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Original Contributions

MALPRACTICE LITIGATION AND TESTICULAR TORSION: A LEGAL DATABASE REVIEW

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☐ **Abstract—Background: The litigious nature of the American medical environment is a major concern for physicians, with an estimated annual cost of $10 billion. Objective: The purpose of this study is to identify causes of litigation in cases of testicular torsion and what factors contribute to verdicts or settlements resulting in indemnity payments. Methods: Publicly available jury verdict reports were retrieved from the Westlaw legal database (Thomson Reuters, New York, NY). In order to identify pertinent cases, we used the search terms "medical malpractice" and "testicular torsion" with date ranging from 2000 to 2013. Jury verdicts, depositions, and narrative summaries were evaluated for their medical basis, alleged malpractice, findings, and indemnity payment(s) (if any). Results: Fifty-two cases were identified that were relevant to this study. Fifty-one percent of relevant cases were found in favor of the defendant physician, with the remaining 49% involving an indemnity payment (13% of which were settled). The most commonly sued medical providers were emergency physicians (48% of defendants), with urologists being second most common and making up 23% of the defendant pool. Emergency physicians were significantly more likely to make indemnity payments than urologists. Conclusion: Testicular torsion is a delicate condition and requires expertise in evaluation and treatment. When emergency physicians choose not to consult an urologist for possible torsion, they leave themselves open to litigation risk. When an urologist is involved in torsion litigation, they are rarely unsuccessful in their defense. Finally, ultrasound is no guarantee for success against litigation.** © **2015 Elsevier Inc.**

☐ **Keywords—litigation; malpractice; testicular torsion; urology**

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INTRODUCTION

The medicolegal climate within the United States has changed dramatically over time. The estimated annual cost of legal and settlement fees for medicolegal cases among U.S. health care providers is $10 billion (1). Concern of litigation among physicians has the potential to dramatically impact clinical practice and appears to be associated with an increased practice of defensive medicine (2). This is especially problematic in our current environment of trying to reduce the cost of care in order to comply with government mandates and to effectively negotiate with insurers for bundled payments.

Emergency physicians need to be especially aware of legal pitfalls in medical practice. In a study of 25 specialties, emergency medicine was in the top half of specialties that face the most malpractice claims annually and pay an average of $188,572 per claim (3,4). The most commonly cited malpractice claim against emergency physicians is failure to diagnose: in 1 epidemiologic study of emergency department–based malpractice claims, error in diagnosis was the alleged negligence in

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37% of cases, and in another study of malpractice claims specific to pediatric cases it was found that delays or failures in diagnosis accounted for 59.5% of successful litigation claims (4,5).

One urologic emergency often prompting urgent evaluation is testicular torsion. For men <25 years of age, the incidence of testicular torsion is estimated to be 1 in 4000 (6). Failure in diagnosis or management can result in severe consequences, both clinically and medicolegally. Loss of the testicle is common if the diagnosis is not made or the treatment not executed within the narrow window of 4 to 8 hours after the onset of pain (7). Variations in presentation and inconclusive reports after diagnostic imaging can further complicate clinical decision-making (8). Not surprisingly, atypical presentations of testicular torsion have been associated with a higher rate of misdiagnosis and subsequent malpractice claims (9).

In many instances, a thorough history and physical examination may be sufficient for a diagnosis of testicular torsion, when conducted by an experienced clinician. When the suspicion is high, operative intervention should be performed. If, however, the diagnosis is in question, diagnostic ultrasound should be considered (8). While relatively sensitive for torsion, false-negatives are possible, and some locations may lack access to prompt imaging (10). Therefore, evaluation of the acute scrotum places a premium on thorough assessment by a skilled physician capable of distinguishing torsion from other etiologies of acute testicular pain, and one who is aware of the indications to proceed with ultrasound.

Recognizing the time-sensitive nature of testicular torsion is of utmost importance to multiple clinical providers, including urologists, emergency physicians, and primary care providers. The urgency required in diagnosis and management, the potential uncertainty of diagnostic imaging, and the severe consequences of medical error make this condition fertile ground for malpractice claims. The purpose of this study is to determine the outcomes of legal cases involving instances of testicular torsion and their surrounding factors. We hypothesize that urologists will have a higher rate of successful litigation defenses than other specialties, and that urologists will have lower rates of indemnity payment than other fields. In addition, we aimed to identify associations among cases that may provide useful information for physicians in regard to medicolegal protection.

MATERIALS AND METHODS

The Westlaw database (Thomson Reuters, New York, NY) was used to perform an advanced search for jury verdict reports using the term “medical malpractice” in combination with “testicular torsion.” Westlaw is a national database consisting of legal proceedings that advance far enough for inclusion into publicly available federal and state court records. While some jurisdictions only report voluntarily submitted records (via attorneys), the vast majority of jurisdictions require reporting. In the case of involuntary submissions, the parties involved are named in a manner to preserve anonymity (e.g., John/Jane Doe). Jurisdictions and commercial vendors differ in requirements for making case details available to the public, and the Westlaw database is best-suited to allow examination of details from included proceedings, rather than simply estimating incidence of topic-specific litigation. It has been used for analysis of other medicolegal issues in a variety of specialties, including otolaryngology, emergency medicine, genetics, and urology (11–17). Data collection was performed in June 2014, with the search parameters set to cases occurring between January 1990 and December 2013.

Each case was examined for information regarding the year and location of trial, patient demographics, specialty of the defendant(s), breach of duty, use of ultrasound for diagnostic purposes, progression to trial, case outcome, and plaintiff award(s).

Statistical Analysis

A Student’s *t*-test was used for comparison of normally (symmetric) distributed continuous data, and a Mann-Whitney *U* test was used for asymmetric (nonparametric) continuous data, with threshold for significance set at $p < 0.05$. SPSS software (version 20; SPSS, Inc., Chicago, IL) was used for statistical calculation.

RESULTS

The initial search returned 80 cases, 7 of which had multiple defendants. Of these 80 results, 23 were excluded as duplicate entries and 5 were excluded for not being cases of malpractice litigation for testicular torsion, leaving 52 unique cases relevant to this study. Twenty-eight of these cases involved an injured party that was a minor, 17 of these cases involved adult injuries, and the remaining 7 did not specify age.

Figure 1 shows the distribution of trial outcomes: 51% of cases were found in favor of the defendant physician, with the remaining 49% involving an indemnity payment. Of cases involving payment, 33% were the result of pretrial settlement while the remaining 66% were trial verdicts. There was no significant difference in the rate of decisions between cases involving adults or minors. There was no significant difference in the amounts of indemnity payments made for settlement versus defense verdict, and there was no significant difference between payments made in cases involving adults versus minors. The overwhelming majority of negligence claims were

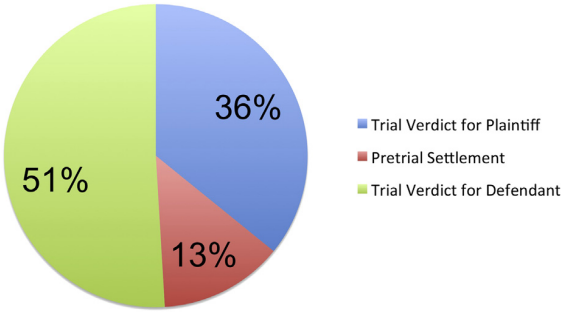

Figure 1. Distribution of trial outcomes.

failure of diagnosis, representing 96% of claims (the remaining 4% of cases claimed unnecessary procedure). Figure 2 shows the frequency of misdiagnoses from cases in which the incorrect diagnosis was named (27 cases). Sixty-five percent of misdiagnosed cases of torsion were incorrectly diagnosed as epididymitis, with small percentages attributed to various other misdiagnoses.

Figure 3 shows the breakdown of defendants by specialty. The most commonly sued doctors were emergency physicians, which represented 48% of total defendants. Urologists were second among most commonly sued physicians, making up 23% of the defendant pool, with a variety of other providers making up significantly smaller portions. Figure 4 shows a comparison of the outcomes between cases against urologists and cases against emergency physicians. Emergency physicians were significantly more likely to make an indemnity payment than urologists ($p = 0.46$). In fact, the only claim against a urologic provider that went to trial and was successful involved a urology resident as the defendant. In cases where data regarding the use of ultrasound were available, ultrasound was not used in 72% of cases, but there was no significant difference in rate of successful defense between ultrasound users and nonusers.

DISCUSSION

Although testicular torsion is uncommon relative to many other medical conditions, a delayed or missed diagnosis can be costly to patients and physicians alike. All providers involved in management of cases of the acute scrotum should perform a proper evaluation regardless of medicolegal issues. However, a knowledge of factors associated with unsuccessful defense to litigation may equip physicians with a better sense of how to properly document episodes of care, involve requisite consultations and testing, and thereby limit the chance of unfavorable verdicts and potentially avoid unnecessary claims altogether. The purpose of this study is to identify associations among cases that either went to trial or were settled before the trial date in order to extract the type of information described.

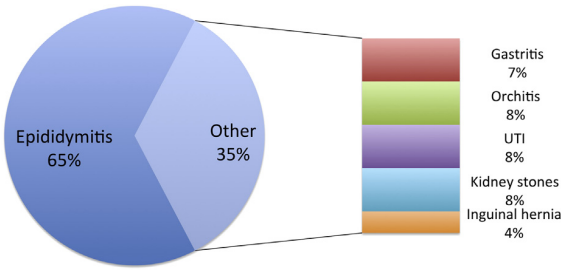

Figure 2. Misdiagnoses of testicular torsion at trial. UTI = Urinary tract infection.

A previous review of a single medical malpractice insurance company in New Jersey found urologists to be the most commonly named defendants in malpractice cases related to testicular torsion (18). Our data suggest that this may no longer be accurate; in our analysis, emergency physicians were by far the most commonly named physicians in testicular torsion claims (48%), with a representation more than double that of urologists (23%). Difficulty in diagnosis of testicular torsion may partially explain this finding. It has been reported that, among errors within the emergency department, those of diagnosis account for the majority and are responsible for nearly half of malpractice claims resulting in indemnity payment (4). Prompt and reliable diagnosis of torsion is essential to surgical salvage, and the identification of mimicking conditions is critical to avoid unnecessary surgery.

Not only are urologists named far less often than emergency physicians, our data show that decisions against urologists are considerably lower by both settlement and verdict. Urologists were significantly less likely to make an indemnity payment than emergency physicians, and no reported verdicts in favor of the plaintiff were claimed against an attending urologist. These findings reinforce the value of early urologic in evaluation of the acute scrotum. Timing is also important: another study that reviewed time to evaluation by emergency physicians and surgeons found that surgeons saw patients with acute testicular pain within a median of 5 minutes, whereas emergency physicians took a median of 13 minutes (19). The difference may seem clinically insignificant, but when ischemic time determines whether an organ related to hormonal and reproductive function is salvageable, it is not difficult to make the case that any delay seems relevant. In addition, it should be noted that although testicular torsion is classically considered a pediatric condition, almost one-third of the reported malpractice cases involved torsion in an adult and that indemnity payout rates and amounts were similar to in cases involving minors. The complaint of testicular pain in an adult must therefore be taken seriously in the emergency department setting and may warrant a urologic consult. Unfortunately, urologic consultation may not

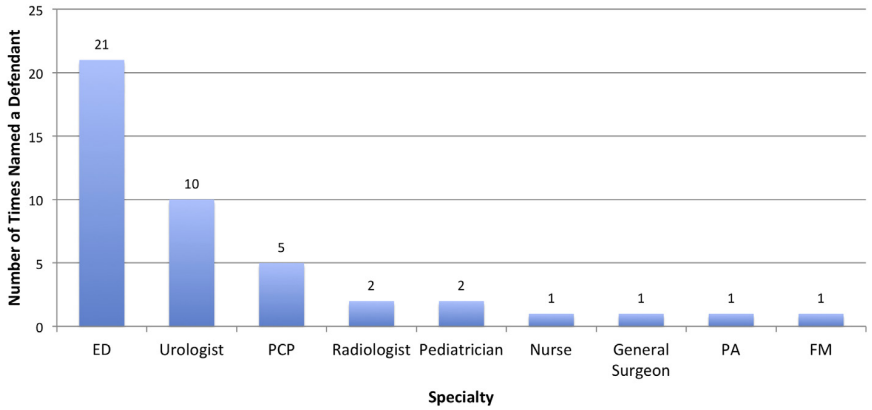

Figure 3. Testicular torsion malpractice defendants by specialty. ED = Emergency department; FM = family medicine; PA = physicians assistant; PCP = primary care physician.

always be readily available in the community hospital setting. In these cases, emergency physicians must be especially careful in their diagnoses and should be ready to transfer patients with any concern of possible torsion to their local tertiary care center.

In malpractice claims where imaging data were available, we found that ultrasound had not been conducted in 72% of cases. Ultrasound is useful because a physical examination alone is not sufficient to distinguish testicular torsion from other causes of acute scrotal pain (20). Color Doppler sonography of the scrotum has a reported sensitivity of 76%, and high-resolution ultrasonography has a sensitivity of 96% (10). Although our study did not show a significant difference in rate of successful defense between those physicians who used ultrasound and those who did not, 1 previous study found evidence that some malpractice liability occurs as a result of failure to perform an ultrasound when it is indicated for diagnosis. In this study, 659 emergency scrotal cases were reviewed, with 27% involving failure to perform testicular ultrasound (14). Ultrasound, however, is only useful when operated and interpreted correctly. Our study did not find any significant difference in defense rates between ultrasound users and nonusers, and this may be because in those cases where ultrasound failed to diagnose torsion it was used incorrectly. Of the 4 cases where ultrasound was used and indemnity payments were still made, 1 involved discharge by a resident after a clear reading of unequal blood flow between testicles, 1 involved ultrasound reading solely by a technician without a physician ever verifying, and the remaining 2 involved misreading of the ultrasound by an emergency department physician without consultation to a urologist. These cases show that ultrasound is only as good as the user, and that the damages caused by failure to diagnose using ultrasound may be the fault of a team member other than the emergency physician. In these cases, the emergency physician should not be the liable party. It is also possible that certain cases may have been avoidable if their imaging was overread by genitourinary radiologists who are experienced in diagnosing torsion. Ultimately, when ultrasound is used it should be done so with a physician who is trained in reading scrotal ultrasounds overseeing the examination.

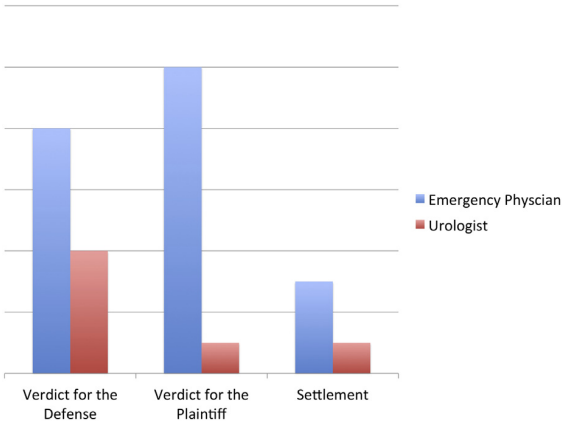

Figure 4. Trial outcomes based on specialty.

Finally, we found that 49% of relevant cases resulted in indemnity payment, with 33% of these being settled before court verdict. This shows that malpractice litigation for cases of testicular torsion carries a substantial chance of financial payout. Our results are consistent with previous reports that the majority of cases involving irreversible injury to the patient result in indemnity payments compared to those without permanent insult (21). Such claims are costly to physicians in terms of time and actual financial losses, and great care should be taken to avoid errors in evaluation, management, or documentation.

Tort reform has led to a cap of noneconomic damages for malpractice cases in most states. However, multiple states specify that the cap is raised in cases involving damage to the reproductive system (22–24). In addition,

the statute of limitations may be extended when the plaintiff is a pediatric patient, and may also be subject to the time of discovery based on the insult (e.g., hypogonadism and subfertility) potentially associated with loss of a testicle (25,26). Therefore, physicians involved in litigation for arguably mismanaged cases of testicular torsion may be at risk for increased financial liability relative to other medical malpractice cases, and the window of concern may be prolonged.

Limitations

The limitations of the study are primarily related to the nature of the Westlaw database used in the process of our data collection. The Westlaw database is composed of records purchased from several vendors in a variety of jurisdictions. As such, there was variability in the amount of information included in each court filing. In addition, out of court settlements may be underrepresented in this database, because those may not progress far enough to be reported. However, despite these flaws, Westlaw has been valuable in previous medicolegal analyses in multiple specialties; we believe it provides an accurate representation of factors involved in these lawsuits and may also serve to gauge prevalence (11–17).

CONCLUSION

Given the often emergent presentation of testicular torsion and the potential loss of a reproductive organ because of misdiagnosis or mismanagement, the risk of legal consequences after an undesired outcome is considerable. Both urologists and emergency physicians should be aware of the risk of malpractice litigation when evaluating an acute scrotum, especially in younger patients. Despite a relatively low incidence, testicular torsion was the fourth most commonly misdiagnosed condition according to 1 review (4). To ensure the best outcomes for patients and to avoid malpractice litigation, urologic consultation should be considered for cases of the acute scrotum. Although testicular torsion accounts for a small percentage of cases of acute testicular pain, the risks of misdiagnosis are substantial. Future studies should aim to investigate the impact of condition-specific quality improvement protocols upon the incidence and outcome of subsequent litigation.

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ARTICLE SUMMARY

1. Why is this topic important?

The medicolegal environment is a major concern for American physicians, and testicular torsion is a time-sensitive diagnosis that may be missed in the chaotic setting of the emergency department.

2. What does this study attempt to show?

This study shows the causes of litigation in cases of testicular torsion and what factors contribute to verdicts or settlements resulting in indemnity payments.

3. What are the key findings?

Approximately half of cases (51%) were found in favor of the defending physician. The most commonly sued medical providers were emergency physicians (48% of defendants), with urologists being second most common and making up 23% of the defendant pool. Emergency physicians were also significantly more likely to make an indemnity payment.

4. How is patient care impacted?

We show the importance of urologic consultation during episodes of possible testicular torsion. When emergency physicians choose not to consult an urologist for possible torsion, they leave themselves open to litigation risk. When an urologist is involved in torsion litigation, they are rarely unsuccessful in their defense. Finally, ultrasound is no guarantee for success against litigation.