

Institutional Project

1. **Title:** Radiographic and Sonographic evaluation of Cardiac, hepatic and urogenital diseases of canine.

2. **Principal Investigator:** **Dr. Pallav Shekhar**, Asstt. Professor, Veterinary Medicine

3. **Co Pi:** **Dr. Ajeet Kumar, Asstt. Prof., Veterinary Biochemistry**

Dr. Ramesh Tiwary, Asstt. Prof. Veterinary surgery and Radiology

4. **Year of Start:** 2018

5. **Duration:** One Year

6. **Budget:** 50 thousand

Objectives:

- i) To find out Prevalence of cardiac, liver and urogenital diseases in different age, breed and sex of dogs.
- ii) Correlation of Biochemical markers with the diseases of different organs.

Silent Achievements:

Routine ultrasonography is proposed to be a beneficial procedure for the prompt, cost effective and non-invasive diagnostic procedure of abdominal disease conditions in dogs.

1. The sonograms were descriptively evaluated based on changes in echotexture. It was found that the echotexture of the organs exhibiting pathologies was detectable on ultrasound and the changes varied from mild to severe. The ultrasound findings were related to the clinical features exhibited in the dogs diagnosed with the various abdominal conditions and biochemical markers.
2. Renal disorder among dog was found to be the main problem (53.48%) followed by hepatic (17%) and cardiac (17%) as per specific biochemical marker test.
3. This is also evident by the elevated level of biochemical marker for liver disorder (ALT 231.11), Kidney (BUN 131.63mg/dl, Cr 8.36mg/dl) and Cardiac (C-kinase 268.12).
4. This is also supported by sonogram study which reveals 46.15% disorder of kidney followed by urinary bladder 19.23% liver 13.46% and spleen 5.76%.
5. Among urinary bladder disorder renal calculi and crystals (were found to be the principal disorder (44.44% & 7.69%).

6. Out of 46.15% of renal disorder loss of corticomedullary demarcation (44.44% & 15.38%) was found to be the main cause of renal failure.
7. Hyperechoic rounded liver lobe with ascites was found to be the main liver disorder (28.57% & 3.84%).
8. Other diseases like distended bladder (5.76%) and splenomegaly (5.76%) Intestinal obstruction (3.84%) and abdominal mass (1.92%) were important ultrasonographic findings in canine.



Fig: Dog showing distended abdomen due to ascites



Fig: Dog showing severely distended abdomen due to Cardiac disorder.

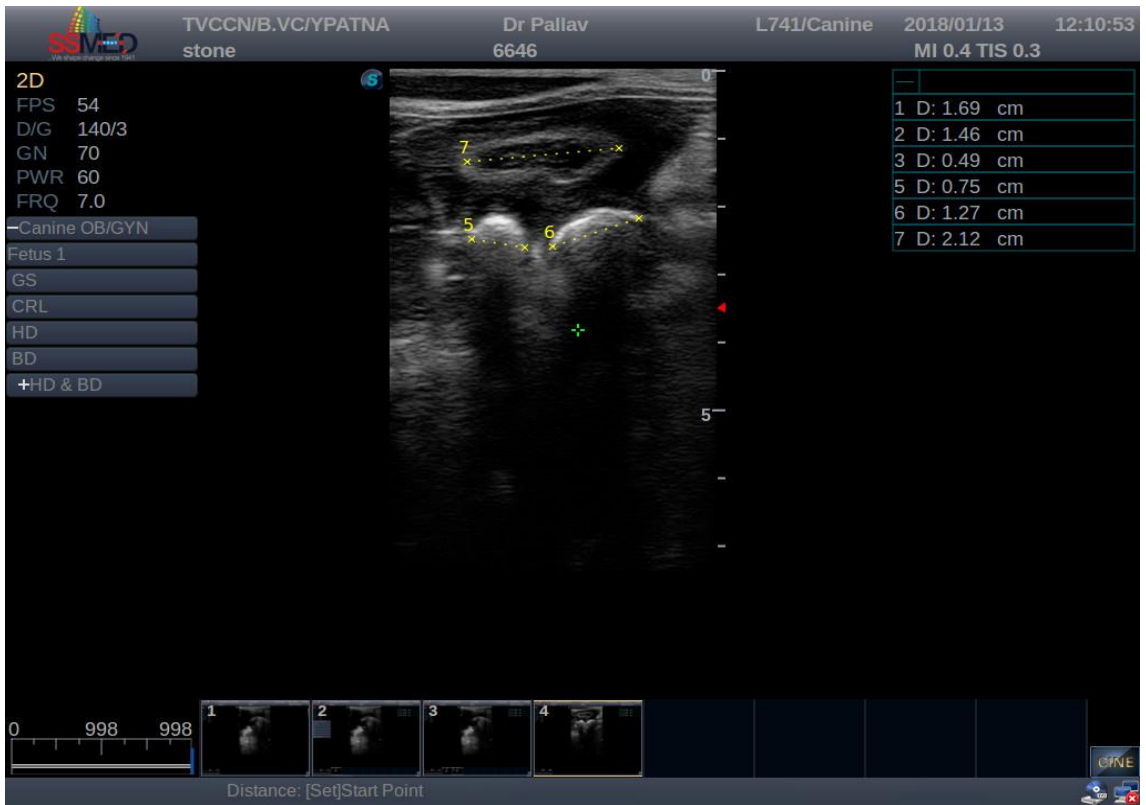
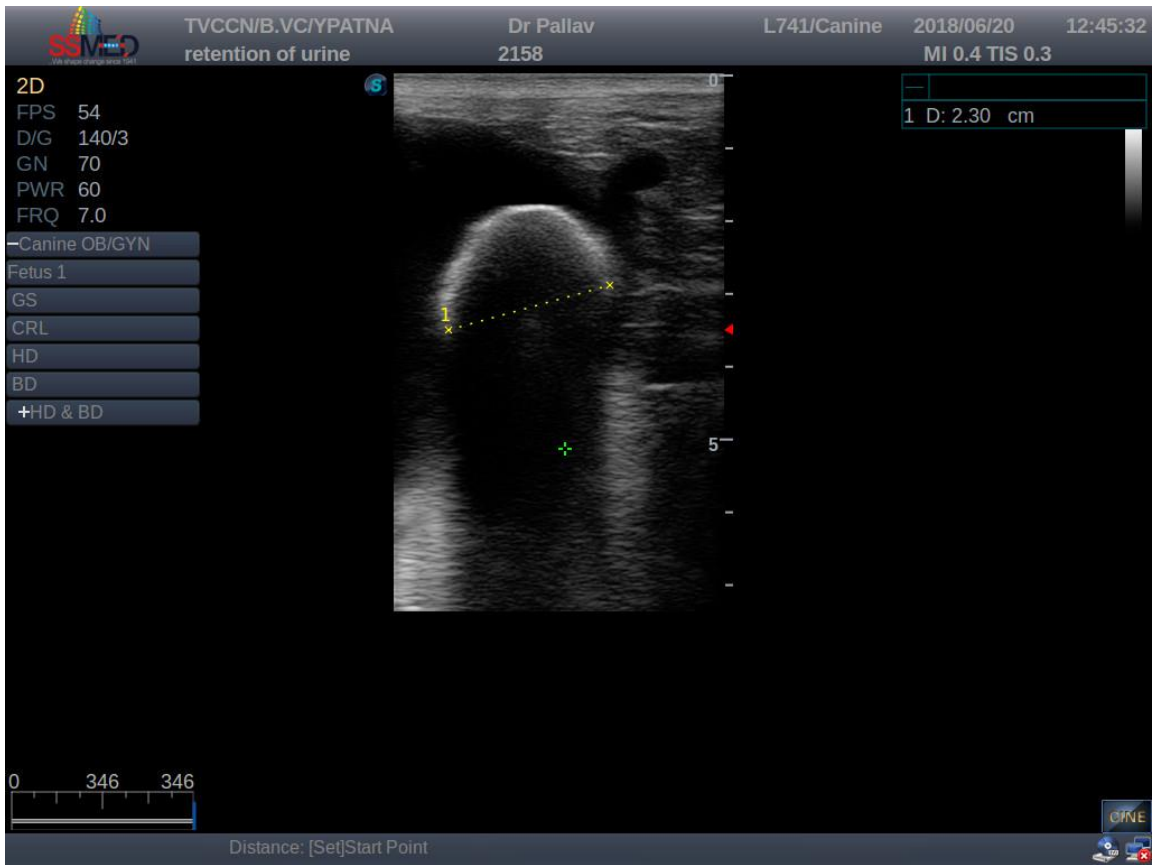


Fig: Ultrasonography of urinary Bladder of a bitch showing multiple stone of variable sizes.

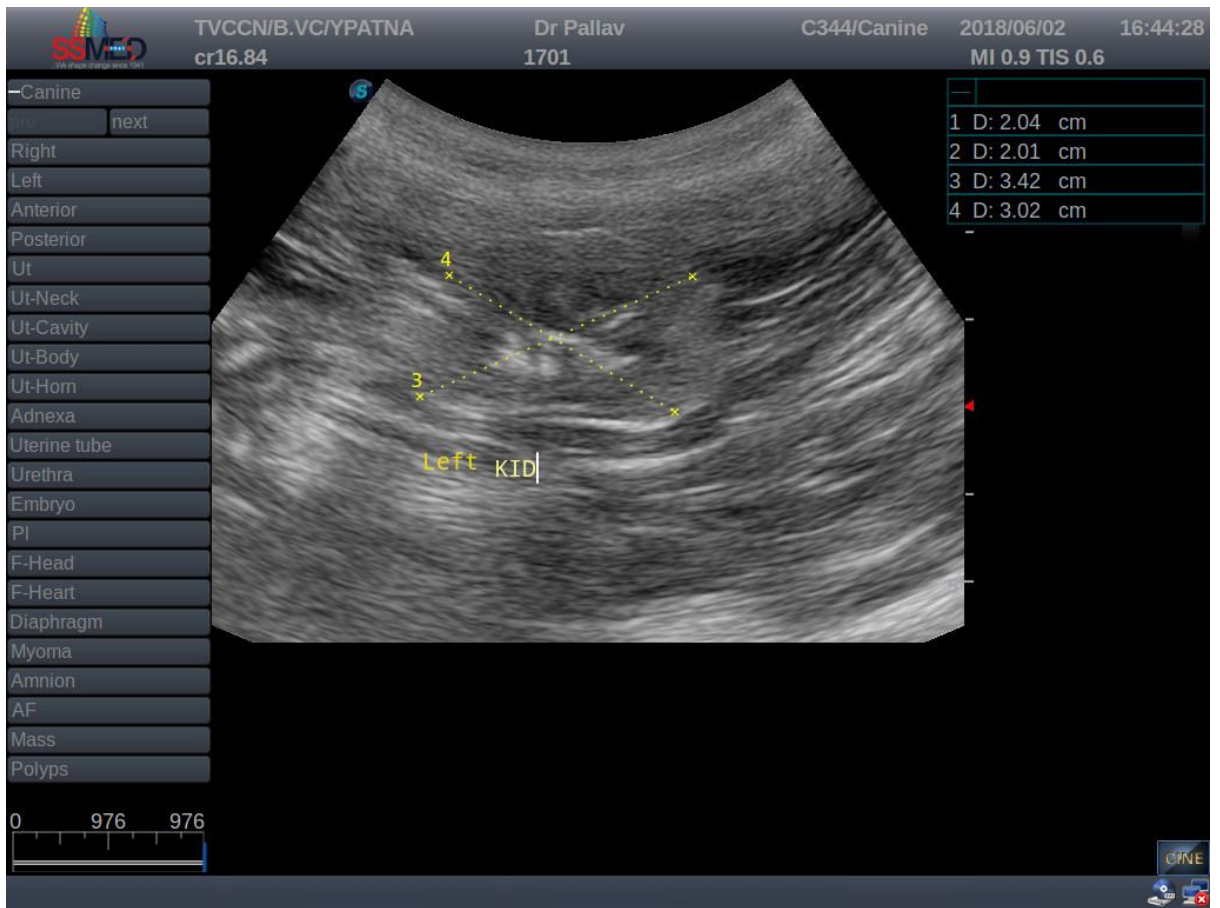


Fig: Ultrasonography of Kidney of a dog showing shrunken kidney with loss of cortex and medulla integrity

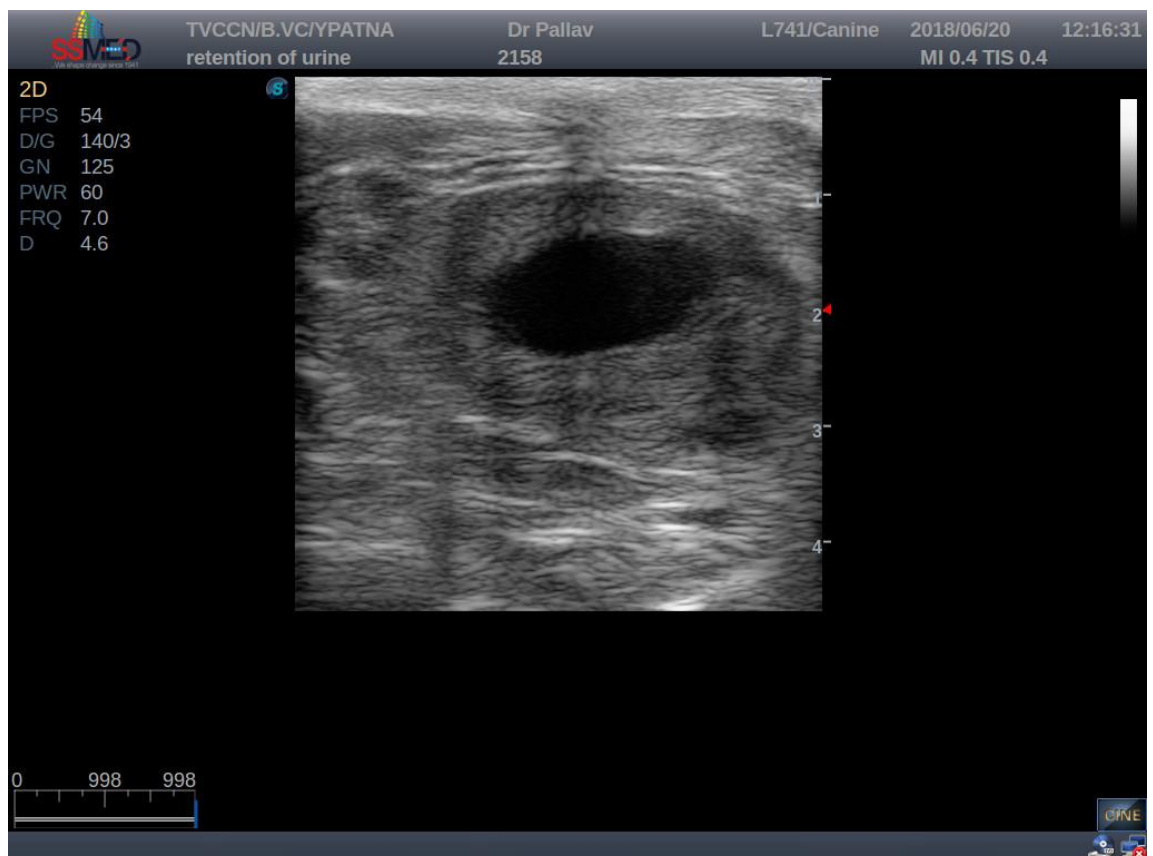


Fig: Ultrasonography of Kidney of a bitch showing Hydronephrosis



Fig; Ultrasonography of abdomen of a dog showing hyperechoic liver with anechoic region (Ascites)

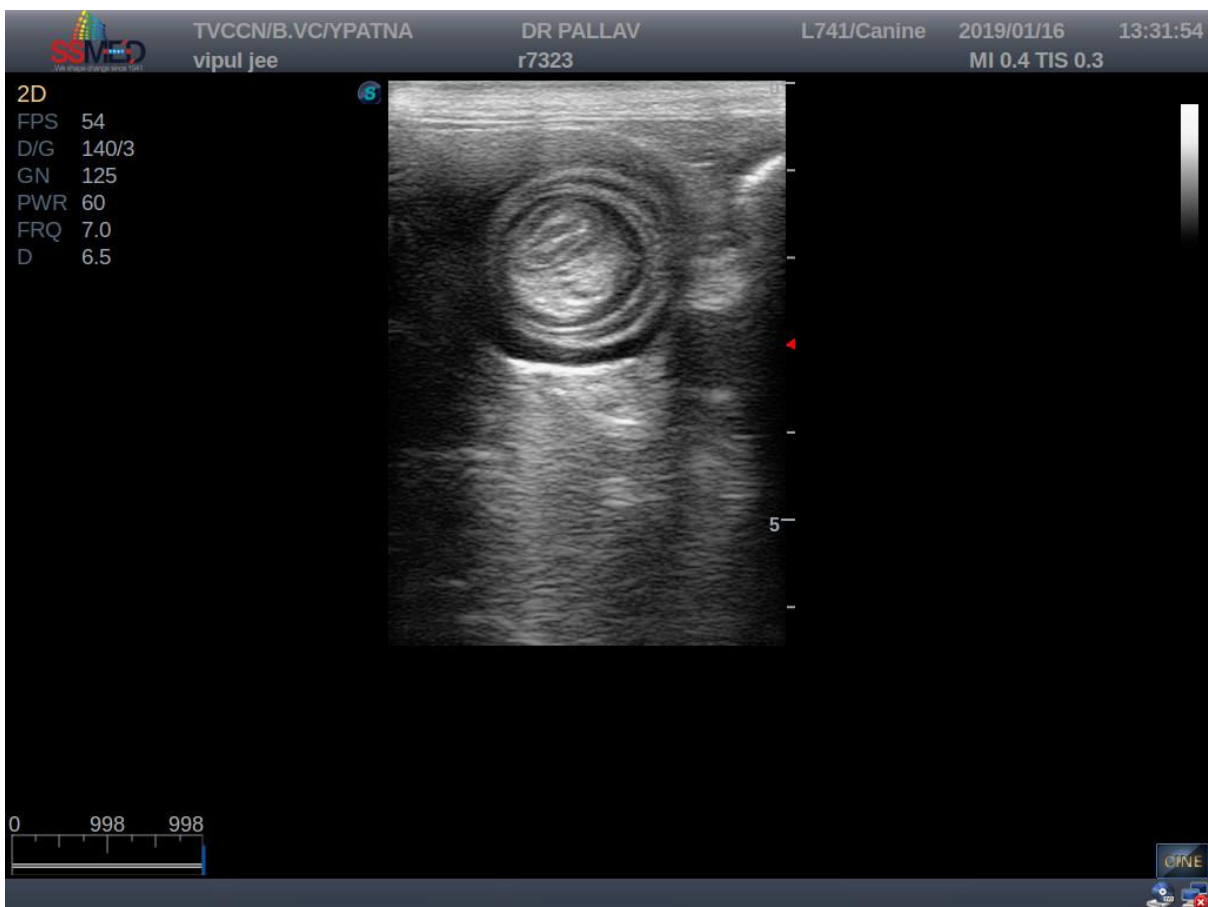


Fig: Ultrasonograph of Intestine of male dog showing Bulls Eye condition (Intussusception)

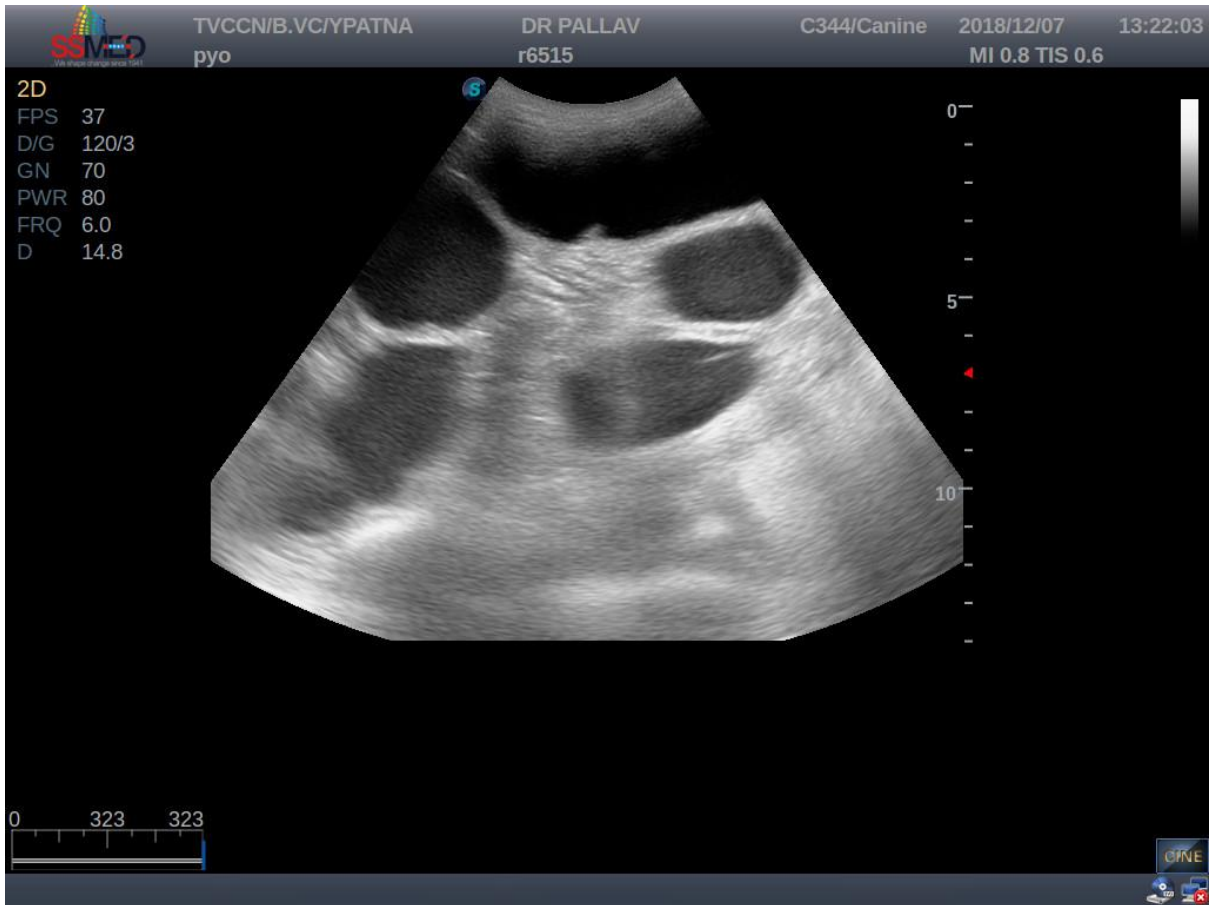


Fig: Ultrasonography of abdomen of bitch showing distended anechoic region in uterus(Pyometra)



Fig : Ultrasonography of bitch abdomen showing live foetus with HR 250bpm