c or blood glucose at the start of TB treatment

HbA1c or FBG at the start of TB treatment	*TB patient diagnosed with new DM*	*TB patient already receiving treatment for DM*
If HbA1c <8% or FBG <10.0 mmol/l (180 mg/dl)	No further immediate action is taken; re-assess blood glucose levels at 2 months and again at the end of TB treatment	No further action is taken; the patient continues on current medication for DM
If HbA1c ≥8% but less than 10% or FBG ≥10 mmol/l (180 mg/dl) but less than 15 mmol/l (270 mg/dl)	Start metformin 500 mg once a day, reassess in two weeks and increase the dose to 500 mg twice a day or refer if blood glucose levels have not improved	Intensify current glucose-lowering treatment and reassess one–two weeks later
If HbA1c ≥10% or FBG ≥15 mmol/l (270 mg/dl)	Start metformin 500 mg twice a day and seek specialist advice	Seek specialist advice and consider the need for hospital admission for better glucose control



OPEN ACCESS PEER-REVIEWED

RESEARCH ARTICLE

Glycemic Control and the Risk of Tuberculosis: A Cohort Study

Pin-Hui Lee, Han Fu, Ting-Chun Lai, Chen-Yuan Chiang, Chang-Chuan Chan, Hsien-Ho Lin

Published: August 9, 2016 • http://dx.doi.org/10.1371/journal.pmed.1002072

- Тайвань, 123 546 пациента;
- Время наблюдения - 2005 – 2015 год;
- 327 случаев заболевания туберкулезом;
- Пациенты с высокой гликемией (130 мг/дл) – aHR 2,21;
- Пациенты с нормальной гликемией (< 130) – риск не отличается от риска для пациентов без диабета;
- При улучшении уровня гликемии снижается риск заболеть ТБ

Tegegne et al. Systematic Reviews (2018) 7:161
https://doi.org/10.1186/s13643-018-0828-0

Systematic Reviews

RESEARCH Open Access

Association between diabetes mellitus and multi-drug-resistant tuberculosis: evidence from a systematic review and meta-analysis

Balewgizie Sileshi Tegegne[1,2], Melkamu Merid Mengesha[1*], Andreas A. Teferra[3], Mamaru Ayenew Awoke[4] and Tesfa Dejenie Habtewold[2]

Abstract

Background: Diabetes mellitus (DM) poses a significant risk for the development of active tuberculosis (TB) and complicates its treatment. However, there is inconclusive evidence on whether the TB-DM co-morbidity is associated with a higher risk of developing multi-drug-resistant tuberculosis (MDR-TB). The aim of this meta-analysis was to summarize available evidence on the association of DM and MDR-TB and to estimate a pooled effect measure.

Methods: PubMed, Excerpta Medica Database (EMBASE), Web of Science, World Health Organization (WHO), and Global Health Library database were searched for all studies published in English until July 2018 and that reported the association of DM and MDR-TB among TB patients. To assess study quality, we used the Newcastle-Ottawa Scale for cohort and case-control studies and the Agency for Healthcare Research and Quality tool for cross-sectional studies. We checked the between-study heterogeneity using the Cochrane Q chi-squared statistic and I^2 and examined a potential publication bias by visual inspection of the funnel plot and Egger's regression test statistic. The random-effect model was fitted to estimate the summary effects, odds ratios (ORs), and 95% confidence interval (CIs) across studies.

Results: This meta-analysis of 24 observational studies from 15 different countries revealed that DM has a significant association with MDR-TB (OR = 1.97, 95% CI = 1.58–2.45, I^2 = 38.2%, *P* value for heterogeneity = 0.031). The significant positive association remained irrespective of country income level, type of DM, how TB or DM was diagnosed, and design of primary studies. A stronger association was noted in a pooled estimate of studies which adjusted for at least one confounding factor, OR = 2.43, 95% CI 1.90 to 3.12. There was no significant publication bias detected.

Conclusions: The results suggest that DM can significantly increase the odds of developing MDR-TB. Consequently, a more robust TB treatment and follow-up might be necessary for patients with DM. Efforts to control DM can have a substantial beneficial effect on TB outcomes, particularly in the case of MDR-TB.

Systematic review registration: PROSPERO CRD42016045692.

Keywords: Diabetes mellitus, Tuberculosis, Multi-drug-resistant tuberculosis, Systematic review, Meta-analysis

INT J TUBERC LUNG DIS 23(7):783–796

http://dx.doi.org/10.5588/ijtld.18.0433

STATE OF THE ART SERIES
TB and diabetes
Series editors: Matthew Magee, Hsien-Ho Lin
NUMBER 8 IN THE SERIES

The effects of diabetes on tuberculosis treatment outcomes: an updated systematic review and meta-analysis

P. Huangfu,* C. Ugarte-Gil,†,‡ J. Golub,§ F. Pearson,* J. Critchley*

*Population Health Research Institute, St George's University of London, London, UK; †Facultad de Medicina Alberto Hurtado and Instituto de Medicina Tropical Alexander von Humboldt, Universidad Peruana Cayetano Heredia, Lima, Peru; ‡Department of International Health, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD, §Centre for Tuberculosis Research, Johns Hopkins School of Medicine, Baltimore, MD, USA

Previous articles in the series: **Editorial:** Magee M, Bao J, Hafner R, Lin Y, Lin H-H. Curbing the tuberculosis and diabetes co-epidemic: strategies for the integration of clinical care and research. Int J Tuberc Lung Dis 2018; 22: 1111–1112. **Articles: No 1:** Harries A D, Lin Y, Kumar A M V, Satyanarayana S, Zachariah R, Dlodlo R A. How can integrated care and research assist in achieving the SDG targets for diabetes, TB and HIV/AIDS? Int J Tuberc Lung Dis 2018; 22: 1117–1126. **No 2:** Magee M J, Salindri A D, Gujral U P, et al. Convergence of non-communicable diseases and tuberculosis: a two-way street? Int J Tuberc Lung Dis 2018; 22: 1258–1268. **No 3:** van Crevel R, Koesoemadinata R, Hill P C, Harries A D. Clinical management of combined tuberculosis and diabetes. Int J Tuberc Lung Dis 2018; 22: 1404–1410. **No 4:** Alexander M, Gupta A, Mathad J S. Is there a connection between gestational diabetes mellitus, human immunodeficiency virus infection, and tuberculosis? Int J Tuberc Lung Dis 2019; 23: 19–25. **No 5:** Huangfu P, Laurence Y V, Alisjahbana B, et al. Point-of-care HbA1c for diabetes management and its accuracy among TB patients: a study in four countries. Int J Tuberc Lung Dis 2019; 23: 283–297. **No 6:** Bao J, Sha W, Zhang W-H, Zhang T, Muldoon K, Hafner R. Curbing diabetes and tuberculosis co-epidemic: role of China. Int J Tuberc Lung Dis 2019; 23: 663–668. **No 7:** Martinez N, Kornfeld H. Tuberculosis and diabetes: from bench to bedside and back. Int J Tuberc Lung Dis 2019; 23: 669–677.

SUMMARY

TB-DM patients compared to those with TB alone were included. Two reviewers independently assessed titles, abstracts, and extracted data. Culture conversion at two/three months, all-cause mortality, treatment failure, relapse and multidrug-resistant TB (MDR-TB) were evaluated using random effects meta-analysis with generic inverse variance. Heterogeneity was explored using subgroup analyses and meta-regression.

RESULTS: One hundred and four publications were identified. Sixty-four studies including 56 122 individuals with TB-DM and 243 035 with TB, reported on death. Some outcomes showed substantial heterogeneity between studies, which we could not fully explain, though confounding adjustment and country income level accounted for some of the differences. TB-DM patients had higher odds of death (OR 1.88, 95%CI 1.59–2.21) and relapse (OR 1.64, 95%CI 1.29–2.08) compared to TB patients. More limited evidence suggested TB-DM patients had double the risk of developing MDR-TB (OR 1.98, 95%CI 1.51–2.60).

CONCLUSION: DM is associated with increased risks of poor TB treatment outcomes, particularly mortality, and may increase risk of developing primary MDR-TB. Cost-effectiveness of interventions to enhance TB-DM treatment should be assessed.

KEY WORDS: TB; DM; treatment outcomes; epidemiology; public health

TUBERCULOSIS (TB) REMAINS an important public health issue globally; in 2017, there were an estimated 10 million incident cases and 1.6 million

ЛЕЧЕНИЕ МЛУ-ТБ И ПОЧЕЧНАЯ НЕДОСТАТОЧНОСТЬ

ПОЧЕЧНАЯ НЕДОСТАТОЧНОСТЬ

- Может быть хроническая – как последствие хронического заболевания (в том числе и ТБ), или острая – при приёме инъецируемых лекарств;

- Режим лечения с учетом СКФ (скорости клубочковой фильтрации)

СКФ - СКОРОСТЬ КЛУБОЧКОВОЙ ФИЛЬТРАЦИИ

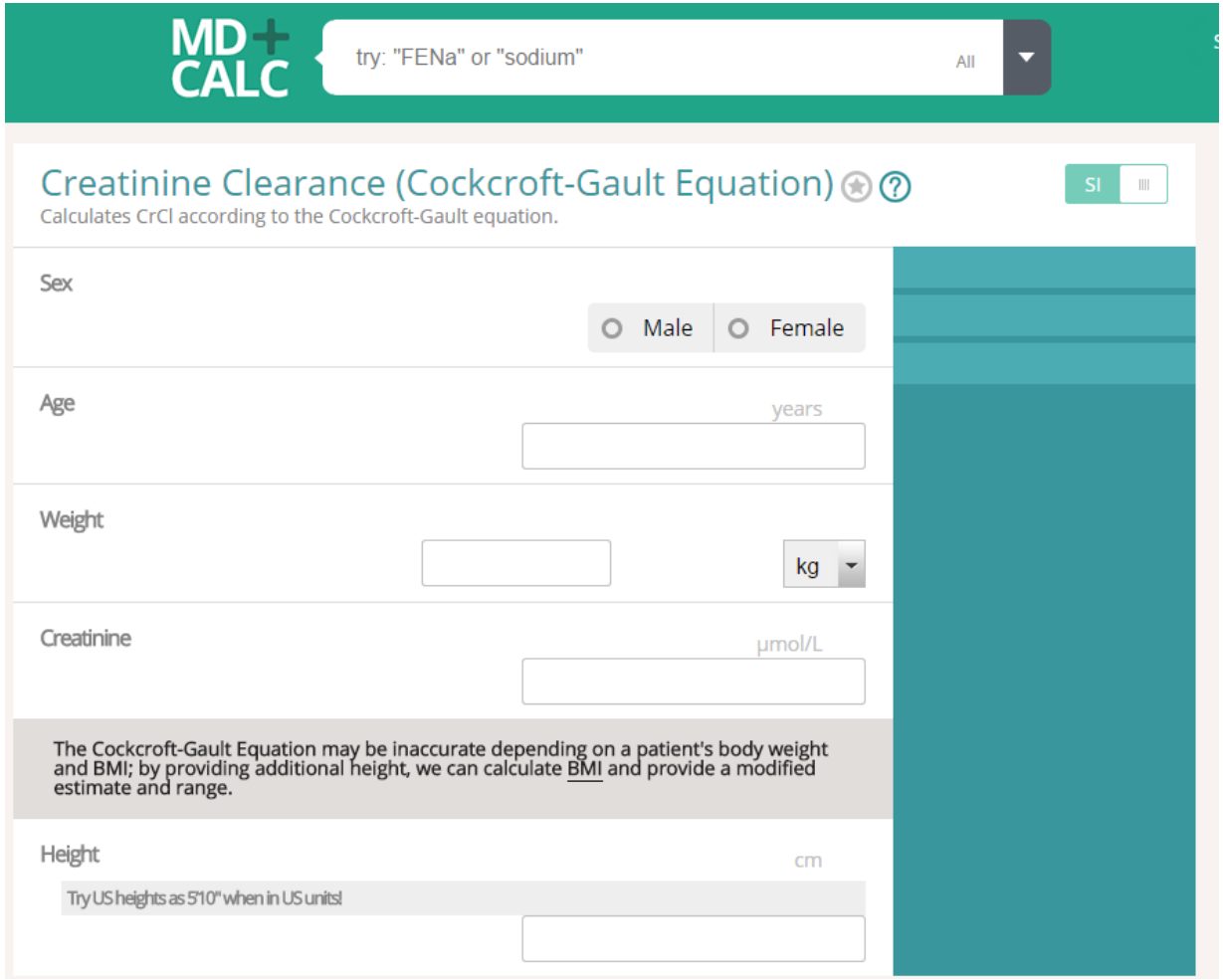


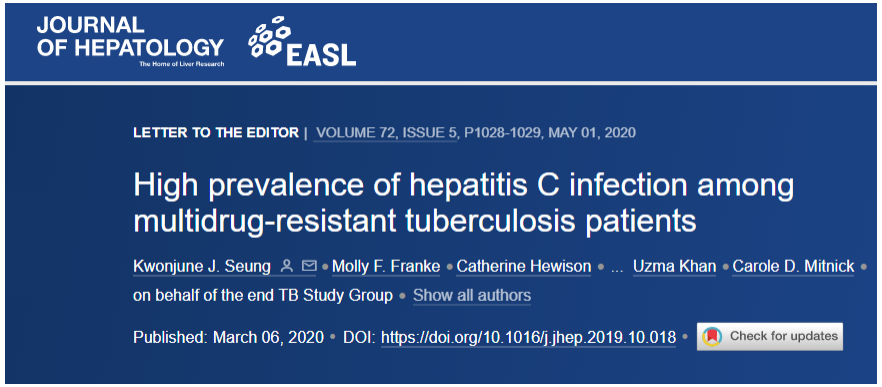
TABLE 7.1 **Adjustment of anti-TB drugs in renal insufficiency**[a]

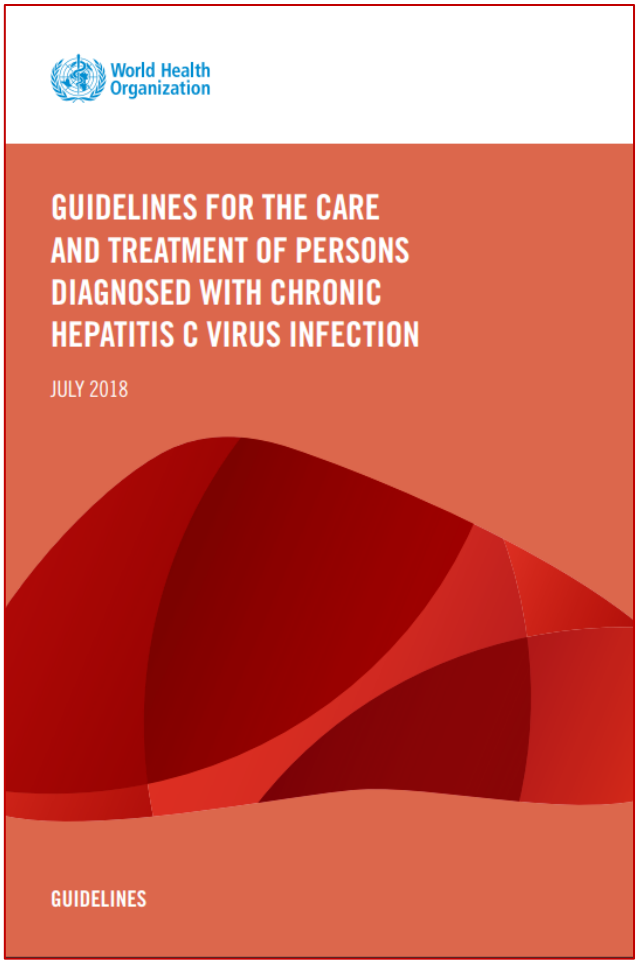
DRUG	RECOMMENDED DOSE AND FREQUENCY FOR PATIENTS WITH CREATININE CLEARANCE <30 ML/MIN OR FOR PATIENTS RECEIVING HAEMODIALYSIS (UNLESS OTHERWISE INDICATED DOSE AFTER DIALYSIS)
Isoniazid	No adjustment necessary
Rifampicin	No adjustment necessary
Pyrazinamide	25–35 mg/kg per dose three times per week (not daily)
Ethambutol	15–25 mg/kg per dose three times per week (not daily)
Rifabutin	Normal dose can be used, if possible monitor drug concentrations to avoid toxicity.
Rifapentine	No adjustment necessary
Streptomycin	12–15 mg/kg per dose two or three times per week (not daily)[b]
Capreomycin	12–15 mg/kg per dose two or three times per week (not daily)[b]
Kanamycin	12–15 mg/kg per dose two or three times per week (not daily)[b]
Amikacin	12–15 mg/kg per dose two or three times per week (not daily)[b]
Ofloxacin	600–800 mg per dose three times per week (not daily)
Levofloxacin	750–1000 mg per dose three times per week (not daily)
Moxifloxacin	No adjustment necessary
Gatifloxacin	400 mg three times a week
Cycloserine	250 mg once daily, or 500 mg/dose three times per week[c]
Terizidone	Recommendations not available
Prothionamide	No adjustment necessary
Ethionamide	No adjustment necessary
Para-aminosalicylic acid[e]	4 g/dose, twice daily maximum dose[d]
Bedaquiline	No dosage adjustment is required in patients with mild to moderate renal impairment (dosing not established in severe renal impairment, use with caution).
Delamanid	No dosage adjustment is required in patients with mild to moderate renal impairment (dosing not established in severe renal impairment, use with caution).
Linezolid	No adjustment necessary
Clofazimine	No adjustment necessary
Amoxicillin/clavulanate	For creatinine clearance 10–30 ml/min dose 1000 mg as amoxicillin component twice daily; for creatinine clearance <10 ml/min dose 1000 mg as amoxicillin component once daily
Imipenem/cilastin	For creatinine clearance 20–40 ml/min dose 500 mg every 8 hours; for creatinine clearance <20 ml/min dose 500 mg every 12 hours
High dose isoniazid	Recommendations not available
Clarithromycin	500 mg daily

ЛЕЧЕНИЕ МЛУ-ТБ И БОЛЕЗНИ ПЕЧЕНИ

ЛЕЧЕНИЕ МЛУ-ТБ И БОЛЕЗНИ ПЕЧЕНИ ,

- Хронический гепатит – B, C
- Лекарственный гепатит
- Острый гепатит
- Хронический алкоголизм





ЛЕЧЕНИЕ МЛУ-ТБ И БОЛЕЗНИ ПЕЧЕНИ 2

- **Лекарственный гепатит**
  - чаще при приёме медикаментов 1–го ряда: H, R, Z;
  - при приёме медикаментов 2-го ряда – Eth/Pto, PAS, редко – FQ (Mfx);

- **Хронический гепатит**
  - Если состояние пациента позволяет, режим лечения остаётся без изменений, но при этом риск токсического гепатита высок;

ЛЕЧЕНИЕ МЛУ-ТБ И БОЛЕЗНИ ПЕЧЕНИ 3

- При **остром гепатите** следует отложить лечение МЛУ-ТБ до стабилизации показателей

- Если нельзя отложить, следует принимать 4 эффективных препарата (щадящих печень)

ЛЕЧЕНИЕ МЛУ-ТБ И ПСИХИЧЕСКИЕ ЗАБОЛЕВАНИЯ

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doi: 10.5588/ijtld.18.0530

PMCID: PMC6558966
NIHMSID: NIHMS1031798
PMID: 31097069

Integrating tuberculosis and mental health services: global receptivity of national tuberculosis program directors

A. C. Sweetland,[*] J. Galea,[†] S. S. Shin,[‡] C. Driver,[§] R. A. Dlodlo,[¶] A. Karpati,[§] and M. L. Wainberg[*], The Union TB & Mental Health Working Group

MENTAL AND SUBSTANCE use disorders frequently co-exist with tuberculosis (TB),[1–4] and are associated with delays in seeking care,[5] missed doses,[2] poor quality of life, disability and loss to follow-up.[6] Mental and substance use disorders may thus increase the risk of treatment failure[7] and drug resistance[8] and, consequently, greater morbidity, mortality,[7,9] and community transmission.[3,10,11] They therefore represent a significant barrier to TB elimination. Individuals with TB have a significantly higher risk for depression than the general population[1–3,12,13] due to biologic, social and behavioral factors.[10] Individuals co-infected with the human immunodeficiency virus (HIV) have an even greater risk of depression,[14] which is significantly associated with worse health status involving mobility, pain and discomfort, self-care, cognition, interpersonal activities, sleep and energy.[12]

CONCLUSIONS

Go to:

We reported findings from the first survey on the integration of TB and mental health care services by NTP directors. Our most noteworthy finding was the lack of attention to mental health and substance use in current practice, but high receptivity to integrating such services into TB care and prevention. Our findings suggest that the integration of TB and mental health care should be supported as part of TB elimination goals. We identified significant obstacles that need to be addressed: low levels of awareness and inadequate prioritization of mental health, limited resources, and lack of training. Future work should leverage the promising receptivity among NTP directors and the momentum of the Global Mental Health Movement to address the obstacles presented in our study.

ЛЕЧЕНИЕ МЛУ-ТБ И ПСИХИЧЕСКИЕ ЗАБОЛЕВАНИЯ I

- Перед началом лечения рекомендуется осмотр психиатра;
- При констатировании психических изменений – **адекватное лечение**;
- При лечении МЛУ-ТБ существует высокий риск тревоги и депрессии:
  - ✓Медикаментозная терапия;
  - ✓Индивидуальная психотерапия;
  - ✓Групповая психотерапия

ЛЕЧЕНИЕ МЛУ-ТБ И ПСИХИЧЕСКИЕ ЗАБОЛЕВАНИЯ $_2$

- Cs/Trd - можно назначать;
- Потенциальная польза выше, чем уровень риска;
- Строгое наблюдение и хорошая коммуникация с психиатром;
- Чаще психиатрические побочные явления:
  - ✓ Психоз,
  - ✓ Суицид.

Annals of General Psychiatry

BMC

Ann Gen Psychiatry. 2020; 19: 30.
Published online 2020 May 7. doi: 10.1186/s12991-020-00281-8

PMCID: PMC7206806
PMID: 32419837

The prevalence of depression among patients with tuberculosis: a systematic review and meta-analysis

Bereket Duko,[✉1,2] Asres Bedaso,[1] and Getinet Ayano[2,3]

▸ Author information ▸ Article notes ▸ Copyright and License information Disclaimer

Associated Data

▸ Data Availability Statement

Abstract

Go to:

Background

Evidence has shown that the prevalence of depression is much higher among patients with tuberculosis (TB) and this, in turn, may adversely impact compliance with anti-TB medications. Therefore, this systematic review and meta-analysis aimed to quantitatively summarize epidemiologic evidence on the prevalence of depression among patients with TB and formulate a recommendation for future clinical practice as well as research.

Results

We identified a total of 25 studies that included 4903 participants across seven countries. In our analysis, the pooled estimated prevalence of depression among TB patients was found to be 45.19% (95% CI 38.04–52.55). The prevalence was higher in MDR-TB 52.34% (95% CI 38.09–66.22) than non-MDR-TB 43.47% (95% CI 35.88–51.37) patients. We also found that the pooled prevalence of depression was higher among females 51.54% (95% CI 40.34–62.60) when compared to males 45.25% (95% CI 35.19–55.71). The pooled prevalence of depression was 45.45% as measured by HRDS, and it was 55.62%, 45.52%, and 38.36% as measured by BDI, HADS and PHQ-9, respectively.

ЛЕЧЕНИЕ МЛУ-ТБ И ЗАВИСИМОСТЬ ОТ АЛКОГОЛЯ И НАРКОТИКОВ

ЛЕЧЕНИЕ МЛУ-ТБ И ЗАВИСИМОСТЬ ОТ АЛКОГОЛЯ И НАРКОТИКОВ

- Зависимость от алкоголя не является препятствием для начала лечения;

- Следует предложить пациенту терапию от зависимости:
  - ✓ Программа Метадона, Subutex (**buprenorphine**)

INT J TUBERC LUNG DIS 22(11):1277–1285

http://dx.doi.org/10.5588/ijtld.18.0092

Alcohol consumption and risk of tuberculosis: a systematic review and meta-analysis

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UK Centre for Tobacco and Alcohol Studies, Division of Epidemiology and Public Health, University of Nottingham, Nottingham, UK

SUMMARY

OBJECTIVE: To perform a systematic review and meta-analysis of the association between alcohol consumption and risk of tuberculosis (TB).

METHODS: Medline, EMBASE and Web of Science were searched for observational studies from 2005 to April 2018. Reference lists of included studies were screened.

RESULTS: Forty-nine studies were included. Compared with people with low or no alcohol intake, the risk of TB in people with high or any alcohol consumption was increased by relative odds of 1.90 (95%CI 1.63–2.23). Substantial levels of heterogeneity were seen ($I^2 = 82\%$); however, there was no evidence of publication bias ($P = 0.54$). Sensitivity analysis restricted to studies using no alcohol drinking as a reference group found a slightly lower but still increased risk (OR 1.60, 95%CI 1.39–1.84). Subgroup analyses revealed no significant differences in relation to study design and quality, geographic location, publication year or adjustment for confounders. A pooled analysis of a further four studies reporting hazard ratios (HRs) found a nearly three-fold increase in risk of TB in relation to alcohol consumption during follow-up (HR 2.81, 95%CI 2.12–3.74). An exposure-response analysis showed that for every 10–20 g daily alcohol intake, there was a 12% increase in TB risk.

CONCLUSION: Alcohol consumption is an important risk factor for the development of TB.

KEY WORDS: alcohol; TB; meta-analysis

› Alcohol Clin Exp Res. 2006 Jan;30(1):150-4. doi: 10.1111/j.1530-0277.2006.00018.x.

Dispersion of the corrected QT and JT interval in the electrocardiogram of alcoholic patients

Naima Corović [1], Zijad Duraković, Marjeta Misigoj-Duraković

Affiliations + expand

PMID: 16433743 DOI: 10.1111/j.1530-0277.2006.00018.x

Conclusions: Persons who consume various alcoholic beverages excessively and for a long time have significantly higher dispersions of the QTc and JTc, intervals and they have a significantly higher estimation of relative risk for the prolonged QTc interval and higher QTc dispersion than the control group, i.e., higher risk of arrhythmias.

Randomized Controlled Trial > J Stud Alcohol. 2005 Jul;66(4):555-8.
doi: 10.15288/jsa.2005.66.555.

Acute alcohol intake and QT dispersion in healthy subjects

Huseyin Uyarel [1], Cagdas Ozdol, Ahmet Murat Gencer, Ertan Okmen, Nese Cam

Affiliations + expand

PMID: 16240563 DOI: 10.15288/jsa.2005.66.555

Conclusions: Heavy episodic drinking is associated with an increase in QTd and cQTd.

J Neurol. 2019; 266(12): 2907–2919.
Published online 2018 Nov 22. doi: 10.1007/s00415-018-9123-1
PMCID: PMC6851213
PMID: 30467601

Alcohol-related peripheral neuropathy: a systematic review and meta-analysis

Thomas Julian,[1] Nicholas Glascow,[1] Rubiya Syeed,[1] and Panagiotis Zis[2,3]

Conclusions

- Alcohol-related peripheral neuropathy is common, with signs and symptoms in 44% of chronic alcohol abusers and representing 10% of polyneuropathies. When utilising NCS to identify subclinical neuropathy amongst alcohol abusers, the rate is higher.

ЛЕЧЕНИЕ МЛУ-ТБ И ЗАВИСИМОСТЬ ОТ АЛКОГОЛЯ И НАРКОТИКОВ 2

- Полностью отказаться от употребления алкоголя;
- При приёме Cs/Trd увеличивается риск психических побочных реакций:
  - ✓ Припадки

РАЗБОР СЛУЧАЕВ
I

ПАЦИЕНТКА D -D, 24 ГОДА

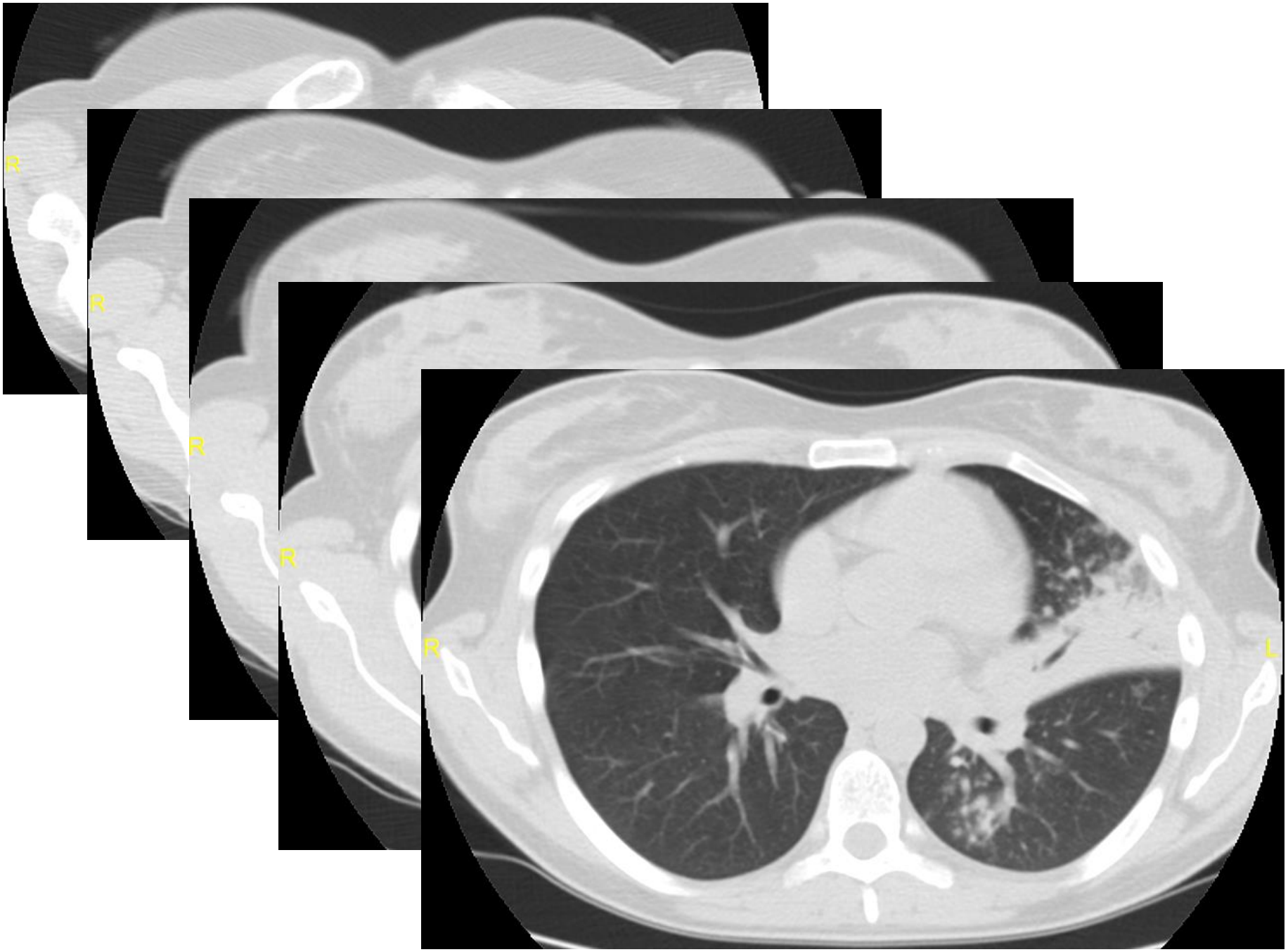
- В первый раз ТБ лимфатические узлы – в возрасте 13 лет (брат H R S E Z)

- Февраль
  - Лихорадка,
  - боли в горле,
  - кашель с мокротой.

- Рентгенограммы грудной клетки - Подозрение на ТБ
- **Graviditas II 5-6 неделя**

- МИКРОСКОПИЯ – 2+; 1+, 3+

ДАТА			H	R	E	Z	Km	Cm	Am	Ofx	Lfx	Mfx	Pto	Cs	PAS	Lzd
Тест	Результат															
21.02.		GenXpert		У												


R
R
R
R
R
L

Нужно ли нам лечить пациентку?

1. Да, обязательно
2. Нет, мы можем подождать

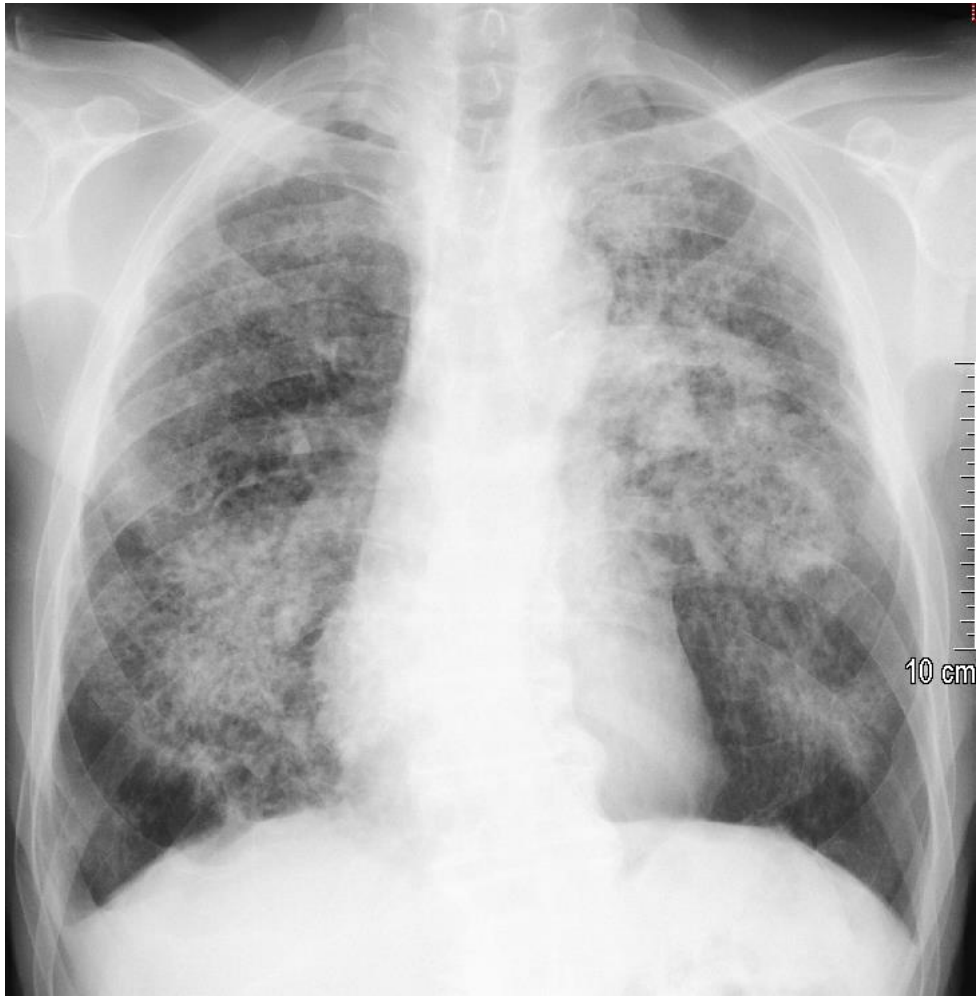
Режимы химиотерапии?

1. Am Lfx Eth Cs Lzd
2. Bdq Lfx Eth E $H_{0,6}$ Z Cfz
3. Lfx Bdq Cfz Lzd Cs
4. Lfx Cfz Cs Lzd Dlm

РАЗБОР СЛУЧАЕВ
2

ПАЦИЕНТ ЯКОВ, 74 ЛЕТ

- Новый случай
- Жалобы:
    - Лихорадка,
    - Кашель с мокротой,
    - Одышка,
    - Потеря веса 8 кг.



Результаты микроскопии и посева:

Месяц лечения	Дата сбора образца	Результат микроскопии	Дата сбора образца	Результат посева
0	05.04.	отр		
	06.04.	4/100		

Результаты ТЛЧ:

Месяц лечения	Дата сбора образца	Метод исследования	H	R	E	Z	S	Am	Lfx	Mfx	Eto/ Pto	Cs	PAS	Bdq	Lzd	Cfz	Dlm
0	05.04.	Xpert		У													

Hain test 5.04.

rpoB –мутаций MUT2A
katG –мутаций MUT1
inhA – нет мутаций
gyrA – нет мутаций
gyrB – нет мутаций
rrs – нет мутаций
eis – нет мутаций

E. Последние результаты клинических/биохимических лабораторных исследований:

Дата сбора образца:	Параметр	Результат	Единица измерения	При отклонении от нормы, пожалуйста, укажите исходный результат и результаты в динамике
05.04.	Гемоглобин	109		
	Лейкоциты	8.53		
	Тромбоциты	409		
	Эритроциты	3.71		
	Креатинин	55		
	рСКФ	135.20		
	K	4.73		
	Mg			
	Na			
	Билирубин			
	АЛТ	10		
	АСТ			
	Альбумин	30.2		
	Глюкоза	14.18		
	HbA1c	6.7%		(4.8 – 5.9)
	C-пептид	1.13		(0.78 – 5.19)
	Hiv	Отр.		

Нуждается ли этот пациент в лечении диабета?

1. Да
2. Нет

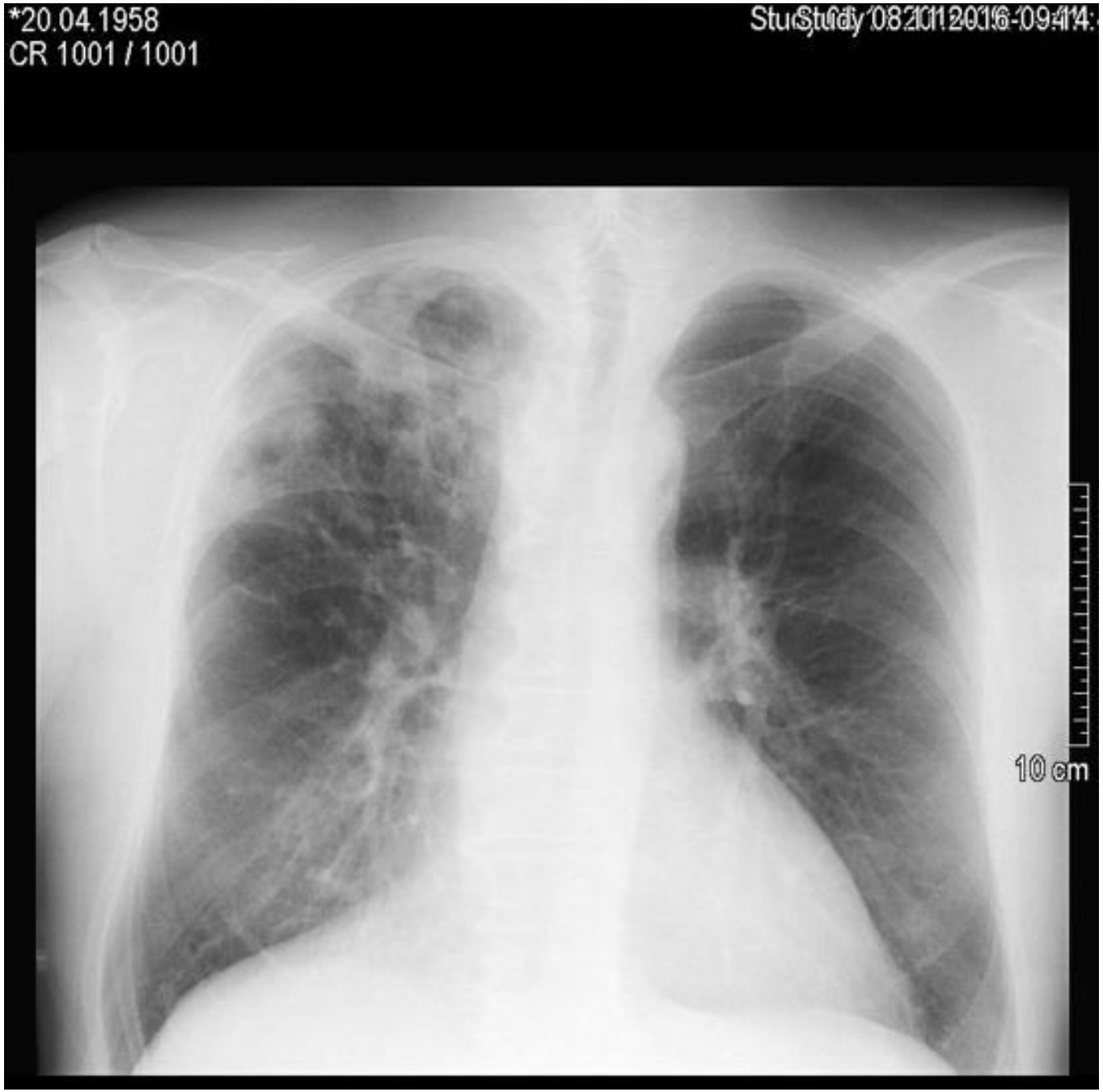
Какое лекарство?

1. Метформин
2. препараты сульфанилмочевины
3. Инсулин

РАЗБОР СЛУЧАЕВ
3

ПАЦИЕНТ V-Б, 54 ЛЕТ

- Сахарный диабет 24 года
- 8,4% (HbA1c)
- Периферическая полиневропатия
- Почечная недостаточность V (СКФ=20)


*20.04.1958
CR 1001 / 1001
10 cm

ДАТА	МИКРОСКОПИЯ
26.10.	I +
26.10.	2 +

Контакт - 2002.- H R E S Z Km Ofx ;

ДАТА			H	R	E	Z	Km	Cm	Am	Ofx	Lfx	Mfx	Pto	Cs	PAS
Тест	Результат														
26.10.		GeneXpert		У											

Дата сбора образца:	Параметр	Результат
26.10.	Гемоглобин	85
	Лейкоциты	9.49
	Тромбоциты	409
	Эритроциты	3.33
	Креатинин	601
	рСКФ	8.91
	K	6.18
	Na	137
	Билирубин	2.7
	АЛТ	10
	АСТ	7
	Альбумин	38
	Глюкоза	9.81

Режимы химиотерапии?

1. Lfx Bdq Lzd Trd Cfz
2. Am Lfx Pto Trd Lzd
3. Bdq Lfx Eth E $H_{0,6}$ Z Cfz
4. Lfx Cfz Trd Lzd Dlm
5. Bdq Pa Lzd

TABLE 7.1 **Adjustment of anti-TB drugs in renal insufficiency**[a]

DRUG	RECOMMENDED DOSE AND FREQUENCY FOR PATIENTS WITH CREATININE CLEARANCE <30 ML/MIN OR FOR PATIENTS RECEIVING HAEMODIALYSIS (UNLESS OTHERWISE INDICATED DOSE AFTER DIALYSIS)
Isoniazid	No adjustment necessary
Rifampicin	No adjustment necessary
Pyrazinamide	25–35 mg/kg per dose three times per week (not daily)
Ethambutol	15–25 mg/kg per dose three times per week (not daily)
Rifabutin	Normal dose can be used, if possible monitor drug concentrations to avoid toxicity.
Rifapentine	No adjustment necessary
Streptomycin	12–15 mg/kg per dose two or three times per week (not daily)[b]
Capreomycin	12–15 mg/kg per dose two or three times per week (not daily)[b]
Kanamycin	12–15 mg/kg per dose two or three times per week (not daily)[b]
Amikacin	12–15 mg/kg per dose two or three times per week (not daily)[b]
Ofloxacin	600–800 mg per dose three times per week (not daily)
Levofloxacin	750–1000 mg per dose three times per week (not daily)
Moxifloxacin	No adjustment necessary
Gatifloxacin	400 mg three times a week
Cycloserine	250 mg once daily, or 500 mg/dose three times per week[c]
Terizidone	Recommendations not available
Prothionamide	No adjustment necessary
Ethionamide	No adjustment necessary
Para-aminosalicylic acid[e]	4 g/dose, twice daily maximum dose[d]
Bedaquiline	No dosage adjustment is required in patients with mild to moderate renal impairment (dosing not established in severe renal impairment, use with caution).
Delamanid	No dosage adjustment is required in patients with mild to moderate renal impairment (dosing not established in severe renal impairment, use with caution).
Linezolid	No adjustment necessary
Clofazimine	No adjustment necessary
Amoxicillin/clavulanate	For creatinine clearance 10–30 ml/min dose 1000 mg as amoxicillin component twice daily; for creatinine clearance <10 ml/min dose 1000 mg as amoxicillin component once daily
Imipenem/cilastin	For creatinine clearance 20–40 ml/min dose 500 mg every 8 hours; for creatinine clearance <20 ml/min dose 500 mg every 12 hours
High dose isoniazid	Recommendations not available
Clarithromycin	500 mg daily

Dlm Lzd Mfx Pto Trd

	8 oo	12 oo	16 oo	21 oo	Apidra	Lantus
4.11.	**2,46**	7,27	8,61		14-14-14	15 - 24
7.11.	4,52	5,0	7,50			
10.11.	10,67	**2,41**				
14.11.	4,16	**2,31**	5,46	**4,02**		
16.11.	**2,5**	5,0	**2,9**	**3,8**		
17.11.	**2,43**	**2,8**	6,64			
18.11.	8,9	7,5	8,0			
19.11.	6,8	**3,9**	5,9			
20.11.	8,0	5,2	9,8		6-6-6	12
21.11.	17,24		16,03			
22.11.		20,1	17,0	16,6		
23.11.	13,7	8,8	5,8	4,5		
24.11.	5,7	12,95	12,31	13		

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