Introduction:
The genus Pasteurella is small gram negative coccobacilli that are primarily natural habitat of oral flora and digestive tract of various animals including domestic cats and dogs. These organisms can cause a variety of human infections. Most common species is P. multocida, generally associated with an animal bite. There are several species of Pasteurella which can cause disease in humans such as Pasteurella multocida subsp. multocida, P. multocida subsp. Septic, and P. canis. P. canis is a species that rarely affects humans and has been rarely found in systemic infections with underlying diseases. Here we report the first documented case from India of Pasteurella canis bacteremia in a 13-month-old child and only third case report in the literature.

Case History:
A thirteen months-old child presented with convulsion and fever. He had history of cough, cold and fever several times. Mother of the child told about history of dog scratch while playing with the native dog before the illness. On physical examination, child was in altered sensorium responding to painful stimuli. He had tachycardia, fever (39°C), pulse-200/min; respiratory rate-60/min. Bilateral ronchi and crepts were found in respiratory examination. Liver was 4 cm and spleen 2 cm palpable.

Initial laboratory investigations revealed white blood cells count of 21.3 x 10^9/L, Hb-5.9 g%. Peripheral blood smear showed hypochromic microcytic red blood cells. Platelet count was 75 x 10^9/L. CSF and blood cultures were sent to the laboratory. Both conventional & automated blood cultures were done on blood and MacConkey’s agar. After 24 hrs, tiny, gram stain. CSF culture was negative for the growth. Subcultures of the growth on blood were done on blood and MacConkey’s agar. Organism was identified as Pasteurella canis (P. canis) by various biochemical reactions as follows: catalase (positive), oxidase test positive, indole and urease test negative. Identification was also confirmed by the VITEK 2 Instrument (Biomerieux). Sensitivity on Muller Hinton Blood Agar (MHBA) showed sensitivity against all antibiotics tested-ampicillin, ceftriaxone, ciprofloxacin, gentamicin and amikacin.

2 days after i.v. antibiotics, child was conscious and afebrile. Eye opening was present and child was vocalizing and accepting feeds well. For the anaemia, two pints of packed cell volumes (PCV) were given. Repeat blood cultures were negative for the growth. Antibiotic treatment was continued for 7 days and child was discharged.

Discussion:
Human infection with Pasteurella canis can be divided into three types: infection occurring after animal bites, usually from dogs or cats; infection occurring after other animal exposures; infection with no known animal contact. Manifestations of these infections range from skin or soft tissue infections to meningitis or septicaemia. P. canis infections are rare and often seen after animal bite and in the persons with underlying diseases. There are only two case reports in the literature with P. canis bacteremia. Albert T.J. et al described a cirrhotic adult patient with P. canis bacteremia with the history of licking of dog to an open leg wound. In Yefet et al case report P. canis bacteremia was present in a healthy child who was exposed to rabbit secretions. There was no underlying disease present in our case. Infections without a clear source have been documented and are thought to be the result of licking by animals or inhalation of microorganisms. In the present case, there was history of exposure to the dog with scratch wound.

P. canis is susceptible to ampicillin, amoxicillin-clavulanate, cephalothin, ceftaxime, linezolid, aminoglycosides, tetracycline, pipracillin and fluoroquinolones. In this case, isolate was also susceptible to the all antibiotics which were tested.

In conclusion, though Pasteurella canis is rare human pathogen; it can cause serious life-threatening infections in susceptible population like children and persons with underlying diseases. Avoidance of animal contact is a simple measure to prevent this infection.

REFERENCES