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### **Relationship between tumor necrosis factor-alpha (TNF- $\alpha$ ) and urinary tract pathology in rural Nigerians with *Schistosoma haematobium* infection**

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**Abstract: Background:** Schistosomiasis is estimated to affect more than 200 million people especially in rural and agricultural areas. *Schistosoma haematobium* is a significant urinary tract disease and is mediated by T cell dependent

responses to the schistosome eggs. Since tumor necrosis factor alpha Th 1 responses and implicated in granulomatous responses to the o bladder wall of *Schistosoma haematobium* infected persons, it is i relationship between intensity of infection and urinary tract pathology

**Methodology:** The urine samples from volunteers were subjected t investigations to ascertain the presence of *S. haematobium* ova in t profile was ascertained using standard enzyme-linked immunosorbe ultrasonographical investigation was carried out on the *S. haematol* participants using transabdominal ultrasonography.

**Results:** Nineteen out of 40 rural Nigerians infected with *S. haema* infection while the remaining 21 individuals had light infection. Male severely infected than females (14). Children (30) were more infect serum TNF concentration correlated positively with the intensity of i Serum TNF was negatively correlated with the age of the volunteer TNF concentration among subjects with heavy infection ( $535.7.4 \pm 341.0$ ,  $p < 0.05$ ). Also the concentration of TNF in the sera of chi ( $448.2 \pm 140.2$  pg/ml) was significantly higher than that in adults ( $180 114.6$ ,  $p < 0.05$ ). The ultrasonographic investigation revealed eigh pathology, namely, abnormal wall thickness (70%), irregular bladde particles (75%), calcification (60%), pseudopolyp (12.5%), masses (30%) and hydroureter (7.5%) among 28 subjects. These participar pathology had relatively high serum TNF ranging from  $190.6 \pm 15.6$  thickness to  $630.6 \pm 15.6$  pg/ml among individuals with masses.

**Conclusion:** The bladder and kidney pathology revealed in this inv intensity of infection correlated with the levels of serum TNF among infected participants in Ihieve-Ogben, Nigeria. We observed an assc level TNF with heavy infection and urinary tract pathology.

**Key words:** [Schistosoma haematobium](#), [Tumor necrosis factor](#), [U](#) [Light infection](#), [Heavy infection](#), [Transabdominal ultrasonography](#), [r](#)

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