



Study by Rupal showed that 15.9% of patients had pulmonary artery hypertension (PAH). It also had a significant correlation between low CD4. But Kristin Mondy from Washington university School of medicine said about 57% of this abnormalities. Factors significantly associated with PAH were current use of a ritonavir-boosted protease inhibitor. PAH also was present in 27% of HIV-infected patients of American's study led by Eric A. Secemsky.

Various causative factors involved in the development of pericardial disease have been described. Tuberculosis is the commonest cause of pericardial disease. 11.9% patients from first investigation had pericardial effusion. Pravesh Aggarwal et al had a prevalence of tuberculosis 63.5% and incidence of 11.5% in there study. In Nigerian study pericardial involvement was also common in the cases. Of the 100 cases, 47% had pericardial effusion. No definitive cause was determined for any pericardial effusion in this study.

Thus, the results of our study have demonstrated that in asymptomatic HIV-positive subjects a significant impairment of systolic and diastolic function may be detected by echocardiographic examination, confirming an early involvement of the heart in HIV disease. Echocardiographic abnormalities increases as the CD4 count falls.

Thus our aim should be to start ART in these patients as soon as possible so as to improve the morbidity and quality of life of people living with HIV infection. In view of the high frequency of cardiac abnormalities detected by echocardiography in the HIV infected patients in our study, it is suggested that HIV-positive patients should have a careful initial and periodic cardiac evaluation to detect early involvement of the heart in the HIV disease using standardized echocardiographic examination.

**Semianiv I.O.**

### **MORPHOLOGICAL CHANGES IN HEPATOCYTES IN PATIENTS WITH PULMONARY TUBERCULOSIS**

*Department of Phthysiology and Pulmonology  
Higher State Educational Establishment of Ukraine  
«Bukovinian State Medical University»*

Tuberculosis and liver disease are related in many ways. Liver disease can occur due to hepatic tuberculosis or the treatment with various anti-tubercular drugs may cause hepatic injury or patients with chronic liver disease may develop tuberculosis and create special management problems.

We have conducted a prospective pathomorphological study of 60 deaths of patients diagnosed with a sensitive (the first group), poly-resistant (the second group) and multidrug-resistant tuberculosis (the third group).

The analysis of the findings showed a linear growth in coefficient of variation of the optical density of the nuclei staining in all the experimental groups from I to III acinus zones, by increasing the homogeneity of the nucleus colour of the first zone hepatocytes, indicating the increased activity of their nuclei and DNA involvement to synthetic processes. In the third acinus zone the coefficient of variation of the optical density of the nucleus staining in all the groups was higher compared to the first and second zone, indicating a heterogeneous organization of chromatin.

When analyzing the findings, we established that in pulmonary tuberculosis the coefficient of variation of the optical density of hepatocytes nuclear chromatin in the first, second and the third acinus zones is significantly higher, depending on the resistance profile. In the second and third groups the average coefficient of variation of the optical density of nuclear chromatin was significantly higher by 1.51 and 1.96 times respectively compared to the first group and it is indicative of an imbalance between eu- and heterochromatin due to increase in the content of the latter, indicating a decrease in activity of the cell nucleus to involve DNA to synthetic processes and it is a substrate for the development of hepatocellular dysfunction.