

Education and Use of the Lelli Test in the Clinical Setting

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ABSTRACT

The knee ligament most susceptible to injury is the anterior cruciate.^{2,5,8} Detection of a ruptured ACL tear is pivotal in the course of injury care and management process.⁸ The gold reference standard for diagnosing an ACL tear has been arthroscopic evaluation.^{2,5} However, a MRI may be used as an alternate because it is non-invasive, and it has a sensitivity and specificity of 98% and 94%.^{2,5} Before the gold reference standard is used, a combination of physical examinations must be performed. The three physical examinations chosen by surgeons because of the exams' highly researched validity are the Lachman test, Anterior Drawer test, and the Pivot shift.^{2,5,6,8} In 2005, a clinical exam called the Lelli test or Lever Sign test was created by Alessandro Lelli of Bologna, Italy.^{2,10} The Lelli test was designed to forgo the factors that negatively influence the results of the previously listed tests. Since there has been little research, the test's validity has not been verified. **PURPOSE** The purpose of this study was to: review the literature over the Lelli test, understand how it is used by medical professionals in different clinical settings, identify how diagnostic accuracy of the examination compares to other trusted exams, provide exact instructions on the proper methods to perform the exam, and create an educational video. **METHODS** A literature review of 10 articles was performed to identify patient population, methods, diagnostic accuracy, and limitations of each study. The procedure was noted and used in the creation of an educational video to teach the technique to the public. Participants were chosen from local areas, consisting of athletic trainers at the high school and collegiate level as well as orthopedic surgeons. Participants were only asked to participate in a short video interview. Informed consent was obtained before the interview process. Interviews displayed the participant's: history with exam, implementation of the Lelli test in the clinical setting, trust in the supporting evidence of the exam, preference and trust when comparing all four exams, sideline exam procedure, preference in sideline exams and explanation, and patient observations. **CONCLUSION** The review of literature was inconsistent. Several identified the Lelli test to be high in sensitivity and low in specificity, a few found sensitivity and specificity to be equal or near equal, and a few found specificity to be higher than sensitivity. There were many limitations in the studies. Examples are: small sample sizes, lower number of acute injuries, few partial tears, differences in techniques, low number of female participants, and absence of specificity. Thus, the test should be labeled as experimental until future research, correcting the mistakes from previous studies, can be conducted. Researchers will begin the interview process in March.