

Dipstick Urine Analysis and Urinary Deposit Screening Among Paramedical College Students

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Abstract – Urine examination by a urine dipstick analysis was conducted to determine the urine abnormalities among asymptomatic carrier paramedical college students. The research study used to earlier find out asymptomatic renal diseases by screening with the urinary investigation of physical, chemical & microscopic examination, create awareness about renal diseases manifestation leads to poor lifestyle followed by students.

Key Words: Asymptomatic, urine dipstick, kidney disease, urine deposit, RFT-Renal function test, UTI-urinary tract infection

observed under microscopy for the blood cells, Epithelium, cast, crystals, bacteria, and others.

Table -1: Urine Macroscopic Appearance Vs Gender

	Male	Female
Normal	10	17
Turbid	1	10
Slightly turbid	2	10

Table 2: Biochemical Examination Vs Gender

	Male	Female
Blood	0	1
Bilirubin	0	0
Uro bilirubin	0	0
Ketone	0	0
Protein	0	0
Nitrite	0	0
Glucose	0	0
PH	0	0
Specific gravity	0	0
Leukocytes	0	1

Table 3: Microscopic Analysis Vs Gender

	Male	Female
Pus	0	2
Epithelial	0	4
Rbc	0	1
Crystals	0	2
Bacteria	0	2
Others	0	0

1. INTRODUCTION

Urinalysis is very a useful test in the diagnosis and screening of many diseases and conditions. Results of a urinalysis in diagnosing of Renal function test, urinary tract infections (UTI's), kidney stone, screening for evaluating many types of kidney diseases & monitoring the progression of diabetes mellitus and high blood pressure. In too much junk food and inadequate amount of water consumption which is commonly arises in to kidney related diseases & disorders among college students.

2. AIM & Objectives:

The aim of the study is to detect of asymptomatic carrier in renal disease among in college going students investigated with the urine sample by dip stick method.

3. Methodology

A study was carried out in a private allied health science college in Chennai. 50 students participated in this study in that 13 were male and 37 were female between 17 to 25 years of age. The morning midstream urine sample collection obtained from students with informed consent form. The first part of a urinalysis is direct visual observed colour and appearance. Then dipstick dipped with urine sample and observed the blood, glucose, protein, ketone, bilirubin, urobilirubin, leukocyte, ph, specific gravity, and nitrite. The urine deposit done in the collected samples and

Chart -1: Urine Macroscopic Appearance Vs Gender

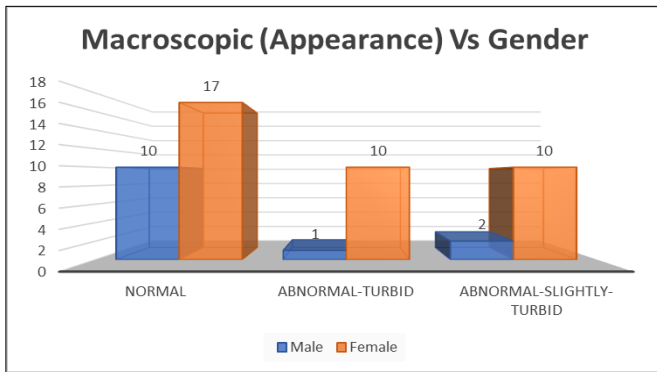


Fig -1: Macroscopic examination

Chart 2: Biochemical Examination Vs Gender

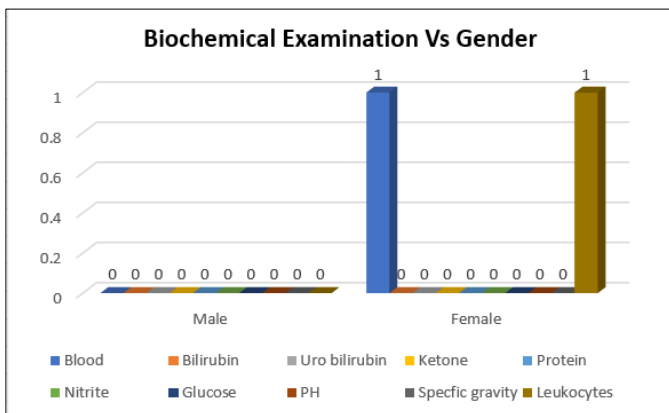


Fig -2: Dipstick biochemical examination

Chart 3: Microscopic Analysis Vs Gender

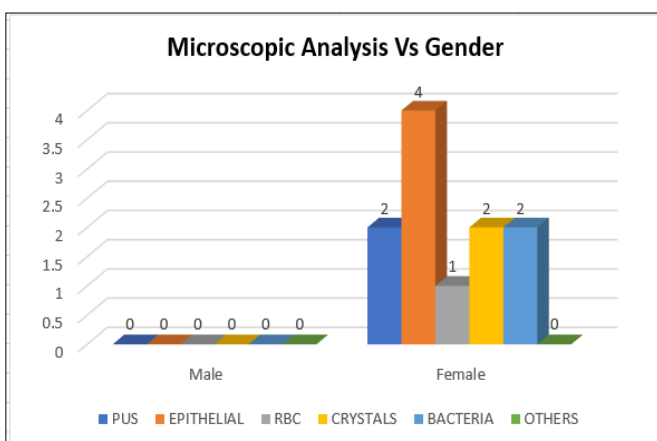


Fig -3: Urinary Deposit examination: Centrifugation & wet mounting:

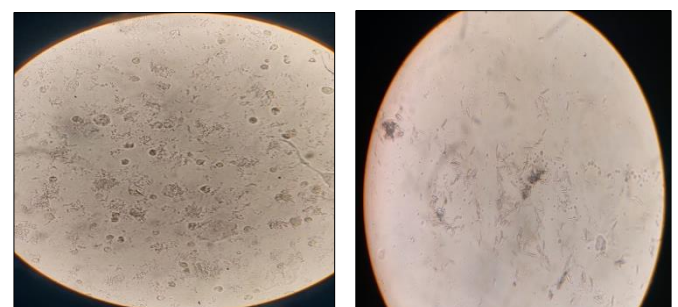


Fig -4: Microscopic View:

Calcium Oxalate Monohydrate & Uric Acid
Crystals, Bacteria, Pus, Epithelial cells

REPORTING

Total of 50 students were screened, of which 23% Male 54% female participants were found turbid appearance. In Biochemical examination 2.7% of blood and 2.7% of leukocytes were found in female participants. In microscopic examination in female participant have 5.4% of pus, 10.81% of epithelial, 2.7% of RBC, 5.4% of uric acid, calcium oxalate monohydrate crystals, 5.4% of Bacteria were reported. With respect to age, most positive results were detected at 18-22 years of female participants.

Conclusion

Among the students Urinary abnormalities were more common in females participants. Urinary abnormalities like turbid appearance, increased cellular elements, crystals, bacteria significantly prevalence in female participants. Screening a more tests like urine culture, RFT help to early detect renal disorders which will lead to effective interventions and possibly reduce the burden of renal diseases. Urine routine examination should be a part of screening regularly. Drinking more water & avoid unnecessary medication followed with healthy diet, regular exercise keeps way the kidney disease.

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