Introduction:
Surgical reconstruction of the anterior cruciate ligament (ACL) and medial patellar femoral ligament (MPFL) results in significant postoperative pain. While use of a hamstring autograft is reported to decrease morbidity, patients often complain of pain at the graft donor site in the post-operative phase.1 Various modalities are available to provide analgesia for the hamstring donor site, yet only sciatic nerve blockade has proven to do so reliably.1 Though both single injection blockade and continuous perineural infusions alleviate pain the day of surgery, a continuous sciatic nerve block has the ability to reduce pain on subsequent postoperative days.2 Despite the ability to extend pain control, concerns regarding increased risk of falls, decreased active knee movement and masking of compartment syndrome may preclude routine catheter use. We report our experience with single injection and continuous sciatic nerve blockade in conjunction with continuous femoral nerve blockade in adolescents following ACL and MPFL reconstruction.

Methods:
We reviewed the records of 72 ASA I-II adolescents who underwent ACL or MPFL repair. All patients received continuous femoral nerve infusions. Fifty-one patients also received a sciatic catheter, while 21 patients received single injection sciatic blockade. Ropivacaine 0.2-0.5% was utilized for single injections. Catheter infusions consisted of ropivacaine 0.125-0.2%. After surgery, pain scores, opioid requirements, motor and sensory blockade were assessed. Evaluation continued for most patients for 48-72 hours postoperatively.

Results:
Of the 72 patients, 8 patients required rescue narcotics in the PACU due to poor pain control. Reported pain scores on postoperative day 1 were comparable regardless of the method of sciatic blockade (Table 1). The incidence of motor block and paresthesia were higher with a single injection and there was 1 fall due to leg numbness/weakness. Two patients following single injection had severe pain and returned to the emergency room for pain management due to the blocks limited duration of action.

Conclusion:
Sciatic nerve blockade reliably abates the pain associated with hamstring harvest, however, the value of continuing this analgesia several days postoperatively is not universally agreed upon. Although single injection and continuous sciatic nerve blockade share similar complication profiles, the benefits and risks should be discussed with patients and families. Additional research would clearly define the advantages and disadvantages associated with utilizing continuous rather than single injection sciatic nerve blockade following knee reconstruction in adolescents. As this is an ongoing study, we will report further outcomes from a larger sample at the annual meeting.

References:

See additional files