Leptospirosis, a direct anthropozoonosis has gained importance both in man and animals and is assuming greater dimension as a re-emerging disease. In India, various workers have reported the disease from various parts of the country. But systemic studies are limited. The true incidence of human leptospirosis in West Bengal, particularly in Kolkata metropolitan city is not known either because of a lack of awareness on the part of the technicians (both physicians and veterinarians) or the lack of diagnostic techniques. The present study has been undertaken as a pilot study. It places on record the serological evidence of leptospirosis in hospitalized jaundice patients in and around Kolkata by using microscopical agglutination test (MAT).

Forty two consecutive patients admitted with jaundice as a predominant clinical symptom were taken into consideration in this serological survey work for leptospirosis between the period of January to June, 2003. About 5mL of blood collected from each patient was kept undisturbed for about 2-3 hours at room temperature. The sera were separated and preserved at –20°C until use.

All the samples were examined against four leptospiral serovars namely – *L.interrogans* serovar canicola, pomona, icterohaemorrhagiae and grippotyphosa. These were kindly provided by PMRC, Port Blair, Andaman. The organisms were maintained in EMJH (Ellinghausen, McCullough, Johnson and Harris) semi-solid and liquid media in the laboratory at 29°C in screw-capped test tubes containing 5mL media (liquid). Cultures of 4-7 days were used as antigens. Hyperimmune sera were raised against the four serovars in duplicate leptospira-antibody-free healthy rabbits by injecting serial increasing dose of leptospira liquid antigens.
culture (approximately $2 \times 10^8$ leptospires/mL) at seven days interval starting from one millilitre as the first dose.

MAT was performed as described by Cole et al. in microtitre plates. Positive controls with known hyperimmune sera and antigen controls with PBS were regularly used in each test. The plates were incubated overnight at 25°C. the end point titre was the highest dilution of the serum in which 50% of the leptospiral cells were agglutinated. Titres equal or higher than 100 were considered as positive. All the results obtained from MAT were statistically analyzed as per the methods described by Snedecor and Cochran.

Out of 42 sera samples from persons with jaundice, 10 (23.81%) were found positive for leptospirosis. Eight out of 10 were positive for \textit{L.pomona} and 2 (20.00%) were positive for \textit{L.grippotyphosa}. None of the patients sera reacted against \textit{L.canicola} and \textit{Licterohaemorrhagiae} and none showed mixed reaction with more than one serovar.

The prevalence of these four leptospiral serovars in hospitalized jaundice patients was statistically highly significant ($p<0.01$). \textit{L.pomona} was found as the most prevalent serovar in these patients. The highest occurrence of this serovar in these patients and the huge pig population in this region may be indicative of these animals as the natural reservoir host for this species of leptospira in particular. Besides, the huge rodent population, and the intermingling of these rodents with the pigs and close association with humans may also be a source of infection for these patients with this serovar. The seroprevalence of these serovars in human jaundice patients had also been studied by Joseph and Kalra\textsuperscript{5} in northern India. They found a very low prevalence of only 3 patients (one with \textit{L.icterohaemorrhagiae} and \textit{L.pomona} and two with \textit{Licterohaemorrhagiae}) out of 43 positive for agglutination reaction. The present findings might therefore demand the extra attention for the prevention of this disease.

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*Corresponding author
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\section*{Invasiveness – An Indicator of Differentiation of Virulent and Non Virulent Isolates of \textit{Yersinia enterocolitica}}

Dear Editor,

\textit{Yersinia enterocolitica}, an emerging pathogen has been implicated as causative agent for a number of clinical manifestations predominantly diarrhoea. Invasiveness into epithelial cells is an important pathogenic mechanism of enteric bacteria, including strains of \textit{Shigella}, \textit{Salmonella}, \textit{Escherichia coli} and \textit{Yersinia}.

Clinically, the invasive bacteria are capable of producing dysentery like disease or exudative diarrhoea. Pathogenic \textit{Y.enterocolitica} strains are characterized by their ability to adhere to and invade epithelial cells.\textsuperscript{2} Demonstration of epithelial invasiveness of \textit{Enterobacteriacea} can be done by Sereny test.\textsuperscript{3} To assess the relative importance of Sereny test twelve isolates of \textit{Y.enterocolitica} were tested by Sereny test.