وزارة التعليم العالي والبحث العلمي
جامعة المثنى
كلية العلوم

تأثير الليزرات الواطئة الطاقة على البكتريا المعزولة من الصفراء

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من قبل

نبيل خضير حسون الموسوي

بكالوريوس علوم حياة – أحياء مجهريه
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بإشراف

الأستاذ الدكتور
إحسان فتح الله رستم

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Abstract

This study includes isolation and identification of the microorganisms which cause cholecystitis in man, five different microorganisms isolated from forty samples taken from 40 patients after removing the infected gallbladder.

Two isolates of *Staphylococcus aureus*, two isolates of *Listeria monocytogenes* and five isolates of *Escherichia coli*. These microorganisms isolated by cold centrifuge method. Just one isolate of *Salmonella typhi* and one isolate of *Shigella sonnei* isolated by placing the stones found in infected gallbladders in Brain heart infusion broth for ten days from incubating at 37 C°, *Shigella sonnei* isolated in the seventh day while *Salmonella typhi* isolated in the tenth day of incubation.

To identify a bacteria; cultural, microscopic examination and Biochemical tests were done in addition to api system and antisera for diagnosis of *Salmonella typhi* and *Shigella sonnei.*

The antimicrobial agent's sensitivity before irradiation was done for ten antibiotics, These strains showed high resistance for these antibiotics except amikacin .

Some features were studied after irradiation with diode laser using different wavelengths; the results reveal that diode lasers had clear effects on the sensitivity to antimicrobial agents which increased reaching to kill the bacteria. Bacterial growth killed and attenuated to to prepare vaccine.

After the immunization period (one month) from all the experimental animals the blood samples were collected to determine some systemic immune response parameters (humoral) to compare the immunized animals with the control animals which were injected with normal saline.

The humeral immune response was also studied using radialimmunodiffusion test (to determine the immunoglobulin's concentration, for the IgM, IgG , IgA).

Immunoglobulin concentration rates were higher in the test subgroup animals compared with those of the control one, also the live attenuated vaccine induced highly immune response as compared with killed vaccine.

The challenge dose was given to all the animals, the control subgroup animals died while the immunized animals remain was not respons.