

Abstract

* This study aimed to determine the effect of He-Ne laser 10 mW and 632.8 nm wavelength on bacteria that can cause Urinary Tract Infection in the presence of the photosensitizers. Toluidine blue(TBO) and crystal violet (CV).

* The samples for this study were collected from twenty patients with UTI in addition to two other microorganisms (*E. coli* ATCC25922), *S.aureus* (ATCC 25923) obtained from laboratory collage – university of Khartoum, as standard organisms .

* The samples were irradiated with different exposure times and different dye percentages.

* The colonies were counted before and after irradiation and compared with the number of colonies of the control groups without irradiation.

* The result showed that there was a moderate reduction in number of colonies with the increasing of the exposure time and dye percentage incase of *S. aureus* ATCC25923 was reduced from 1440 colonies at zero time to 880, 800 and 600 colonies at 30 (min) with the percent of TBO 5%, 15% and 45% respectively , while in *E .coli* ATCC25922 reduced from 1440 colonies at zero time to 900, 800 and 550 colonies at 30 (min) with the percent of TBO 5%, 15% and 45% respectively , in the isoled organism *Pseudomonas aeruginosa* was reduced from 660 colonies at zero time to 540, 510 and 480 colonies at 30 (min) with the percent of TBO 5%, 15% and 45% respectively , also the isoled *Proteus mirabilis* was reduced from 740 colonies at zero

time to 720, 680 and 650 colonies at 30 (min) with the percent of TBO 5%, 15% and 45% respectively ,
* Finally from these results it was noted that the killing effect of bacteria increased with the increasing of exposure time using 45% TBO as photosensitizer.