Indications for intravenous anti-TB therapy:

- Severe overall physical condition in patient (severe course of TB, need for treatment in Intensive Care Units);
- Impaired GI absorption of drugs/malabsorption syndrome;
- TB patients who had surgical procedures on their GIT organs;
- Pre- and postoperative period (surgical intervention for TB);
- Disseminated forms of tuberculosis with massive tissue involvement (caseous pneumonia, disseminated TB, miliary TB, extrapulmonary TB, TB of the CNS);
- Adverse GI tract reactions to oral anti-TB drugs (vomiting, nausea, toxic gastritis);
- Low patient compliance.

BITUB — parenteral form of isoniazid

BITUB can be used as:
- I.V. drop infusions, previously dissolved in 100–200 ml of 0,9% NaCl or 5% dextrose.
- Intramuscular injections;
- Inhalations via nebulizer.
ALL BENEFITS OF INTRAVENOUS ANTI-TB DRUGS:

✓ **100% bioavailability**
regardless of the individual features of the patient
(functional state of the intestines, pH, microcirculation,
hydration and hemoconcentration, etc.).

✓ **increased efficacy**
BITUB creates concentrations of isoniazid in plasma and tissues
2.8 times higher than after oral administration
(18.5 mcg/ml VS 6.8 mcg/ml)*.
Maximum efficient impact on MTB.

✓ **decreased risk of gi side effects**
BITUB reduces negative impact on the Gi tract organs.

✓ **100% control**
**Parenteral administration is** the best DOT!
The doctor is always sure that the patient received
the full dose of isoniazid.

✓ **product form: solution for injections in ampoules 5 ml**
allows the use of the drug for inhalation therapy in cases of associated
bronchial lesions and TB of the upper respiratory tract.

Nebulizer therapy for specific bronchial lesions allows to avoid complications
(gross bronchial deformation, strictures) and to cure TB patient faster.

**PLUS**

Anti-TB chemotherapy regimens usually consisting of at least four drugs.
The consequence is an increased risk of toxic reactions, especially from the side of liver.

**Additional presence of:**
**Methionine —**
indispensable aminoacid with hepatoprotective and
cytoprotective action:
- possesses stimulating effects on a liver cells regeneration.
- has antifibrotic and anticholestatic action.
All of the above mentioned effects decrease the hepatotoxicity rate
of isoniazid and improve the tolerability of chemotherapy.

**Additional presence of:**
**Succinic acid and sodium succinate —**
an essential ingredient of energy metabolism and cellular respiration processes (citric
acid cycle):
- helps restore the biochemical reactions in the body, stimulates the supply of oxygen
to cells as well as normalizes impaired metabolism.
- minimizes the negative impact of chemotherapy on the patient's own cells as well as
restore the disrupted homeostasis of the patient due to the illness.

The presence of these components significantly reduce the risks of hepatotoxicity and
other toxic effects of anti-TB chemotherapy.

*V.A. KRASNOV, I.G. URSOV. BACTERICIDAL THERAPY IN PATIENTS WITH TUBERCULOSIS
Problems of Tuberculosis and Lung Disease: 2004 - N 5 - P21-26