

(2009 /3 /16 2008 / 6 /23)

(50)

Pseudomonas aeruginosa *Proteus mirabilis*

(8)

(32)

E. coli

Staphylococcus aureus

(10)

The Investigation of some Types of Bacteria in Kidney Stones

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ABSTRACT

The study investigated the presence of bacteria in stone constituents in addition to chemical analysis of struvite stone components, removed by surgical intervention from (50) patients having renal stones and urinary tract infections (UTIs).

The results showed the isolation of *Proteus mirabilis* and *Pseudomonass aeruginosa* from most of 8 struvite stones from the center and subsurface layers, *Staphylococcus aureus* and *E. coli* were also isolated from one of the 32 calcium stones, while 10 uric acid stone, were germ-free.

The chemical analysis results showed that struvite stone components, contain calcium, magenisium and phosphate.

(%80)

. (A I-Jwadai, 2002)

.(Joseph, 2005)

P.mirabilis

(%70)

.(Coker *et al.*, 2000; Rodman, 1999; Lerner *et al.*, 1989)

(%80)

.(Torzewska *et al.*, 2003; Maxwell, 2003)

struvite

.(Naas *et al.*, 2001; Rose, 1982)

.....

apatite –

struvite

.(Mclean *et al.*, 1989)

"

:"

.1

(77)

(6)

(50)

/

.

.2

Eriochrome Black T

•

Ammonia Buffer Solution

•

(0.01M) Na₂-EDTA

•

Ammonium Molybdate

•

Stannous Chloride

•

.(Rand *et al.*, 1976)

:"

(Rand *et al.*, 1976)

struvite

(48-24) ° (37)

.(1)



0 1 2 3 4 5 cm

:1

.....

:

:

-

struvite

()

()

-

(37)

(24)

(Holt *et al.*, 1994)

struvite

Pseudomonas aeruginosa *P. mirabilis*

apatite struvite

.

P. mirabilis

Pseudomonas aeruginosa

biofilms

(Li *et al.*, 2002; Nickel *et al.*, 1985)

struvite

Staphylococcus aureus

superimposed infections

.(1984b)

Takeuchi

.

E.coli

(1984) Yoshida

(1984a) Takeuchi

Pseudomonas aeruginosa *P. mirabilis*

struvite

Staphylococcus

Secondary infection

(TME)

(SEM)

struvite

apatite struvite

Takeuchi

(Takeuchi *et al.*, 1989)

(1996)

(PCR)

(2002)

Li

struvite

P. mirabilis

SEM

Confocal Laser Scanning Microscope

Electron micrograph

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