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**DETERMINATION OF URONIC ACID IN PATIENTS WITH HEMATURIA**

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**ABSTRACT**

In this study, (54) patients with hematuria were subjected in this study, where (18) patients with microscopic hematuria, (24) patients with gross hematuria, and (12) patients with terminal hematuria. Also, (10) healthy individual with no history of hematuria were included in this study as control group. The results of this study showed that uronic acid was detected at high levels in (6) patients with microscopic hematuria and in (11) patients with gross hematuria were the results above the control group ( $23 \pm 6.0$  and  $18.0 \pm 4.3$  respectively) where as the urine samples of patients with terminal hematuria had normal levels within control group. Malonyldialdehyde (MDA) was also estimated in the urine of patients with hematuria. The results of MDA were not significant although some patients showed high levels for this parameter in their urine samples.

**INTRODUCTION**

Hematuria (blood in urine) can originate from any site along the urinary tract and, whether gross or microscopic, may be a sign of serious underlying diseases including malignancy [1]. Some biochemical parameters may be considered in some cases of hematuria, particularly in microscopic hematuria where blood in urine causes different types of urological cancers such bladder and prostate cancer [2].

One of the most common markers that would be helpful in diagnosis bladder cancer is

hyaluronic acid (HA) and hyaluronidase enzyme which have strong correlation in early diagnosis [3].

Hyaluronic acid and its derivatives promote tumor cell adhesion and migration, where as its small fragments stimulate angiogenesis. Such small fragments are generated from degradation of this acid by hyaluronidase enzyme [4].

The aim of this study was to detect of uronic acid which is derivative from sugar acid