PROSTATE SUPPORT:

GRAMINEX Flower Pollen Extract

Treatment of Chronic Prostatitis and Prostatodynia with Pollen Extract

A.C. Buck, R.W.M. Rees and L. Ebeling
Departments of Urology, Leighton Hospital, Crewe, and University Hospital of Wales, Cardiff

Summary— Chronic abacterial prostatitis and prostatodynia are notoriously difficult both to diagnose and to treat. These patients tend to have received several courses of antibiotics, anti-inflammatory agents or adrenergic blockade and various other therapeutic manoeuvres with little success. The pollen extract, Cernilton, is reported to be effective in the treatment of this condition and we present the results of an open trial with Cernilton in a group of 15 patients with chronic prostatitis and prostatodynia. In 13 patients there was either complete and lasting relief of symptoms or a marked improvement; 2 patients failed to respond.

Cernilton was found to be effective in the treatment of chronic prostatitis and prostatodynia. Its precise mode of action is not known, although experimental studies suggest that is has anti-inflammatory and anti-androgenic properties.

The treatment of chronic, relapsing non-bacterial prostatitis presents a formidable challenge to the clinician. It is also well recognized that other conditions, such as pelvic floor myalgia, prostatodynia, adductor muscle strain and chronic traumatic osteitis pubis, may give rise to symptoms of dysuria, perineal, groin, testicular and suprpubic pain that mimic inflammatory disease in the prostate (Segura et al., 1979; Osborn et al., 1981; Buck et al., 1982). It is, therefore, important to differentiate such conditions from chronic prostatic inflammation on the basis of objective morphological, biochemical, radiological, urodynamic and microbiological criteria.

To achieve a cure in these patients is extremely difficult. The response to antibiotics, α-adrenergic blockage, non-steroidal anti-inflammatory drugs and other empirical manoeuvres is either ineffective or, at best, variable (Meares and Barbalias, 1983; Meares, 1986). The pollen extract Cernilton (A. B. Cernelle, Sweden) has been used in the treatment of chronic prostatitis for nearly 30 years with favourable results (Ask-Upmark, 1963; Denis, 1966; Ebeling, 1986; Saito, 1967).
The aim study was to evaluate the efficacy of Cernilton in the treatment of patients with chronic non-bacterial prostatitis and prostatodynia.

Patients and Methods

Fifteen patients, ranging in age from 23 to 63 years (mean 42.9±SD 11.1) and with a clinical diagnosis of chronic relapsing non-bacterial prostatitis or prostatodynia, were entered into an open trial to study the effect of Cernilton. Twelve patients had previously been treated with 1 or more courses of antibiotics for varying periods of time, 4 had been treated with an alpha-adrenergic blocker, 1 had undergone a transurethral resection of the prostate and 1 an epididymectomy without relief of symptoms. At the time that the patients were commenced on Cernilton they had suffered from their symptoms for periods ranging from 5 months to 7 years (mean 3.3±SD 2.2). Their clinical presentation was as follows: 13 complained of irritative urinary symptoms, mainly dysuria (13) and frequency (6). All complained of pain or discomfort, persistent or intermittent, localised to the testis (7), groin (4), perineum (5), suprapubic area (1) urethra / penis (3) or on ejaculation (2) (Table).

The diagnosis of chronic prostatitis or prostatodynia was made on the basis of the segmented urine sample method of Meares and Stamey (1968). No significant bacteriuria was present in any of the patients, nor were pathogenic organisms, including Chlamydia

Table Details of Patients

Name age (years)	Dur. of symptoms (years)	Urinary symptoms	Pain site/ occurrence	Previous therapy: Antibiotics	Previous therapy: Relaxants/ α adrenergic blockade	Previous surgery	Response to Cernilton
TW 36	7	Dysuria	L testis	Multiple		Epididymectomy	Complete
DD 61	5	Dysuria	Suprapubic	None	Yes	TURP	Partial
FM 49	0.5	Dysuria	Lumbosacral	None			Partial
GS 47	2	Dysuria	L. testis	Multiple			Partial
DB 33	1	Frequency	R. testis	Multiple			Complete
JG 46	2	Dysuria, frequency	Perineum, ejaculation	Multiple		Cystoscopy	None
MP 44	7	Dysuria	Groin	Multiple	Yes	Cystoscopy	Complete
RJ 29	1	Dysuria, frequency	Perineum, penis	Multiple		Cystoscopy	Complete
DP 51	4	Dysuria	Perineum, testes	Multiple			Partial
HG 63	2	Frequency	Penile, on intercourse	Single	Yes	Cystoscopy	None
SC* 36	2	Dysuria	L. testis, groin	Multiple			Complete
DH 40	7	Dysuria	Perineum, testes	Multiple			Partial
JM 35	3	Dysuria	Testes, urethra	None	Yes		Partial
RD* 23	3	Dysuria	Groins	Multiple			Complete
AP 51	3	Frequency	Groins, perineum	Multiple	Yes	Cystoscopy	Complete

* Patients SC and RD relapsed when treatment was stopped and responded again to further treatment.

trachomatis, cultured from the EPS (expressed prostatic secretion). In 5 patients the pH of the prostatic fluid was alkaline (pH 7.0-8.0) with >10 leucocytes and fat laden macrophages /high power field on microscopy. In 8 patients the characteristics of the EPS were normal (pH < 6.5; pus cells < 10 / HPF) and in 2 cases no fluid could be obtained by massage for examination. The patients were commenced on Cernilton 2 tablets twice daily and assessed clinically at monthly intervals.

Results

The duration of treatment with Cernilton varied from 1 to 18 months. Seven patients became symptom-free, 6 were significantly improved and continue to take Cernilton regularly, and 2 failed to respond. Most patients (11) did not begin to show any improvement in signs or symptoms until 3 months after starting treatment (Table).

Only 1 patient, with a 12-month history of right testicular pain and urinary frequency, who had received 3 courses of antibiotics, with sterile urine and an EPS pH of 6.8 with < 5 leucocytes/HPF, was completely relieved of symptoms after 1 month's treatment with Cernilton. A second patient with a 5-month history of dysuria, frequency, back ache and sterile urine, but an EPS pH of 8 and > 20 pus cells/ HPF, was partially relieved of symptoms at 2 months and the pH of the EPS fell to 7.8, < 10 pus cells / HPF.

Two patients had a recurrence of symptoms after cessation of treatment. A 36 year-old man had a 2-year history of intermittent dysuria, left groin and testicular discomfort and an EPS pH of 8 with masses of pus cells /HPF on microscopy; he had been treated with several courses of antibiotics (minocycline, doxycycline, trimethoprim) without relief of symptoms or a

.

change in the alkalinity or leukocytosis of the EPS. After 3 months' treatment with Cernilton the symptoms were completely relieved and the pH of the EPS fell to 7.1 with < 5 pus cells / HPF. On discontinuing treatment the symptoms recurred, with a return to leukocytosis and an alkaline shift in the pH of the EPS. After recommencing Cernilton the signs and symptoms again reverted to normal.

Discussion

Cernilton is an extract of various pollens from different plants. The active ingredients are a water-soluble (T60) and fat-soluble (GBX) fraction. The water-soluble fraction attenuated the inflammatory response in experimental animals (Ito et al., 1984). The acetone-soluble fraction was found to consist of 3ß-sterols with a similarity on UV absorption spectra to oestrone and stigmasterol (Kvanta, 1968). More recently, in vitro studies have shown that GBX inhibits cyclo-oxygenase and lipoxygenase enzyme in the eicosanoid cascade, blocking both leukotriene and prostaglandin synthesis (Loschen, personal communication). Cernilton was shown to reduce significantly the size of the ventral and dorsal prostate in the rat and to inhibit testosterone-induced prostatic hypertrophy in the castrated animal (Ito et al., 1986). Kimura et al. (1986) observed that T60 and GBX produced relaxation of the smooth muscle of the mouse and pig urethra and increased the contraction of the bladder muscle.

Although the precise mode of action of Cernilton on the inflammatory process in the prostate is not known, it has been shown to be effective in the treatment of chronic abacterial prostatitis (Ohkoshi et al., 1967; Ebeling, 1986). In this study, Cernilton was found to relieve completely the symptoms of prostatitis in 7/15 patients and a further 6 were markedly improved. All patients had previously received several courses of antibiotics, analgesics and muscle relaxants and some were given adrenergic blockade, without effective or lasting relief of symptoms. It is of interest that the effect of the pollen extract was mainly observed after 3 months or more of treatment. Most patients have opted to continue with treatment and no adverse side effects have been reported. The in vitro experiments suggest that it could be either a potent cyclo-oxygenase and lipoxygenase inhibitor or a smooth muscle relaxant. These actions could explain its anti-inflammatory effect in abacterial prostatitis and symptomatic relief in prostatodynia, a condition in which an increase in the maximum urethral closure pressure and spasm of the external sphincter mechanism has been observed in association with a diminished urine flow rate (Buck, 1975; Meares and Barbalias, 1983). Conversely, it may affect metabolic processes within the prostatic cell (Habib, personal communication). Further clinical and laboratory studies are necessary to elucidate the exact mode of action of this compound.

References

Ask-Upmark, E.: Die Behandlung der Prostatitis. Z. Urol. 56 (1963) 113-116.

Buck, A. C.: Disorders of micturition in bacterial prostatitis. Proc. roy. Soc. Med. 68 (1975) 4-7.

Buck, A. C., D. M. Crean, I. L. Jenkins: Osteitis pubis as a mimic of prostatic pain. Brit. J. Urol. 54 (1982) 741 744.

Denis, L. J.: Chronic prostatitis. Acta Urol. Belg. 34 (1966) 49-56.

Ebeling, L.: Therapeutic results of defined pollen-extract in patients with chronic prostatitis or BPH accompanied by chronic prostatitis. In Schmiedt, E., J. E. Alken, H. W. Bauer (eds.): Therapy of prostatitis. Zuckschwerdt Verlag, MiInchen 1986 (pp. 154-160).

Ito, R., A Ishii, S. Yamashita et al.: Cemitin pollen-extract (Cernilton). Antiprostatic hypertrophic action of Cernitin ™ pollenextract (Cernilton). Pharmacometrics (Jpn.) 31 (1986) 1 - 11.

Ito, R. K. Noguchi, S. Yamashita et al.: Antiinflammatory effects of cemitin pollen-extract (Cernilton). Pharmacometrics (Jpn.) 28 (1984) 55-65.

Kimura, M., I Kimura, K. Nakase et al.: Micturition activity of pollen extract: contractile effects on bladder and inhibitory effects on urethral smooth muscle of mouse and pig. Planta Medica 2 (1986) 148-151.

Kvanta, E.: Sterols in pollen. Acta Chem. Scand. 22 (1968) 2161-2165.

Meares, E. M. Jr., G. A. Barbalias: Prostatitis: bacterial, non-bacterial and prostatodynia. semin. Urol. 1 (1983) 146-154.

Meares. E. M. Jr. t. A. Stamey: Bacterial localization patterns in bacterial prostatitis and urethritis. Invest. Urol. 5 (1986) 492-518.

Ohkoshi, M., N. Kawamura, I. Nagakubo: Clinical evaluation of Cernilton in chronic prostatitis. Jpn. J. Clin. Urol. 21 (1967) 73-81.

Osborn, D. E., N. J. R. George, P. N. Rao et al.: Prostatodynia-physiological characteristics and rational management with muscle relaxants. Brit. J. Urol. 53 (1981) 621-623.

Saito, Y.: Diagnosis and treatment of chronic prostatitis. Clin. Exp. Med. 44 (1967) 2-15.

Segura, J. W., J. L. Opitz, L. F. Greene: Prostatosis, prostatitis or pelvic floor tension myalgia. J. Urol. 122 (1979) 168-17.