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Results: Out of 310 drug abusers with TB cases, HIV serology was positive in 65 (21.0%) cases. HIV was significantly more common in study subject with IV drug abuse compared to those who did not take IV drugs.

Conclusion: Prevalence of HIV coinfection is very high in TB patients among drug abusers so all TB patients with history of drug abuse should be asked regarding their risk factors for HIV infection and counselled to undergo HIV testing.

INTRODUCTION
The increased risk of Mycobacterium tuberculosis infection and active tuberculosis (TB) disease in people who use drugs was well established even before the emergence of HIV. Human immunodeficiency virus (HIV) infection increases the risk of TB 20 fold compared with HIV seronegative individuals in high-HIV-prevalence countries.

Drug addiction in TB can lead to not only the spread of TB but also of other diseases owing to their immunocompromised status. Drug abusers remain a high-risk group for TB infection and disease, and injection drug users (IDU) has been an important factor in Human Immunodeficiency Virus (HIV) associated epidemic of TB worldwide. Management of TB should be focused on modifiable risk factors (treatment barriers, including poor adherence and limited access to care) in future interventions, as treatment failure is the primary risk factor for the development of drug resistance. Drug users in particular injection drug users (IDUs) have driven TB epidemics in number of countries.

Studies conducted before and after the emergence of HIV infection show that, when compared with the general population, people who use illicit drugs have a higher risk not just of getting tuberculosis infection, but also of developing active disease. Similarly, outbreaks of drug-susceptible and multidrug resistant (MDR) tuberculosis are common in this group. Although the higher risk of tuberculosis observed in people who inject illicit drugs is usually the result of associated HIV infection, while in people who use illicit drugs without injecting, this higher risk is primarily attributable to the sharing of drug equipment, such as marijuana water pipes, and to living in cramped conditions or in dwellings with poor ventilation. Co-infection with the hepatitis B and hepatitis C viruses is also common among patients who inject illicit drugs, particularly among those who are also co-infected with the tuberculosis bacillus and HIV.

The intricate linkage of HIV with TB and substance drug abuse, and its convergence with incarceration pose a massive challenge to the clinical and programmatic management of HIV-related TB, particularly in settings in which injecting drug use is driving the HIV epidemic. Therefore, present study was planned to know the prevalence of HIV TB patients amongst drug abusers and their clinical and radiological findings.

KEYWORDS
HIV, Tuberculosis, drug abuser, risk factors

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Subjects and Methods
Study design, settings and participants: It was a hospital based cross-sectional study conducted over a period of one year from March 2018 to February 2019 in Pulmonary medicine and psychiatry department of a tertiary care teaching hospital in Punjab where 310 drug abuser with microbiologically confirmed TB were screened for HIV.

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ABSTRACT
Background: The intricate linkage of HIV with TB and substance drug abuse, and its convergence with incarceration pose a massive challenge to the clinical and programmatic management of HIV-related TB, particularly in settings in which injecting drug use is driving the HIV epidemic.

Objective: Present study was planned to know the prevalence of HIV TB patients amongst drug abusers and their clinical and radiological findings.

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HIV was pleural effusion (29.2%) followed by military TB (20%) and parenchymal infiltration (25.4%). Other common findings were fibrocavitary with parenchymal infiltration (10.7%) and cavity with parenchymal infiltration (10.7%). (Table 1) Out of 310 study subjects, 37 (11.9%) subjects gave history of needle syringe sharing. HIV was significantly higher in patients with needle syringe sharing compared to those without sharing of needle and syringe. (p<0.01). HIV was more common in study subject with IV drug abuse compared to those who did not take IV drugs. This association was found to be statistically significant (p<0.01). (Table 2)

DISCUSSION:
Drug abusers (in particular injection drug abusers) have caused TB epidemics in a number of countries.10 Drug abusers remain a high-risk group for TB infection and disease, and IDU has been an important factor in HIV-associated epidemics of TB worldwide.11 The mean age was 40.2±14.84 years in drug abusers. Almost all the drug abusers were male 307 (99.0%). Out of 310 study subjects only 1 (0.3%) was female and 2 (0.6%) were transgender. Saeed AM et al12 reported mean age in their study as 33.7±9.1 years which were less than our study. In their study all the study subjects were male and only 38% were married. Tai M et al13 who studied acute heroin intoxication in 18 tubercular patients encountered in emergency room and ICU, reported mean age as 27.2 years. Lamptey et al14 in his study on addicts found that 83(90%) were male abusers and four (10%) were female abusers. Presence of females in his study might indicate different social habits, traditions and cultures between their society and our society.

In present study, among drug abusers, most commonly abused drug was alcohol (n=202, 65.2%) followed by heroin (n=61; 19.7%), Chitta (n=59; 19.0%), Afeem (n=10; 3.2%) and poppy husk (n=6; 1.9%). Different areas might be having different type of drug abuse. Shenoy et al15 published the data and reported that all of the patients were opium smokers, of whom 14.3% had an additional history of injection drug use (heroin). In contrast to our study, Kornreich et al16 who found that cannabis, opiates, hallucinogens, amphetamines, inhalants, and benzodiazepines are often used in combinations. Saeed AM et al12 stated cannabis (89%) as most commonly abused drug followed by tramadol (77%), and more than three-quarters of the 100 cases were taking combinations (77%). Alcohol abuse

In our study, out of 310 drug abusers with TB cases, HIV serology was positive in 65 (21.0%) cases. Reykhett I et al17 reported prevalence of HIV among patients with TB as 15.5% and 23.7% in the civilian and penitentiary sectors respectively while Reyes JC et al18 reported higher prevalence of HIV (34.7%) among drug abusers. Shenoy R et al19 did not report any of the drug abusers with HIV positive while Saeed AM et al20 reported prevalence of HIV as 11% in drug abusers with TB from their study. According to a study done by Yusuph H et al21 the HIV overall prevalence was 23.6%.

In present study, Among HIV positive patients, 63 (96.9%) were drug sensitive and 2 (3.1%) were drug resistant on CBNAAT. We could not find any study among drug abusers with tuberculosis in which CBNAAT finding was separately mentioned for HIV positive patients still study with larger sample size can be considered to see pattern of drug sensitivity and resistance in HIV and HCV drug abusers with TB.

CONCLUSION & RECOMMENDATIONS
Present study concluded that prevalence of HIV coinfection is very high in TB patients among drug abusers so all TB patients with history of drug abuse should be asked regarding their risk factors for HIV infection and counselled to undergo HIV testing.

Table 1: Radiological findings in HIV positive subjects (n=65)

<table>
<thead>
<tr>
<th>Radiological findings</th>
<th>No.(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parenchymal infiltration</td>
<td>73.8</td>
</tr>
<tr>
<td>Cavitation</td>
<td>26.2</td>
</tr>
<tr>
<td>Cavity with parenchymal infiltration</td>
<td>23.6</td>
</tr>
<tr>
<td>Fibrocavitary</td>
<td>40.2</td>
</tr>
<tr>
<td>Fibrocavitary with parenchymal infiltration</td>
<td>11.9</td>
</tr>
<tr>
<td>Hilar prominence</td>
<td>0.0</td>
</tr>
<tr>
<td>Pleural effusion</td>
<td>19.2</td>
</tr>
<tr>
<td>Hydro pneumothorax</td>
<td>6.1</td>
</tr>
<tr>
<td>Collapse</td>
<td>0.0</td>
</tr>
<tr>
<td>Military TB</td>
<td>20.0</td>
</tr>
<tr>
<td>Bronchiectasis</td>
<td>1.5</td>
</tr>
<tr>
<td>Normal</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Table 2: Association of IV drug abusers with HIV positivity

<table>
<thead>
<tr>
<th>HIV serology</th>
<th>No IV drug abuser (n=268)</th>
<th>IV drug abuser (n=42)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative</td>
<td>234</td>
<td>11</td>
<td>26.2</td>
</tr>
<tr>
<td>Positive</td>
<td>34</td>
<td>31</td>
<td>73.8</td>
</tr>
</tbody>
</table>

REFERENCES