Krishnan A., Semianiv I., Semianiv M.
THE PROBLEM OF TUBERCULOSIS IN INDIA
Bukovinian State Medical University, Chernivtsi, Ukraine
Department of tuberculosis and pulmonology
(scientific advisor - teacher Semianiv I.)

Each year about 2.2 million people develop tuberculosis (TB) in India and an estimated 220,000 die from the disease. Some estimates calculate the deaths as being twice as high. TB can affect any age, caste or class but cases are mainly poor people. Slum dwellers, tribal populations, prisoners and people already sick with compromised immune systems are over-represented among the cases, compared to their numbers in the population. The economic burden of TB is extremely high. Between 2006 and 2014, TB cost the Indian economy a massive USD 340 billion.

TB treatment and care in India is provided by the government's Revised National TB Control Programme (RNTCP) as well as through private sector health providers. A total of 9,132,306 cases of suspected TB were examined by sputum smear microscopy and 1,423,181 people were diagnosed and registered for TB treatment.

The notification of TB cases is estimated to be only 58%. Over one third of cases are not diagnosed, or they are diagnosed but not treated, or they are diagnosed and treated but not notified to the RNTCP. This could be even higher, and the World Health Organisation estimates that possibly as many as another 1 million people Indians with TB are not notified.

One of the reasons for the low case notification is the largely unregulated and unmonitored private sector which accounts for almost half of the TB care delivered in India.

For the five year National Strategic Plan for 2012 – 2017, the vision of the government was for a TB free India, through achieving Universal Access by provision of quality diagnosis and treatment for all TB patients in the community. This was a major policy change.

The policy change meant extending the reach of Revised National TB Control Programme services to all people diagnosed with TB, including those with drug resistant (DR) TB, as well as those seeking treatment in the private sector. The new policy also included improving the quality of existing RNTCP services.

Another major problem for public health in India is particularly resistant TB and DR TB.

Varahabhatla V., Tekwani V. S.
BIOCHEMICAL CHANGES IN PATIENTS WITH NEWLY DIAGNOSED PULMONARY TUBERCULOSIS IN THE PRESENCE OF RESISTANCE TO ANTI-TB DRUGS
Zaporozhye State Medical University, Zaporozhe, Ukraine
Department of Pthysiatry and Pulmonology
(scientific advisor - M.D. Yasinskyi R.)

Biochemical changes in blood of patients with pulmonary tuberculosis (TB) depends on multiple factors and affect the course of the disease.

Aim: to determine the changes in biochemical indices in patients with newly diagnosed pulmonary tuberculosis in the presence of resistance to anti-TB drugs that are not classified in 4 category.

Materials and methods: We examined 46 patients with newly diagnosed pulmonary tuberculosis. The patients were divided into 2 groups. 1 group consisted of 12 patients with resistance to anti-TB drugs that are not classified in 4 category. The 2 healthy people group consisted of 34 patients who retained sensitivity to drugs. The control group included 25 healthy people. Of the biochemical parameters evaluated indicators of protein peroxidation: aldehyde-phenylhydrazone (APH), ketone-phenylhydrazone (KPH); intermediate mass molecules determined at different wavelength of the spectrophotometer: IMM254, IMM 272, IMM 280, catalase, glutathione restored, glutathione reductase, glutathione peroxidase (GP) and glutathione transferase enzymes.

Results: Determined that the levels of IMM in both groups higher than in control: $0,29 \pm 0,04$ and $0,32 \pm 0,02$ vs. $0,22 \pm 0,004$ units, $p < 0,001$ for IMM 254; $0,24 \pm 0,03$ and $0,25 \pm 0,02$ vs. $0,13 \pm 0,004$ units, $p < 0,001$ for IMM 272; $0,25 \pm 0,03$ and $0.26 \pm 0,02$ vs. $0,13 \pm 0,004$ units, $p < 0,001$ for IMM 280, respectively. Levels of APH and KPH also exceeded the control values in both groups: of $5.53 \pm 0,62$ and $4.9 \pm 0,46$ vs $3,81 \pm 0,09$ optical density/g protein, $p < 0,001$ and $p < 0,05$ respectively for APH; of 3.54 ± 0.31 to $2.99 \pm 0,24$ vs $2,32 \pm 0,09$ optical density/g protein, $p < 0,001$ and $p < 0,05$ respectively for the KPH. There was a tendency towards lower levels of GP in patients of group 1 compared to control: $13,4 \pm 3,8$ vs $19,9 \pm 1,8$ IU/g HB, $p < 0,1$. Between the groups on these indicators was not significantly different.

Conclusions: In patients with newly diagnosed pulmonary tuberculosis in the presence of resistance to anti-TB drugs that are not classified in category 4, as in patients with preserved sensitivity, increased levels of products of peroxidation of proteins, intermediate mass molecules. Patients with the presence of resistance have a tendency to decrease the level of glutathione peroxidase.