

## EXPLAINING A URINALYSIS RESULT

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**Doctor:** Good morning Ms. Tea. How may I help you today?

**Patient:** Hi doctor! I had a urinalysis yesterday as part of my pre-employment requirement. When I saw the results, some were not in the normal range. I was wondering if I have a problem with my kidneys.

**Doctor:** Ok. May I take a look at the results?

**Patient:** Here it is.

**Doctor:** Thank you. Everything looks good except for ketone, RBC, WBC, epithelial cells, and bacteria. Your ketone is +1, RBC is 5-10/hpf, and WBC is 3-5/hpf. Epithelial cells are abundant.. Bacteria are moderate.

**Patient:** What do they mean doctor?

**Doctor:** First, ketone detected in the urine may be a sign of diabetes and requires follow-up testing.

**Patient:** So it means I have diabetes?

**Doctor:** We cannot conclude that based on this result alone. You need more testing like an FBS or an HbA1c. And sometimes ketone is also present in the urine if you have experienced starvation. So we have to rule that out.

**Patient:** I see. So you mean doctor an abnormal result in the urinalysis does not necessarily mean I have a kidney disease?

**Doctor:** Yes. We have to do more tests to confirm the presence of an abnormality. We do not rely on these results alone. It is also a fact that the results might be changed because of certain factors.

**Patient:** What do you mean doctor?

**Doctor:** For example, a higher than normal RBC result may suggest that you have a kidney problem. But if you have your menstrual period at the time you had your urine collected, your urine might be contaminated with blood which gives us a false result.

**Patient:** So that's why it's abnormal. I have my menstrual period since the other day.

**Doctor:** Right.

**Patient:** What about the WBC, epithelial cells, and bacteria? How do you explain that doctor?

**Doctor:** An increase in WBC, epithelial cells, and bacteria can be a sign of infection. But it can also be caused by a contaminated urine specimen. Sometimes, the urine sample of a woman is contaminated by the white cells from the vagina. The same is true with epithelial cells and bacteria. That is why it is very important that you collect your urine sample correctly so as to produce accurate results.

**Patient:** Ah. So maybe the urine I passed yesterday was contaminated. I mean, I don't have any other symptoms of a kidney problem like pain in urination or pain on my sides. That is why I was wondering.

**Doctor:** I cannot say for sure if it was contaminated. The best thing you can do is have a urinalysis done again. This time, do it after you finish your menstruation and follow the instruction on proper collection of urine specimen. If the results are still abnormal, we can do more tests to confirm a diagnosis.

**Patient:** I think that's a good idea doctor. I'll be back here after a week then for another urinalysis. I hope the results will be normal by that time.

**Doctor:** We'll see.

**Patient:** Thank you doctor.

**Doctor:** No prob. See you then.

### **TEST YOUR KNOWLEDGE:**

1. What is the correct way of collecting a urine specimen?
2. If you suspect a patient has a kidney problem, what other tests should you order? Why are those tests important?