Chronic Scrotal Pain Syndrome: Management among Urologists in Switzerland

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Abstract
Introduction and objectives: Management of patients presenting with chronic or recurrent pain located in the scrotum is often very challenging. Evidence-based literature and clinical practice guidelines for the management of chronic scrotal pain syndrome (CSPS) are not available. We assessed the current perception and management of chronic scrotal pain syndrome by urologists in Switzerland.

Methods: In July 2004, all the members of the Swiss Society of Urology received a questionnaire focusing on diagnostic and treatment practices for the management of chronic scrotal pain syndrome. The questionnaire consisted of 6 topics concerning practice setting, incidence, aetiology, diagnostics, therapy and treatment success rate.

Results: 103 questionnaires were completed (63%). All but 2 (2%) responding Swiss urologists see a mean of 6.5 new patients per month (range 1–30). 79% of Swiss urologists consider CSPS to be infectious or post-infectious in nature. Furthermore, a history of vasectomy, psychosomatic disorders, chronic prostatitis, neuromuscular disorders, a history of inguinal surgery, and idiopathic aetiology were mentioned in decreasing order. The most commonly used examinations are urinalysis in 96% and ultrasound in 93%. Additional assessments include blood sampling, duplex ultrasound, assessment for coexisting chronic prostatitis, and referral to an Orthopaedist, Rheumatologist or Psychiatrist. The predominant medication prescribed for CSPS is a non-steroidal anti-inflammatory agent given for a mean of 15.5 days. An antibiotic trial is prescribed by 82% for a mean of 20.5 days. 74% consider epididymectomy the treatment option of choice in recurrence. Inguinal orchiectomy is performed by 7%, microsurgical spermatic cord denervation is performed by 6% of surgeons. Mean estimated recurrence rate after conservative treatment is 48% and thus higher than after epididymectomy with 18%.

Conclusions: Chronic pain located in the scrotum is a common clinical condition in Switzerland. Most urologists consider an infection or post-infectious alterations as the predominant aetiology for CSPS. Consequently, an antibiotic trial in combination with an anti-inflammatory agent is prescribed as first-line therapy. Recurrence rates for conservative treatment are estimated high which is in contradiction to the presumed aetiology. Therefore, further evaluation of this poorly described disease complex is required.

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1. Introduction and objectives

Management of patients with chronic or recurrent pain located in the scrotum, i.e., in the epididymis and/or testis is often very challenging. For diagnosing and treating acute epididymitis, clinical practice guidelines have been developed [1]. However, in a only recently published study it has been concluded that the published guidelines are not followed sufficiently [2]. Although it is a frequently encountered problem in general urologic practice, evidence-based literature
and clinical practice guidelines on management of chronic epididymitis (CE) or chronic testicular pain are not available [3]. Davis et al. defined chronic testicular pain as intermittent or constant testicular pain for 3 months or longer in duration significantly interfering with the daily activities of the patient so as to prompt him to seek medical attention [4]. Nickel et al. extended the definition and included the testis and scrotum as site of discomfort and/or pain in the definition but named the “enigmatic syndrome” chronic epididymitis [3]. Therefore, in the definition by Nickel et al. the terms chronic epididymitis, chronic orchialgia, chronic testicular pain and chronic orchidynia designate probably all the same symptom complex and are used interchangeable. This concept should be questioned as long as no pathological evidence for similarities between clinical chronic epididymitis and clinical chronic orchialgia are available [4–6]. The majority of epididymectomy and orchiectomy specimens failed to show any pathological abnormalities [4,6,7]. However, testis and epididymis have a common neuronal supply which can render it difficult to clinically distinguish the main site of pain [8]. Moreover, several authors mix the entities chronic epididymitis and chronic testicular pain or chronic orchialgia, when describing their study population and possible etiologies for chronic orchialgia [4,6,9]. Some authors proposed a diagnostic algorithm for diagnosing and treating chronic orchialgia [6,10]. In an attempt to further characterize chronic epididymitis and practise an evidence-based approach to CE management, Nickel proposed a classification system and a chronic epididymitis symptom index (CESI) for CE [3]. Pathophysiological or histological support for this classification though is not provided. Overall, evidence-based literature concerning the prevalence, diagnostic work-up and treatment of pain located in the scrotum i.e. chronic scrotal pain syndrome (CSPS) is sparse. Therefore, our aim was to assess the current perception and management of chronic scrotal pain syndrome by urologists in Switzerland, and compare current practice patterns with the small body of literature dealing with CSPS.

2. Methods

In July 2004 we mailed a questionnaire to all members of the Swiss Society of Urology. In the accompanying letter they were asked about their management of chronic pain located in the scrotum i.e. chronic epididymitis and chronic orchialgia, thus performing a nationwide survey to establish diagnostic and treatment practices for this disease complex in Switzerland. The questionnaire consisted of 6 topics concerning practice setting, incidence, aetiology, diagnostic work-up, therapy, and treatment success rate (Table 1). Questionnaires were returned anonymously by mail. Descriptive statistical analysis was performed using standard software.

3. Results

Out of 164 mailed questionnaires 103 were completed and could be analysed, accounting for a response rate of 63%. All but 2 (2%) responding Swiss urologists see patients with chronic scrotal pain syndrome. The mean number of new patients seen with this condition is 6.5 per month (range 1–30). Each patient is accounting for a mean of 2.5 visits per case and thus 195 visits per year. This translates into a crude incidence of about 350–450 cases per 100’000 men in Switzerland (considering men between 25 and 85 years). Moreover, 2.5% of all office visits are attributable to CSPS. 79% of Swiss urologists believe in an infectious or post-infectious aetiology, 52% consider a history of vasectomy, and 28% psychosomatic disorders, i.e. without a somatic correlate etiologic for CSPS. Furthermore, chronic prostatitis, neurological and/or rheumatological disorders, a history of inguinal hernia repair, and an idiopathic aetiology are mentioned by 15%, 7%, 5%, and 3% respectively. The most commonly used examinations besides clinical evaluation are a urinary dipstick and midstream urinary culture in 96% and ultrasound examination in 93%. Additional assessments include blood sampling (29%), urethral swab (29%), duplex ultrasound (19%), assessment for coexisting chronic prostatitis (15%), and referral to an orthopaedist (7%), rheumatologist (6%) or psychiatrist (3%), and PCR on urine specimen (4%). Spermatic cord block with local anaesthetics is performed by 19% of urologists, either for diagnostic or therapeutic reason. A mean of 3.1 examinations per patient are performed. The predominant treatment for CSPS, prescribed by 92% of Swiss urologists, is a non-steroidal anti-inflammatory agent given for a mean of 15.5 days (range 5–90). An antibiotic trial (most commonly quinolones [44%] and tetracyclines [24%]) is prescribed by 82% for a mean of 20.5 days (range 5–90). 72% consider an epididymectomy an appropriate treatment option for symptom recurrence. Inguinal orchieectomy is performed only by 7%, microsurgical spermatic cord dissection and denervation is performed by 6%. Mean estimated recurrence rate after conservative treatment is 48%, i.e. higher than for surgery with 18%. No statistically significant differences for treatment failure were observed in respect of the prescribed type of antibiotic.
Estimated recurrence rate among patients after microsurgical spermatic cord dissection and denervation is 9%. No statistical differences in the practice setting or different geographical regions were observed.

4. Discussion

With a fairly high response rate of 63% and data from all different language regions, the demonstrated data are deemed representative reflecting the current management of CSPS in Switzerland. Our survey shows that chronic epididymitis and/or chronic orchialgia is a common clinical condition in urologic practice, as every Swiss urologist sees a mean of 78 new patients suffering from CSPS per year, which accounts for 2.5% of all visits. The estimated incidence for CSPS in Swiss men is about 4/1000, assuming that all men with CSPS are being referred to a urologist. Or, which is more likely, only an unknown part of men with CSPS are referred to a urologist. The true incidence of CSPS might be even higher therefor. When comparing CSPS with chronic prostatitis, which probably shares some pathophysiological, diagnostic and treatment similarities, the incidence of CSPS is lower, but still represents a relevant problem. Especially when looking at free-text answers and remarks, undoubtedly, there is a certain frustration among Swiss urologists when diagnosing and treating this condition. Thus, some similarities in management dilemma between chronic prostatitis and CSPS are observed, as management of chronic prostatitis is also challenging [11]. Each patient accounts for 3.1 examinations and 2.5 visits. Costabile et al. showed that up to 4.7 diagnostic procedures per patient were performed [6]. They concluded that streamlining the diagnostic process is needed. When analysing their results, the patient history, a physical examination, urinalysis and a scrotal ultrasound were most helpful in guiding the diagnostic and treatment plan.

To make the clinical diagnosis of CSPS is difficult, as available definitions and classifications are imprecise and not widely used. To clinically distinguish chronic epididymitis and chronic orchialgia can be very challenging as testis and epididymis share its innervations [8]. Therefore, we used the term chronic scrotal pain syndrome (CSPS) preferably in this study as it is more descriptive without focusing either on the epididymis or testis. Nickel et al. proposed a classification that mainly reflects the many different aetiologies...
of CSPS described in the literature, without giving pathophysiological support for their new classification [3]. In our study, the possible aetiologies mentioned show a wide range of aetiologies as well. Up to 25% of patients have no obvious cause for chronic pain located in the scrotum [4]. This high rate is reflected in the high percentage of psychosomatic causes for CSPS mentioned by Swiss urologists.

Mid-stream urine and ultrasound of scrotal content are the most commonly performed examinations. This is in accordance with recommendations from different authors [1,5,6,10]. Concerning the ultrasound examination of scrotal content, the diagnostic yield is low in the absence of abnormalities during physical examination [12,13]. Therefore, routine use of this examination should be questioned. As most urologists suspect a possible infectious aetiology, a urethral swab (or PCR on urine specimens) should be performed to rule out concurrent urethritis or sexually transmitted diseases respectively, which in fact is only performed by 33% of responding urologists. However, this is a higher rate of search for concurrent urethritis than in a recently published study about the management of acute epididymitis among British urologists. This is the case despite the fact that most probably patients with CE are older and therefore have a lower risk for sexually transmitted pathogens [2]. Although andrological parameters could possibly help in making a differential diagnosis of an inflammatory origin of CSPS, they are neither assessed routinely by responding urologists nor mentioned in other studies dealing with chronic epididymitis or chronic testicular pain [3,4].

No data concerning the age of patients were collected. Data from published studies suggest that the mean age for patients with CSPS is higher than of those patients with acute epididymitis [3,10,14,15]. Thus, this might give the explanation for the more frequent prescription of quinolones in comparison with tetracyclines, because peak incidence for patients with CSPS is 45–50 years, and peak incidence for patients with acute epididymitis is 20–29 years [16]. Recurrence rates after conservative treatment with antibiotics and anti-inflammatory analgesics are generally high which is in contradiction to the presumed predominant infectious aetiology. This might be attributable to wrongly selected antibiotic treatment, or that infectious agents are not the predominant causative factor. As long as no thorough study is performed addressing the role of infectious agents in CSPS, this hypothesis cannot be answered properly. Failure rates after epididymectomy seem to be largely dependent on the aetiology of CSPS. Patients with chronic pain without a history of prior vasectomy are not likely to benefit from epididymectomy, but in patients with CSPS after vasectomy, it seems to be an effective treatment [4,14,17]. The success rate for durable symptom relief with epididymectomy was estimated fairly high compared with the literature, but as no stratification with an underlying aetiology was specified, these results must be interpreted with caution. Urologists performing microsurgical testicular denervation reported lower failure rates, favouring this approach as seen in previously published studies [10].

Admittedly, our study has some limitations. Numbers concerning frequency and treatment success rate are mean estimates reflecting recollection, and therefore must be judged cautiously because data were not collected prospectively, in a defined period of time. Moreover, many important questions such as mean patient age, rate of positive urethral smear examinations, results of examinations from other specialities, findings of scrotal ultrasound examination and so on were not addressed. However, the questionnaire was kept brief in order to achieve a high response rate.

In conclusion, Swiss urologists diagnose chronic pain, located in the epididymis or testis frequently. Most urologists consider an infection or post-infectious alterations the predominant aetiology for CSPS. Consequently, an antibiotic trial in combination with an anti-inflammatory agent is prescribed as first-line therapy. There is a high incidence of recurrence after conservative treatment with antibiotics and anti-inflammatory agents, in contradiction to the most commonly presumed aetiology. Further evaluation of this to date poorly described disease complex is therefore needed. Furthermore, analysis of current practice patterns will yield additional studies to address unanswered questions and to reconsider current management for its evidence.

References


