

Pseudomonas aeruginosa

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.Pseudomonas aeruginosa

(%75)

(40) ³ / (2000)

(60) (%41.7)

Study of *Pseudomonas aeruginosa* Resistance to Hibitane and Formalin

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ABSTRACT

The effect of hibatane and formalin was studied against *Pseudomonas aeruginosa*. Bacterial isolates were taken from respiratory, urinary tracts and wound infections. The sensitivity percentages were recorded to different concentrations of disinfectants in different time intervals. The study showed that Hibitane has a better effect on this bacterium than Formalin, where the isolates were (70%) sensitive to concentration (2000 µg\cm³) of Hibitane after (40) minutes of treatment, while their sensitivity

percentage to the same concentration of Formalin was (41.7%) after (60) minutes of treatment. The study also showed that sensitivity percentage increases with the increase of disinfectant concentration and treatment time.

)	.			
(Hibitane		) Chlorhixidine	(Formalin	
	.(Frais, 1999; Russell et al., 1982)			
		Alkylating agents		
			.Diguanide compounds	
	.(Schmid, 1997; Pelczar et al., 1977)			
	.(Gardner and Peel, 1986)			
			<i>Ps. aeruginosa</i>	
			(Al-Jebouri, 1989; Baird and Shooter, 1976)	
	.(Rutala et al., 1997; Al-Jebouri, 1989)			
			:	
		<i>Ps. aeruginosa</i>	(12)	
		.	(4)	
	.(Koneman et al., 1997; Macfaddin, 1985)			
			:	
	(%5)	(%40)		
	.			

..... *Pseudomonas aeruginosa*

³ / (3.9,7.8,15.6,31.3,62.5,125,250,500,1000,1500,2000)
 .(Pelczar *et al.*, 1977; Cruickshank *et al.*, 1975) ³ (2)

:

(37)
³ (0.1) . (3-2) (24-18)
³ (2)

(60,40,25,15,10,5)

. (48-24) (37) .

.(Atlas *et al.*, 1995; Cruickshank *et al.*, 1975)

Ps. aeruginosa

(5) .(8-1)
 (1500) (%33.3) ³ / (2000) (%41.7)
 .(1) ³ / (1000) (%16.7) ³ /
 (%75) (%58.3) (%41.7)
 (2) (15,10) ³ / (1000,1500,2000)
³ / (1500) (3) (25)
 (40) (4) .(%66.7)
 (250,500)
 (%8.3) (%16.7) ³ /
 (60)

(10) ³ / (1500,2000) (%100)
 (10,5) .
 (15) (%0.0)

$^3 / (2000)$
 $(\%0.0)$ $(\%16.7)$
 $\% (8.3 , 33.3)$ (25) $.(5)$
 (7) $.(6)$ $)$ $^3 / (1500,2000)$
 (8) $.(\%25)$ $^3 / (1500)$
 $(\%41.7)$ $^3 / (2000)$
 (1000) $^3 / (1500)$
 (60) $(\%8.3)$ $^3 /$
 $.$

Ps. aeruginosa

$(\%75)$ $^3 / (2000)$
 (2000) $(\%50)$ $.$ (60)
 $.$ (60) $^3 /$

(Tuxford and Kenwright, 1982) (2-1)

.(Nisharmon and Pokja, 1977; Pelczar et al., 1977)

Ps. aeruginosa

.(Schmid, 1997; Rutala et al., 1997)

..... *Pseudomonas aeruginosa*

Ps. aeruginosa :1

. (5) Hibitane

(³ /)											
3.9	7.8	15.6	31.3	62.5	125	250	500	1000	1500	2000	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	50	50	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	50	50	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	33.3	41.7	

Ps. aeruginosa :2

. (15) (10) Hibitane

(³ /)											
3.9	7.8	15.6	31.3	62.5	125	250	500	1000	1500	2000	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50	75	75	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	75	100	100	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	41.7	58.3	75	

Ps. aeruginosa :3

. (25) Hibitane

(³ /)											
3.9	7.8	15.6	31.3	62.5	125	250	500	1000	1500	2000	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50	75	75	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	75	100	100	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	41.7	66.7	75	

Ps. aeruginosa :4

(60) (40) Hibitane

(3 l)											
3.9	7.8	15.6	31.3	62.5	125	250	500	1000	1500	2000	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	50	75	75	
0.0	0.0	0.0	0.0	0.0	0.0	25	25	75	100	100	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	50	
0.0	0.0	0.0	0.0	0.0	0.0	8.3	16.7	41.7	66.7	75	

Ps. aeruginosa :5

(15) Formalin

(3 l)											
3.9	7.8	15.6	31.3	62.5	125	250	500	1000	1500	2000	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	

Ps. aeruginosa :6

(25) Formalin

(3 l)											
3.9	7.8	15.6	31.3	62.5	125	250	500	1000	1500	2000	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	50	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	33.3	

Ps. aeruginosa

:7

(40) Formalin

(³ /)											
3.9	7.8	15.6	31.3	62.5	125	250	500	1000	1500	2000	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50	50	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	50	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	33.3	

Ps. aeruginosa

:8

(60) Formalin

(³ /)											
3.9	7.8	15.6	31.3	62.5	125	250	500	1000	1500	2000	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	50	50	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	50	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	25	41.7	

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