



\*
,



Email: dr.khaki@iaut.ac.ir

)

(WHO)

.( )	.( ) (Escherichia coli)				
) ± ±		(		(staphylococcus saprophyiticus)	
	( )		(NGU)	cystitis	
				Nongonococcal urethritis	
			Chancriod	Lymphogramuloma venereum	
			)	(soft chancre)	
				.(	
( )					
			. (Ciprofloxacin)		
			DNA-gyrase		
( )			DNA	( )	
				:	
			(Staphylococcus aureus)		
			(Listeria monocytogenes)		
			( )	(Mycobactrium Tuberculosis)	
				( )	
				( )	
	(Wistar)				
				.( )	

·

,			. ±
/		(	)
	/ (PH= / ) / M		
		(n= )	(n= )
	(PH= / ) / M		(11- )
(	)	/ ( .( )	)
(Propylene oxide)			
	Epon		
(Ultra microtome)	Reichert-Jung	.( )	
	(Semi thin Section)	)	(
			,
	(Ultra thin Sectioning)		
/ ( )		)	( )
Jeol	JEM 200CX		CO2 (
		:	
	:(score)	H	&E
μ Olympus/3H-Z ASA400 Kodak Ultra			tra

( )

.

(PH= / )

	.( )			:
/ ±			. (Fisher test) F /	-test P value
	/ ± /	/ ± /	: /	
(score) *	( )	.( ) :	/ ± / ) / ± / ( )	(
	/±/ζ (	)	:	.( )
	/ ± / ( / ± / (	) )		.( )
	/±/ ( /±/ (	)	: ( / ±/) ( / ±/) .	

/ ± /

:

/ ±

/ ± / ) ( ) / ±/ ( . P< / \* . ( ζ

±

[ Downloaded from ismj.bpums.ac.ir on 2025-07-17 ]

/ ± /



:



.( ×) ( )

:



: ( ×) .H&E ( ) ( )



( ×). H&E



( )





.( ) ) ( ( ) ) .( ) ( ) . . .( ) . .( ) . . ( ) ( )

1

),

,

.( )

.

,

•

.

DNA

1

)

## ( )

(

)

## **References:**

1. Mandell GL, Douglas RG, Bennet JE. Principles and practice of Infectious diseases.3rd edit. New York: Churchill

Livingston: 1990; 203-5.Neu HC. Optimal characteristics of agents to treat uncomplicated Urinary tract infections. J

Infection 1992; 20 Suppl 3: 266–71. 3. Orenstein R, Wong ES. Urinary tract infections in adults. Am Fam Physician, 1999; 59: 1225–34 & 1237.

4. Jun YT, Kim HJ, Song MJ, et al. In Vitro Effects of Ciprofloxacin and Roxithromycin on Apoptosis of Jurkat T Lymphocytes. J Antimicrobial Agents and Chemotherapy 2003; 47: 1161-4.

5. Reece RJ, Maxwell A. Probing the limits of the DNA breakage-reunion domain of the Escherichia coli DNA gyrase A protein. J Biol Chem 1991; 25: 3540-6.

6. Giamarellos-Bourboulis EJ, Grecka P, et al. Comparative in vitro activity of ciprofloxacin vs

8 antimicrobial agents against nosocomial multiresistant P. aeruginosa strains. Drugs 1995; 49 Suppl 2: 203- 4.

(

)

(

.( )

7. Ronald AR, Nicolle LE, Harding GK. Standards of therapy for urinary tract infections in adults. J Infection 1992; 20 Suppl 3: 75-80.

8. Hooper DC, Wolfson JS, Ng EY, et al. Mechanisms of action and resistance to ciprofloxacin. Am J Med 1987; 82 Suppl 4: 12–20.

9. Vander Does MC, Van Duijn NP, Timmerman CP, et al. Resistance to antibiotics in uncomplicated urinary tract infections. J Huisarts Wet 1998; 41: 421-3.

10. Warren JW, Abrutyn E, Hebel JR, et al. Guidelines for antimicrobial treatment of uncomplicated acute Bacterial cystitis and acute pyelonephritis in women. J Clin Infect Dis 1999; 29:745–58.

11. Naber KG, Landen H. Rapid resolution of symptoms with ciprofloxacin therapy in 3859 hospitalised patients with urinary tract infection.

International Journal of Antimicrobial Agents 2004; 23: 35-40.

12. Firsov AA, Vostrov SN, Shevchenko AA, et al. A new approach to in vitro comparisons of antibiotics in dynamic models: equivalent area under the curve/MIC breakpoints and equiefficient doses of trovafloxacin and ciprofloxacin against bacteria of similar susceptibilities. J Antimicrob Agents Chemother 1998; 42: 2841-7.

13. Son GS, Yeo JA, Kim JM, Kim SK, Moon HR, Nam W. Base specific complex formation of norfloxacin with DNA. J Biophys Chem 1983; 14: 225-36.

14. Sissi C, Andreolli M, Cecchetti V, et al. Mg(2+)-mediated binding of 6-substituted quinolones to DNA: relevance to biological activity. J Bioorg Med Chem 1998; 6 Suppl 4: 1555-61.

15. Andriole VT. Urinary tract infections in the 90s, pathogenesis and management. Infection 1992; 20 Suppl 4: 251–6.

16. Norra C, Skobel E, Breuer C, et al. Ciprofloxacin-induced acute psychosis in a patient with multidrug-resistant tuberculosis. Eur Psychiatry 2003; 18: 262-3.

17. Neu HC. Optimal characteristics of agents to treat uncomplicated Urinary tract infections. Infection 1992; 20 Suppl 4: 266–71.

18. Leslie P, Gartner Games L. The color text book of Histology.2nd ed. Phliadelphia: W.B Suanders compmany, 2001, 487-509.

19. Junqueria LC, Carneiro J, Long JA. Basic Histology. Chapter 23, 5th ed. USA: Appleton-century-crofts, 1986, 468-84.

20. Bustos-Obregon E, Rodriguez H. Testicular x-ray irradiation in adult Mice as a model to study spermatogonial proliferation. J Andrologia, 1991; 23: 447–50.

21. Kerr JB, Maddocks S, Sharpe RM. Testosterone and FSH have independent, synergistic and stage-dependent effects upon spermatogenesis in the rat testis. J Cell and Tissue Research, 1992; 268: 179–89.

22. Wilson RM, and Griswold MD, 1979. Secreted protein from rat Sertoli cells, Exp. Cell Res. 123 1979; 127–35.

23. Skinner MK, Griswold MD. Secretion of testicular transferrin by cultured Sertoli cell is regulated by hormones and retinoids, Biol. Reprod. 1982; 27: 211–21.

24. Hauser L, Altshul Z, Chen L, et al. Environmental organochlorines and semen quality: results of a pilot study, Environ. Health Perspect. 2002; 110: 229–33.

25. Rathore P, Bhatnagar D, Rathore M, et al. Burden of organochlorine pesticides in blood and its effect on thyroid hormones in women, Sci. Total Environ. 2002; 295: 207–15.

26. Sharpe RM. Regulation of spermatogenesis. In The Physiology of Reproduction. Knobil E, Neil JD, editors. New York: Raven Press, 1994, 1363–434.

27. Johnson L, Petty CS, Neaves WB. Further quantification of human spermatogenesis: Germ cell loss during post-prophase of meiosis and its relationship to daily sperm production. J Biol Reprod, 1983; 29: 207.

28. Raff MC.Social controls on cell survival and cell death Nature, 1992; Vol : 356: 397–400.

29. National Institutes of Health.The principles of laboratory animal care. NIH publication, (1985), No: 86-23.

30. Yu X, Kubota H, Wang R, et al. Involvement of Bcl-2 family genes and Fas signaling system in primary and secondary male germ cell apoptosis induced by 2-bromopropane in rat. Toxicology and applied pharmacology 2001; 174:35-48.

31. de Kretser DM, Holstein AF. Testicular biopsy and abnormal germ cells. In Hafez, E.S.E.(Ed) The human semen and fertility regulation in men. Mosby and Co. St Louis, Missouri, 1976; 332–43.

32. Orth JM, Gunsalus GL, Lamperti AA. Evidence from Sertoli cell-depleted rats indicates that spermatid number in adults depends on numbers of Sertoli cells produced during perinatal development. Endocrinology, 1988; 122: 787–94.

33. Griswold MD. The central role of Sertoli cells in spermatogenesis. Seminars in Cell and Developmental Biology, 1998; 9: 411–6.

34. Cocco and Benichou, 1998 .Mortality from cancer of the male reproductive tract and environmental exposure to the anti-androgen p,p'-dichlorodiphenyldichloroethylene in the United States, Oncology 55 1998; 334–9.

35. Meistrich ML. Effects of chemotherapy and radiotherapy on spermatogenesis.J Eur Urol, 1993; 23: 136–42.

36. Frankenschmidt A, Naber KG, Bischoff W, Kullmann K. Once-daily fleroxacin versus twice-daily ciprofloxacin in the treatment of complicated urinary tract infections. J Urol 1997; 158:1494-9.

37. Raz R, Naber KG, Raizenberg C, et al. Ciprofloxacin 250 mg twice daily versus ofloxacin 200 mg twice daily in the treatment of complicated urinary tract infections in women. Eur J Clin Microbiol Infect Dis 2000; 19:327-31.
38. Shinoda K, Mitsumori K, Yasuhara K, et al. Doxorubicin induces male germ cell apoptosis in rats.J Arch Toxicol 1999; 73 suppl 4-5: 274-81.

39. Suschek CV, Krischel V, Bruch-Gerharz D, et al. Nitric oxide fully protects against UVA-

induced apoptosis in tight correlation with Bcl-2 up-regulation. J Biol Chem 1999; 5: 6130-7.

40. Chitra KC, Latchoumycandane C, Mathur PP. Effect of nonylphenol on the antioxidant system in epididymal sperm of rats. J Arch Toxicol 2002; 76 suppl 9: 545-51.

41. Zhang JH, Zhang Y, Herman B. Caspases apoptosis and aging. J Ageing Res Rev. 2003; 2 suppl 4: 357-66.

42. Judas L, Bentzen SM, Hansen PV, et al. Proliferative response Of mouse spermatogonial stem cells after irradiation. A quantitative Model analysis of experimental data. J Cell Prolif 1996; 29: 73–87.

43. Clermont Y.Kinetics of spermatogenesis in mammals; seminiferous epithelium cycles and

spermatogonial renewal.J Physiol Rev, 1972; 52: 198-236.

44. Nakagawa S, Nakamura N, Fujioka M, et al. Spermatogenic cell apoptosis induced by mitomycin C in the mouse testis. J Toxicol Appl Pharmacol, 1997; 147 suppl 2: 204-13.

.