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
timeto 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.