

MISCELLANEOUS BACTERIAL PROSTATIC INFECTIONS⁺

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Abstract:

The aim of this study is to find out the miscellaneous bacterial infections of prostatitis and also ages at which infection happens and the effect of antibiotics against isolated bacteria. The study was carried out in the Basrah hospitals , from January 2002 to 2004 . A total of 163 patients at ages # 40 and > years , *klebsiella spp* 33.12 % , *Escherichia coil* 28.83 % , *proteus spp* 10.42 % , *Staphylococcus cureus* 8.58% , *Beta haemolytic streptococci* 7.36% , *Pseudomonas aeruginosa* 4.90% , *Staphylococcus saprophyticus* 3.68% , *Enterobacter spp* 2.45% , and finally *Neisseria gonorrhoeae* 0.61% numbers of cases with age # 40 were 107 patients (65.64%) , less than 40 years were 56 cases (34.36%). Antimicrobial sensitivity test showed high effect of ciprofloxacin and trimethprim — sulfomethoxe , and less effect of erythromycin , sulfonamide , nitrofurantoin , cephalixin , and resistance to doxycycline and ampicillin.

المستخلص:

تهدف هذه الدراسة الى ايجاد انواع الاصابات الجرثومية المختلفة للبروستات ، ومدى الفئحة العمرية ، اضافة الى تأثير انواع من المضادات الحيوية على هذه الجراثيم المعزولة . استمرت الدراسة لمدة سنتين منذ عام ٢٠٠٢-٢٠٠٤ ، في مستشفيات البصرة ، تم اخذ الحالات المرضية والبالغة ١٦٣ حالة مرضية باعمار اكبر من ٤٠ سنة واقل من ذلك ، تم عزل ١٢ و ٣٣% من الكلبسيلا ، ٨٣ و ٢٨ الاشيرثيا القولونية ، ٤٢ و ١٠% المتقلبات ، ٨٥ و ٨ المكورات العنقودية الذهبية ، ٣٦ و ٧% المكورات المسببة تحلل بيتا ، ٩٠ و ٤% الزوائف الزنجارية ، ٦٨ و ٣% المكورات الرمية ، ٤٥ و ٢% الانتيروبيكتا ، وشكلت الناييسيريا المسببة للسيلان ٦١ و ٠% عدد الحالات المرضية اكبر من عمر ٤٠ سنة شكلت مجموع ١٠٧ و بنسبة ٦٤ و ٦٥% ، اما الاعمار اقل من ٤٠ فقد فشلت نسبة ٣٦ و ٣٤% من مجموع ٥٦ حالة ، اظهر فحص الحساسية الدوائية

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تأثيراً فعالاً للسبروفلوكساسين ، السلفاميثوكس ، وتأثيراً اقل للارثرومايسين ، السلفا ، نايتروفوراتين ، سيفالوكسين ومقاومة للاوكسي سايكلين والامبسيلين.

Introduction :

The term prostatitis has been used for various inflammatory conditions affecting the prostate, including acute and chronic infections with specific bacteria with signs and symptoms of Prostatic inflammation present but no specific organisms can be detected [1].

Patients with acute bacterial prostatitis can usually be identified on the basis of typical symptoms and are characterized by pyuria , bacteriuria . To classify a patient with suspected chronic prostatitis correctly , first — void and midstream urine specimens, a prostatic expressate, and a post — massage urine specimen should be quantitatively cultured and evaluated for numbers of leucocytes [2] . Chronic non bacterial prostatitis , the presumably infections etiology of this condition remains unidentified . Evidence for a causative role of both *U. urealyticum* and *C. trachomatis* has been presented but is not conclusive . Since most of non bacterial prostatitis occurs in young, sexually active men and since many cases follow an episode of non specific urethritis , prostatodynia, symptoms and signs of prostatitis show no evidence of prostatic inflammation (normal leucocyte counts) and negative urine cultures are classified as having prostatodynia (11).

Methods

One hundred sixty three male patients, of (>40, # 40) years of age attending Basrah hospitals mainly complaining of prostatic pain were selected for this study Table (1) . Midstream urine specimens, and post massage urine specimen were cultured on agar complement by biochemical test for each bacterial isolate depending on District Laboratory Practice in Tropical countries 2004 . Tables (2,3 and 4). Antimicrobial sensitivity test [3], using antibiotics with activity was used against all isolates including ciprofloxacin , Erythromycin , Trimethoprim Sulfamethoxazole, Nitrofrantoin, Ampicillin , Sulfonamide, and Doxycycline.

Table (1): Age groups of patients

Age group (years)	No.of patients	%
#40	107	65.64
>40	56	34.36
Total	163	100

Table (2): Biochemical test of *staphylococci* & *streptococci*

Test	S.aureus	S.saprophyticus	B.haemolytic Streptococci
Coagulase	+	-	-
DNase	+	-	-
Mannitol	+	+	-
Trehalose	+	+	-
Sucrose	+	+	-
Novobiocin	S	R	R
Calalase	+	+	-
PYR	-	-	-

Table (3) :Biochemical test of *P. aeruginosa* & *N.gonorrhoea*.

Bacteria	Growth				Acid		
	4c		42c		Mannitol		maltose
<i>P. aeruginosa</i>	-		+		+		-
Bacteria	Ox	G	M	S	L	dnase	Shape
<i>N.gonorrhoea</i>	+	+	-	-	-	-	Diplococci

Table (4) :Biochemical test of some *Enteropacteriaceae*

Bacteria	U	VP	L	M	G	S	OX	C	MOT	I	KIA medium			
											S	B	H2S	G
<i>Klebsiellaspp</i>	+	+	+	+	+	+	-	+	-	-	Y	Y	-	+

	slow													
E.coli	-	-	+	+	+	d	-	-	+	+	Y	Y	-	+
Proteus spp	+	-	-	-	+	d	-	+	+	+	Y	Y	-	+
Enterobacter spp	-	+	+	+	+	D	-	+	+	-	Y	Y	-	+

Results:

The results show that more infection is located in # 40 Age groups than > 40 years with 65.64 % ,34.36 % respectively Table(1),*Kiebsiella spp* were 54(33.12).),*Escherichia coli* 47(28.83),*Proteus spp* 17(10.42).),*Staph aureus* 14(8.58%),*B.haemolytic Streptococci* 2(7.36%) *P.aeruginosa* 8(49%) *Staph saprophyticus* 6(3.68).),*Enterobacter spp* 4(2.45%) and finally *N.gonorrhoeae* 1(0.611) table(5). Antimicrobial sensitivity test indicate that Ciprofloxacin and Trimethoprim .Sulfamethaxazole are highly effective and sulfonamide Erythromycin , Nitrofurantoin are less effective,and resistance to Doxycycline and Ampicillin (table 6).

Table (5):Types of bacteria and its intensive

Types of bacteria	N	(%)
Klebsiella spp	54	(33.12)
Escherichia	47	(28.83)
Proteus spp	17	(10.42)
Staphylococcus aureus	14	(8.58)
B-haemolytic streptococci	12	(7.36)
Pseudomonas aeruginosa	8	(4.90)
Staphylococcus saprophyticus	6	(3.68)
Enterobacter spp	4	(2.45)
Neisseria gonorrhoeae	1	(0.61)

Table (6) :Antimicrobial sensitivity test

	E	D	TS	CF	S	NF	A	Cx
Bacteria								
Kiebsiella spp	S	R	S	S	S	S	R	S
Escherichia coli	S	S	R	S	S	S	R	S
Proteus spp	S	R	S	S	S	R	S	S

Staph aureus	R	R	R	S	R	R	S	R
B- haemolytic streptococci	R	R	R	S	R	R	R	R
Pseudomonas aeruginosa	R	R	R	S	R	R	R	R
Staph saprophyticus	R	R	S	S	S	S	R	R
Enterobacter spp	R	R	S	S	S	S	R	R
Neisseria gonorrhoea	R	S	R	R	R	R	R	R

E= Erythromycin

D = Doxycycline Ts = Trimethprim — sulfamethaxazole

cf= ciprofloxacin

S = sulfonamide

nf= nitrofurantoin

A= AMPICILLIN

Cx = cephaloxin

Discussion

In this study, the intensity of bacterial isolates from prostatic infections and ages groups as well as the effective of antimicrobial agents are in similar in many respects [4,5] some studies have emphasized chronic asymptomatic infection of the prostate in men as a possible sources of recurrent urinary tract infections, these indolent infections are particularly troublesome because antibiotics are characteristically ineffective [6]. The relative ineffectiveness of antimicrobials for long term cure results in part from the poor penetration of the prostate by most of these drugs , including ciprofloxacin and ofloxacin ,which have been more successful than other antimicrobials [7,8,9,10].and this results resemble to this study .

Total prostatectomy obviously results in the cure of chronic prostatitis

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