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Interdisciplinary pain management is beneficial for refractory orchialgia in children

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Summary

Introduction

Idiopathic testicular/groin pain can be a difficult entity for children, their families, and caregivers. The role of interdisciplinary pain management has previously been demonstrated in treating chronic orchialgia at the present pediatric pain clinic.

Objective

To evaluate the role of interdisciplinary pain management in managing refractory orchialgia. It was hypothesized that children with refractory orchialgia might respond well. Interdisciplinary care was defined as that which crosses two medical disciplines such as a surgical specialty and specialist in analgesia.

Subjects and methods

Pediatric patients were identified who were: ≥ 10 years old; evaluated in the pediatric urology clinic between 2002 and 2012; were diagnosed with ICD code 608.9 or had the diagnosis of male genital disorder NOS. Children were included if they presented with orchialgia without an identifiable cause and failed conservative management (rest, scrotal support, Sitz bath, timed voiding, constipation avoidance) including conventional anti-nociceptive analgesics (acetaminophen, non-steroidal anti-inflammatory drugs, opioids). Patient electronic medical records were reviewed retrospectively.

Results

Twenty-two children met inclusion criteria. Mean age was 13.7 years (range 10–17). Nearly half (45%) of the children had chronic medical conditions such as asthma, allergies, and obesity. Twenty-one of the 22 children were referred to the pediatric pain clinic; 15 were evaluated, and one refused treatment. All children evaluated in the pediatric pain clinic were initially offered an empiric anti-neuropathic anti-convulsant (i.e. gabapentin) and/

or an anti-depressant (i.e. amitriptyline) before being offered a nerve block. Of the 14 children accepting treatment in the pediatric pain clinic, six were treated solely with an empiric anti-neuropathic anti-convulsant and/or anti-depressant; eight received medications followed by nerve block (seven ilioinguinal–iliohypogastric blocks, one spinal and ilioinguinal–iliohypogastric block) (see Fig. 1). A total of eight of the 14 children (57%) treated by the pain clinic had resolution of pain, with 50% of those treated with medications alone (three out of six children) responding (two responding to gabapentin and a tricyclic antidepressant, one to gabapentin alone); and five out of eight (63%) treated with medications and then nerve block (ilioinguinal–iliohypogastric block) responding. Of the eight children undergoing nerve block, five required more than one block. The time between each block ranged from 4 to 22.6 weeks. Response to nerve block required an average of 1.4 procedures (range 1–2); mean follow-up after nerve block was 2.4 months (range 0.1–4.8).

Discussion

Children with refractory orchialgia often have comorbidities that suggest a multidisciplinary approach would be useful for treating them. The present study found that the majority of children with refractory orchialgia treated in the pediatric pain clinic responded to management. Major limitations, however, included small cohort size and short follow-up, particularly in those children undergoing nerve block. There was also no objective assessment of pain improvement or improvement in quality of life, which could be rectified with a prospective study.

Conclusion

Collaboration and early referral for interdisciplinary pain management as one of these multidisciplinary approaches may help to coordinate care and ease patient suffering.

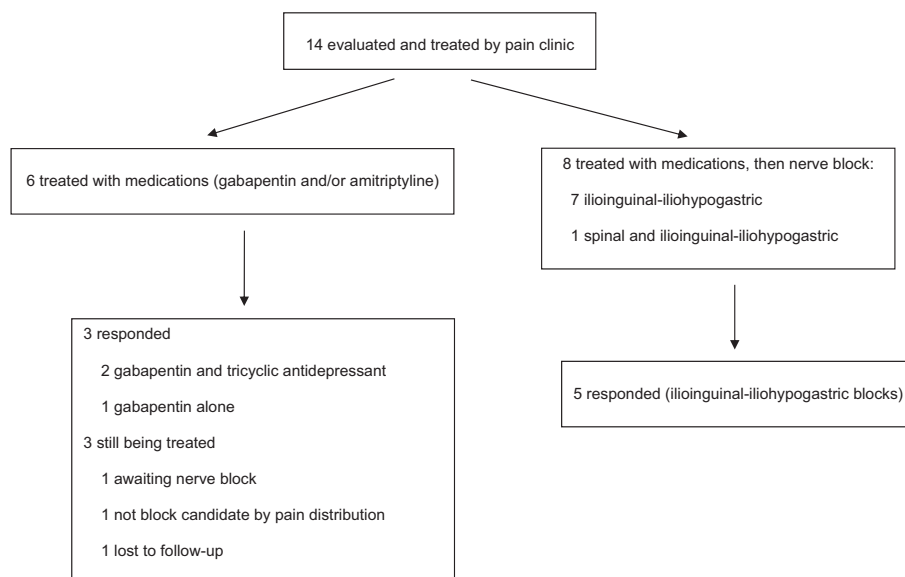


Figure 1 Treatments and outcomes.

Introduction

Orchialgia is a common complaint seen in the pediatric urologist's office. If no anatomic abnormality can be identified, pain is termed idiopathic testalgia/orchialgia, and may be attributed to musculoskeletal strain or pubertal growth. Such pain is generally thought to resolve spontaneously over time. For some children, however, pain persists and is refractory to supportive care and conservative management despite lack of apparent underlying anatomic pathology.

Refractory orchialgia can be a challenging problem for the pediatric urologist. Lack of identified anatomic pathology limits surgical intervention, which is generally of little benefit in this context. Children, nonetheless, experience real and often debilitating pain, for which they, their families and caregivers often seek pediatric urologic care. Lack of response to conservative management frequently engenders frustration and even desperation, with potentially significant disruption of school, home life, and other usual activities.

In the present study, recognizing the value of interdisciplinary pain management, children with refractory orchialgia that was unresponsive to conservative management were referred to the pediatric anesthesiology-based pediatric pain clinic. Interdisciplinary care was defined as that which crosses two medical disciplines such as a surgical specialty and specialist in analgesia. By combining the evaluation for an anatomic pathology in order to explain these children's symptoms in the pediatric urology office, with the expertise to treat neuropathic pain with pain management, it is believed that a fresh perspective to the treatment of this difficult clinical problem can be found. The demographics and outcomes of this unique population are now discussed.

Materials and methods

After receiving institutional review board approval (#121860), children ≥ 10 years old and evaluated in the pediatric urology clinic between 2002 and 2012 with

refractory orchialgia were retrospectively identified. Refractory orchialgia was defined as testicular/groin pain without identifiable cause, and not responsive to conservative management (rest, scrotal support, Sitz bath, timed voiding, constipation avoidance) including conventional anti-nociceptive analgesics (acetaminophen, non-steroidal anti-inflammatory drugs, opioids).

Patients with International Classification of Disease (ICD) code 608.9, Male Genital Disorder NOS, were identified. The electronic medical records (EMR) were subsequently reviewed to identify appropriate patients. Children with apparent underlying causes of testicular pain, including recent trauma or surgery, active infection, and overt torsion, were excluded. Children with a noticeably abnormal exam to explain their symptoms or a positive urine culture were also excluded. Patient presentation, medical history (including chronic medical disease, co-existing chronic pain in other organ systems, psychiatric/behavioral issues, and identified life stressors), physical examination, diagnostic studies, referral to the pediatric pain clinic, treatments, and outcomes were assessed.

Data extracted from the medical records were tabulated and managed using Research Electronic Data Capture (REDCap) tools. REDCap (Vanderbilt University, USA) is a secure, web-based application designed to support data capture for research studies, providing: (1) an intuitive interface for validated data entry; (2) audit trails for tracking data manipulation and export procedures; (3) automated export procedures for seamless data downloads to common statistical packages; and (4) procedures for importing data from external sources [1].

Results

Patient demographics

Overall, 22 children met inclusion criteria. The demographics of the children with refractory orchialgia are

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