

WHEN CHRONIC PROSTATITIS IS TO BE CONSIDERED ?

Mohamed El.Kholy, Ahmed Abou.Elsaad,
Mourad Mahmoud, Magdy Sabra and Hany Yehia

Urology Department, Faculty of Medicine
Al-Azhar University

ABSTRACT

We studied 50 patients with lower urinary symptoms, sexual symptoms and/or bacteruria. Their age ranged between 25-50 years. All patients were subjected to : full history taking, clinical and laboratory investigation including urine analysis and culture and sensetivity; prostatic smear analysis and culture; prostatic needle biopsy and culture. All specinens were grown on aerobic cultures and blood agar plates. The most common presentations of our cases were sexual troubles as weak erection (40%) and lower urinary symptoms as burning micturation (18%). Significant bacteriuria was found in only 20% of patients and E.coli was the most common isolated organism. Infected prostatic secretion with pus cells over 100/H P.F. was found in most cases (45%). Prostatic secretion, semen and prostatic needle biopsy cultures revealed bacteriological growth in 76%, 67%, and 72% respectively. Regarding cost benefit and invasion, prostatic biopsy was of significant value in diagnosis of chronic prostatitis.

INTRODUCTION

Chronic prostatitis is a very common entity where the pathogens persist in the prostatic secretion of untreated patients and lead to recurrent bacteriuria. Gram negative organisms and enterococci are the common offending pathogens in chronic bacterial prostatitis. Gram positive cocci, anaerobic organisms, chlamydia trachomatis and ureaplasma urealyticum are infective agents suspected to play a role in prostatitis (1).

Chronic bacterial prostatitis varies greatly in clinical presentations. Some men present only because asymptomatic bacteriuria which incidentally discovered during investigating an infertile male. Most patients however complain of varying degrees of irritative voiding symptoms including dysuria, urinary urgency, nocturia and pain perceived in various sites (suprapubic, perineal, low back, scrotal, penile and/or inner thigh). A watery dis-

charge or post-micturation dribbling are less common complaints. Others may experience post-ejaculatory pain or intermittent hemospermia (2,3).

Hence we have tried to study 50 patients with chronic prostatitis; clinically and bacteriologically aiming at evaluating prostatic biopsy as a diagnostic tool.

MATERIALS AND METHODS

This study included 50 patients attending urology and skin and venereal outpatient clinics of El-Hussien University Hospital. These patients were presented by lower urinary symptoms, sexual symptoms and/or bacteriuria. All patients were subjected to : full history talking clinical examination and laboratory investigations (urine analysis and culture, prostatic smear

analysis and culture, prostatic needle biopsy examination and culture and semen culture in some cases. The cultures were done on blood agar. All patients underwent radiologic imaging study to exclude other urologic diseases (stone, reflux, stricture, ...etc.). Patients with previous history of any form of instrumentation were excluded.

RESULTS

This study was carried out on 50 male patient with chronic prostatitis between age of 22-50 years, with a mean 40 years of age. The clinical presentation in our cases was sexual symptoms in 40% (35), urinary symptoms in 30% (15) and infertility in 20% (15) and some patients presented with more than one symptoms.

On clinical examination 70% of cases has slight enlarged tender prostate by digi-

tal rectal examination, while 20% of patients were clinically free and 10% has just suprabubic tenderness.

On Laboratory study :

Table (1) shows the results of microscopic examination of urine analysis before massage of the prostate (most of patients 80% had pus cells and RBCs less than 4/HPF).

Table (1) : Result of urine analysis

Microscopic examination	Number of cases	%
1. Pus cells		
0.4/HPF	40	80%
5.15 / HPF	7	14%
above 15/HPF	3	6%
2. RBCs		
0.4 / HPF	40	80%
5.15 / HPF	5	10%
above 15 / HPF	5	10%

Table (2) Result of Microscopic examination of Expressed Prostatic Secretion

Microscopic finding	Number of cases	%
Pus cells		
0.15 / HPF	-	-
15-30 / HPF	6	12%
30-50/HPF	12	24%
50-100/ HPF	15	30%
over 100 / HPF	17	34%
Total	50	100%

Prostatic secretion and prostatic needle biopsy cultures revealed bacterial growth in (76%) and 36 (72%) respectively. The most common isolated organism was E.

coli in 18 (36%) respectively followed by Klebsiella, proteus and staph pyogeus, as shown in table 3&4.

Table (3) : Results of Prostatic Secretion Culture

Culture	No. of cases	%	
* No. of growth	12	20%	
* Growth	38	76%	
Single growth	E. Coli	18	36%
	Klebsiella	5	10
	Proteus	5	10
	Staph pyogenes	4	8%
	Staph epidermis	2	4%
Mixed growth	E. Coli + Strept. facalis	1	2%
	Staph pyogenes + Klebsiella	1	2%
	Staph pyogenes + Candida	2	4%
Total	50	100%	

Table (4) : Results of Prostatic Needle Biopsy Culture

Culture	No. of cases	%	
* No. of growth	14	28%	
* Growth	36	72%	
Single growth	E. Coli	17	34%
	Klebsiella	5	10%
	Proteus	4	8%
	Staph pyogenes	4	8%
	Staph epidermis	2	4%
Mixed growth	E. Coli + Strept. facalies	1	2%
	Staph pyogenes + Klebsiella	1	2%
	Staph pyogenes + Candida	2	4%
Total		100%	

Semen culture was done for 34 cases, and growth was found in 26 (67%). E.coli, Klebsiella and proteus species were the commonst isolated organisms respectively.

DISCUSSION

Although chronic prostatitis is a common disease, yet most of the confusion concerning it; aetiology, diagnosis and proper management has not been settled. At the same time clinical presentation, effect on fertility, relation to male symptoms typical of lower urinary tract infection still controversial (4).

Chronic prostatitis affects men of all decades after puberty, not only elderly men (5). In our study, chronic prostatitis was diagnosed in 50 patients, their ages ranged from 22-50 years, most of them were in the 5th decade.

Diagnosis of prostatitis or excluding its presence is still a controversial issue. Rectal examination, urethroscopy, ultrasonography, prostatic needle biopsy, cytological examination of expressed prostatic secretion, bacteriological assessment, PH determination and molecular traces of inflammation have all been suggested (7,6). No abnormality is detected in prostate during rectal examination except in the acute bacterial type of inflammation (2). Rectal examination of the patients in our series detected no abnormalities except in 35 patients who had enlarged firm glands. Hence in our study non of cases were included on the basis of rectal findings only.

Concerning microscopic urine examination, 80% of our patients had pus cells and RBCs less than 10/HPF and 20% of patients had pus cells above 10/HPF. The

urin analysis was done to exclude urinary tract infection. Also urine culture showed the growth in most cases (80%). Quantitation of neutrophils in expressed prostatic secretion is the most common method used to diagnose prostatitis. Neutrophils are usually the only inflammatory cells useful for quantitation during cytological examination of expressed prostatic secretion. Much controversy exists about the exact number of neutrophils that signifies prostatic inflammation. However patients with more than 15 pus cells/HPF were included in this study. Several investigators believe that true chronic bacterial prostatitis is caused only by gram negative organisms (8,9). Bacterial prostatitis comprises only those cases that harbour gram negative organisms (10). The results of culture of expressed prostatic secretion in our cases has confirmed the view of those investigators, whereas gram negative organisms were detected in 34 cases and E.coli was the most frequently isolated organisms followed by Klebsiella and proteus. Gram positive organisms have been isolated in the expressed prostatic secretion in several studies and staphylococci appeared to be the most suspicious (10).

Some authors (4) found streptococcus facalis were isolated in 23%, staph epidermis in 18% and staphylococcus aureus was also the dominant isolated organism from the expressed prostatic secretion of 20 patients with chronic prostatitis and the same authors.

In our study gram positive cocci were isolated from 28% of cases, staph. pyogens was the most frequently isolated gram positive organism from 20% of cases followed by staph epidermis (8%). Since the infection is usually focal and prostatic biopsy specimens are randoms, small and easily contaminated during procurement, the low yield of valid cultures with the technique is easily understood. So tissue culture of prostatic needle biopsy specimen is ineffective for the diagnosis of chronic prostatitis (10).

In this study bacterial growth were

found in 42% of cases after repeated successful tissue biopsy culture. E.coli was found in 37% followed by staph. pyogens 14% and Klebsiella 10%. The possibility of failure to obtain a prostatic biopsy limit the value of histologic examination. Furthermore, random needle biopsies transperineal or transrectal often fail to demonstrate inflammatory changes on histologic examination (11). Semen culture may be used as a routine in the diagnosis of chronic prostatitis (12). In our study semen and expressed prostatic cultures were positive in 76% of cases and the same diagnosis were isolated in both cultures.

CONCLUSION

Chronic prostatitis should be considered in patients with chronic urinary symptoms, sexual symptoms and/or bacte-

riuria particularly those who were investigated and revealed no findings to explain.

REFERENCES

- Mearns, E; M. Jr. (1979) : *Differentiated diagnosis of prostatitis. J. Genitourinary Med. 1 : 43.*
- Stamey, T.A. (1980) : *Prostatitis. Jr. Soc. Med. 47 : 22.*
- Krieger, J. N. (1984) : *Prostatitis syndrome : Pathophysiology, differential diagnosis and treatment. Sex. Transm. Dis. 11 : 100.*
- Gorelick, J. I.; Stonterfit, L.B. and Vaghan, E.D. Jr. (1988) : *Quantitative bacterial tissue cultures from 209 prostatectomy specimens : Findings and complications. J. Urol. 139 : 57.*
- Drach, G.W. (1974) : *Problems in diagnosis of bacterial prostatitis : Gram Negative, gram positive and mixed infections. J. Urol. III : 630.*
- Mearns, E. M., Jr. (1973) : *Bacterial prostatitis versus "Prostatosis" : A clinical and bacteriological study. JAMA, Vol., 224 : No. 10 : 1372-1375.*
- Eliasson, R. (1976) : *Seminal plasma ac-*

- cessory genital glands and infertility. In male infertility work up. Treatment and research. Cokett A.T. and Urry R.L. (ed.), Grune & Straatton, New York, P. 189-204.*
- Meares, E.M. Jr. and Sraurey, T.A. (1968) : Bacteriologic localization pattern in bacterial prostatitis and urethritis. Invest. Urol., 5 : 292.*
- Pfau, A. (1986) : Prostatitis : A continuing enigma. Urol. Clin. North. Amer. 13 : 695-715.*
- Schmidt, J.D. and Patterson, M.C. (1966) : Needle biopsy study of chronic prostatitis. J. Urol. 96 : 519.*
- Drach, W., Meares, E.M.Jr., Fair, W.R. and Staurey, A.T. (1978) : Classification of benign diseases associated with prostatic pains : Prostatitis and prostatodynia. J. Urol., 120:266.*
- Arora, D.R. Ichpuigani, R.L., Arora, B., Chhabra, L., Keswani, P.K. and Chagh, T.D. (1982) : Diagnostic value of semen culture in chronic prostatitis. Indian J. Med. Res. 75 : 89.*

متى يتم تشخيص إلتهاب البروستاتا المزمن ؟

د. محمد الخولي ، د. احمد أبو السعد ، د. مراد محمود ،

د. مجدي صبره ، د. هاني يحيي

قسم المسالك البولية - كلية الطب - جامعة الأزهر

شملت الدراسة خمسون مريضاً ممن يعانون من أعراض الجهاز البولي السفلي والعهن الجنسي و/أو بكتيريا بالبول. وتراوح عمر المرضى من ٢٥-٥٠ عاماً.

وتم معرفة التاريخ المرضي للمرضي إضافة إلي الفحص الإكلينيكي والمعملي الذي اشتمل علي فحص بول كامل، ومزرعة واختبار حساسية للبول، فحص افراز البروستاتا مع عمل مزرعة واختبار حساسية، وأخذ عينة من البروستاتا بالإبرة وعمل مزرعة لهذه العينة.

ووجد أن ضعف الانتصاب يمثل ٤٠٪ من أعراض المرضي بينما حرقان البول ١٨٪ فقط. ووجد بكتيريا في البول في ٢٠٪ من الحالات وميكروب إي-كولاي كان أكبر الميكروبات تواجداً في مزرعة البول . كما وجد أن زيادة نسبة الصديد في إفراز البروستاتا في ٤٥٪ من الحالات بينما عند فحص مزرعة إفراز البروستاتا والسائل المنوي وعينة البروستاتا بالإبرة وجد نمو للبكتيريا في ٧٦٪ ، ٦٧٪ ، ٧٢٪ من الحالات بالترتيب. كما تبين من فحص عينة البروستاتا أنها ذات جدوي اقتصادية وذا أهمية في تشخيص حالات إلتهاب البروستاتا المزمن.