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# “Blue Balls”: A Diagnostic Consideration in Testiculoscrotal Pain in Young Adults: A Case Report and Discussion

“Blue balls” is a widely used colloquialism describing scrotal pain after high, sustained sexual arousal unrelieved because of lack of orgasm and ejaculation. It is remarkable that the medical literature completely lacks acknowledgment of this condition. The case reported here illustrates that a good history may help make the diagnosis, offer the possibility of prompt relief, and avoid any unnecessary evaluation. Clinicians should be aware of this condition and consider it in the differential diagnosis of scrotal pain.

## CASE REPORT

A 14-year-old male presented to the emergency department with a history of severe bilateral scrotal pain of 1.5 hours' duration. There was no associated nausea or vomiting. The patient denied fever, chills, or feeling systemically ill. He described the pain as sharp, stabbing, constant, and unaffected by position. There was no history of dysuria, urethral discharge, previous urinary tract infections, trauma, or any history of prior sexual intercourse. The patient was a reluctant historian.

On further history he noted that 1 week earlier he had experienced a milder form of this scrotal pain that had resolved slowly over 2 to 3 hours. In each instance the pain started when he had been “messing around,” engaged in foreplay with his first girlfriend, kissing and fondling while fully clothed. In neither case did he ejaculate, and the pain began immediately after stopping foreplay.

On physical examination the patient was alert and nontoxic. He appeared uncomfortable and in moderately severe pain. Vital signs were normal, and physical examination was unremarkable except for diffuse testicular tenderness, increased over the epididymis bilaterally. Cremasteric reflex was present bilaterally. The urine analysis was normal. The patient's pain resolved spontaneously during 1 hour of observation in the emergency department. Telephone follow-up several weeks later revealed that the patient had begun to have sexual intercourse with his girlfriend, and no further episodes of testiculoscrotal pain had occurred.

## DISCUSSION

A review of the literature was undertaken but no comment or reference to “blue balls” in any urologic, pediatric emergency medicine, general emergency medicine, or adolescent medicine textbooks could be found.<sup>1-5</sup> Medical librarians at 3 institutions conducted separate literature searches. Cross-references were made to articles in the sexuality literature, adolescent health literature, and to articles about scrotal pain. The one article found was from a human sexuality journal.<sup>6</sup> The article is nonreferenced and the information came from “common knowledge and experience.”

Specialists in urology and adolescent medicine were contacted, and although they all knew about

“blue balls,” their information was anecdotal and not related to medical training. The great majority of adult, pediatric, urologic, and emergency physicians, as well as nurses and nonmedical people informally surveyed, know of this condition, yet no one was aware of any medical references. Certainly the urologic and adolescent literature is full of subjects equally sensitive and potentially embarrassing. What is the pathophysiology of this condition? Sexual arousal produces pelvic venous dilatation. Perhaps if this persists and testicular venous drainage is slowed, pressure builds and causes pain. Is epididymal distention the cause of the pain? As with any disease entity, there is probably a spectrum of pain with “blue balls” varying from brief, mild discomfort to severe, sustained pain, as in the case described.

The treatment is sexual release, or perhaps straining to move a very heavy object—in essence doing a Valsalva maneuver. In the one article found, the author talks of straining to lift an immovable object such as a car bumper. He claims the pain often disappears within 15 to 30 seconds. Does this work?

How many young men have suffered unnecessary pain and anxiety if a simple maneuver could bring immediate relief? Is pain always bilateral? How many patients have had surgery to rule out testicular torsion or transient testicular torsion where the pain is episodic, when the true diagnosis was “blue balls”? Is the incidence of this condition high in age groups starting sexual exploration? The answer to these questions might easily be obtained with careful histories and further research. Patient education might be integrated with clinical research. It would seem logical to incorporate discussions of “blue balls” into age-appropriate sexual education.

## CONCLUSION

In summary, “blue balls” is suspected to be common among young male adults and should be considered in the differential diagnosis of acute testiculoscrotal pain in such patients. A search of the medical literature shows a paucity of information for this condition and suggests that a greater awareness and discussion of this entity would benefit both physicians and their patients.

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## Isolated Large Third-Trimester Intracranial Cyst on Fetal Ultrasound: Fact or Fiction?

**ABSTRACT.** *Objective.* To distinguish the fact from artifact of an isolated, large, intracranial cyst on prenatal sonography (PSG).

*Background.* The use of PSG is rapidly increasing with most obstetric ultrasounds occurring in general community settings like small hospitals and clinics with personnel who have variable training, experience, and interest levels. In contrast, most PSG articles and books are produced in large subspecialty centers with concentrated referral bases plus both highly-trained and experienced personnel.

*Design/Methods.* We report a series of 2 normal newborn patients who had a large prenatal unilateral intracranial cyst diagnosed by PSG in the 10 years between July of 1989 and 1999 at a rural community hospital. The newborns had imaging studies at birth and their neurodevelopmental progress was followed for several years.

Textbook, bibliography and computerized Medline (1966–present) searches including prenatal ultrasound, observer variation, diagnostic errors, reproducibility of results, sensitivity and specificity, accuracy, central nervous system, false-positive, prenatal diagnosis, and brain were examined starting in August 1996 for reports.

*Results.* There were 4079 obstetric ultrasounds performed in 3.5 years, January 1996 through July 1999 at this rural community facility. This rate extrapolates to a total of 11 654 obstetric ultrasounds over the 10-year study period in which the 2 cases of intracranial cyst artifact occurred. Thus, the incidence of 2 intracranial cyst artifacts was estimated as 2/11 654 PSG, a .0002% false-positive rate.

*Conclusions.* This is the first report of the occurrence of PSG artifacts in a community facility. Artifact is a real problem and needs to be specified in differential diagnoses. There are ways to decrease sonographic artifact—or at least to recognize it—so our estimates at a community hospital for its occurrence are presented with the relevant technical and ethical issues. None of these issues have been previously reported in the pediatric literature.

Our false-positive rate for large intracranial cyst compares favorably with other reports. Our estimate may inflate our denominator by reporting scans rather than the number of fetuses scanned, and our numerator may miss cases that moved from the community.

Confusion differentiating PSG artifact from reality often occurs when interpreting static or frozen real-time images. The signs that sonogram images may be artifacts include defects that: extend outside the fetal body; change shape, size and echogenicity with different scan

planes; are not seen on all examinations; and are isolated in an otherwise normal fetus. Failure to offer quality PSG in clinical settings where it is available restricts access of pregnant women to the diagnosis of fetal anomalies, and therefore restricts access to the options of pregnancy termination, fetal therapy like fetal surgery, and delivery options of timing, setting, and mode.

We suggest a multidisciplinary approach to prenatal abnormalities like isolated third trimester unilateral intracranial cyst in both primary and tertiary care settings aids interpretation followed by expectant conservative management without elaborate, risky, or terminal interventions. *Pediatrics* 2000;106:844–849; *prenatal ultrasound, brain, quality, fetal termination, ethics*.

ABBREVIATIONS. PSG, prenatal sonography; MRI, magnetic resonance imaging.

The use of prenatal sonography (PSG) is rapidly increasing as more pregnant women are even requesting studies. Most obstetric ultrasounds occur in general community settings like small hospitals and clinics with personnel who have variable training, experience, and interest levels. In contrast, most PSG articles and books are produced in large subspecialty centers with concentrated referral bases plus both highly-trained and experienced personnel.<sup>1</sup> Thus the accuracy of PSG in a primary care setting remains an enigma amid reported successes and advances, which must be interpreted based on the uniqueness of their settings.<sup>2–4</sup>

We report a series of 2 normal newborn patients who had a large prenatal unilateral intracranial cyst diagnosed by PSG between July 1, 1989 and July 1, 1998 at a community hospital. In our 10-year study period, our rate of 4079 obstetric ultrasounds for the 3.5 years of January 1996 through July 1999 (PSG yearly rates: 1113, 1114, 1246, and 606 for 6 months of 1999, respectively) at Franciscan Skemp Healthcare, Mayo Health System, La Crosse, Wisconsin, extrapolates to a total of 11 654 PSG. Thus our incidence of 2 intracranial cyst artifacts was estimated as 2/11 654 PSG, a .0002% false-positive rate. The 1998 and 1999 ultrasounds were 97% inpatient (1210/1246 and 587/606, respectively), which is believed representative at Franciscan Skemp Healthcare Obstetrics. Case histories follow our normal newborns who had prenatal intracranial cysts on PSG. We suggest repeat examination and expectant conservative management in view of technical and ethical updates.

### CASE HISTORY A

After maternal spotting, a PSG at 33 (repeated at 37) weeks' gestation showed an otherwise normal fetus with an intracranial fluid-filled, hypoechoic, flaccid structure 7.5 cm in diameter by the right lateral ventricle (Figs 1 2, 3, and 4) reported as a probable arachnoid cyst. The case was discussed with neonatology, pediatric neurology and neurosurgery consultants. With an otherwise normal fetus without hydrocephalus or midline shift, standard expectant obstetric care was advised to proceed with delivery attendance by neonatology.

Brain computed tomography and magnetic resonance imaging (MRI) at birth each showed normal structures without evidence of any cyst or scars. Physical examinations by neonatologists and a pediatric neurologist showed normal neurologic development except for an exaggerated head lag when pulled vertically from a supine position. Three months later pediatric neurology found

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