CBL - Renal Module

A 40 years old male, known case of hypertension for 10 years is brought to emergency department with pain in his left flank not radiating any where in the abdomen and is constant. He says that the pain is relieved for some time with over the counter pain killers which he has been taking for some time as these episodes have occurred in the past. He also states that he had blood in urine once on the same day. The patient states that pain is dull in character, 5/10 in intensity. The color of urine was grossly orange to red with no smell and was about a cup full. (His father died suddenly from a subarachnoid hemorrhage at the age 40 years)

On examination, his pulse was 80 bpm, Blood Pressure 170 / 105 mm Hg, liver was palpable , 10 cm below the right costal margin, and both kidneys were palpable with regular surfaces.

Labs: Blood CP

Hb: 13g /dl
WBCs: $5X10^9/L$
PLTs: $247X10^9/L$
ESR: 15 mm in 1st Hr

Urine Microscopy
RBCs: Numerous
Hyalin Cast: ++
Pus Cells : 2 – 3 /HPF
Leukocytes: 2 – 3 / HPF

Serum Electrolytes

Sodium: 139 mmol/L (135-146 mmol/L)
Potassium: 4.5 mmol/L (3.5-5mmol/L)
Urea: 20 mmol/L (2.6-6.7 mmol/L)
Creatinine: 400 mmol/L (50-150 mmol/L)
Phosphate: 1.9 mmol/L (0.8-1.5 mmol/L)
Calcium: 2.1 mmol/L (2.2-2.7mmol/L)

Questions:

Q.1 Which organs are found in left flank?

Q.2 Give the relations of Left and right kidneys.

Q.3 What is the cause of flank pain?

Q.4 How could you explain enlarged liver in this pt?

Q.5 What is the relation of death of his father at young age due to subarachnoid hemorrhage with disease of the patient?

Q.6 Discuss genetically related disorders with this presentation.

Q.7 Explain the raised blood pressure at the age of 28 years

Q.8 Explain the urinary microscopic findings

Q.9 Justify the raised levels of urea creatinine

Q.10 How would you further investigate this patient?