



## Urine Abnormality in Association with Hematological Parameters in Ambulant Patients with Malaria, River Nile State - SUDAN

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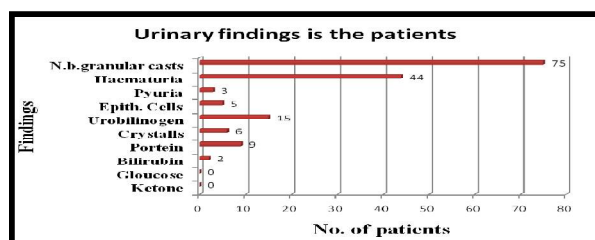
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### ABSTRACT

Malaria can be diagnosed clinically and is typically diagnosed by the microscopic examination of blood using blood films, or with antigen-based rapid diagnostic tests. Modern techniques that use the polymerase chain reaction to detect the parasite's DNA have also been developed, but these are not widely used in malaria-endemic areas due to their cost and complexity [1]. The disease is widespread in tropical and subtropical regions in a broad band around the equator, including much of Sub-Saharan Africa, Asia, and the Americas. The World Health Organization estimates that in 2010, there were 219 million documented cases of malaria, that year, the disease killed between 660,000 and 1.2 million people, many of whom were children in Africa. [2]. According to reports of Ministry of health, River Nile state, there were 2865 cases and about 8 deaths were occurred in 2013. Changes in platelet counts during acute malaria are commonly reported in the medical literature, especially in *P. falciparum* infections; such changes are a major cause of concern to clinicians because such cases are more likely to evolve into serious and complicated disease cases [3, 4]. However, many recent studies have also found thrombocytopaenia associated with *P. vivax* [5,6].

### Graphical Abstract



Urinary findings in the patients

**Keywords:** Thrombocytopenia– Platelet Distribution Width (PDW)– Platelet Mean Volume (PMV) - Narrow bore granular cast -Sudan.