How to Avoid Leg Weakness after Local Anesthesia for Inguinal Hernia Repair?

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Introduction

Tension-free inguinal hernia repairs with prosthetic materials are easily performed as day case procedures today, especially in the specific hernia clinics. Patients are generally sent home only 2 hours after the operation. In some cases, minor complications may develop and patients stay overnight in the institution.

Leg weakness due to transient femoral nerve palsy [TFNP] is a rare complication following inguinal hernia repair with local anesthesia. Its incidence has been reported to be 5.0% following ilio-inguinal nerve block for inguinal hernia repair in the adults. The incidence in pediatric group after ilio-inguinal nerve block can be even higher: 8.8%.

Method and Patients

In the Ankara Hernia Center all the patients have been evaluated prospectively regarding the complications of local anesthesia. A total of 212 patients underwent 231 inguinal hernia repairs with Lichtenstein technique between September 2006 and January 2008. A step by step local anesthetic infiltration with bupivacaine and lidocaine was performed as previously described by Lichtenstein Hernia Institute. The patients also received mild intravenous sedation. No cases had neither previous vascular nor peripheral nerve disease.

Findings

During the early phase of the study local anesthetics were given by a 22 G needle. 3 patient-repair out of a total of 82 (3.65%) developed leg weakness. Classical complaint was knee buckling (inability to stabilize the knee to stand up and walk).

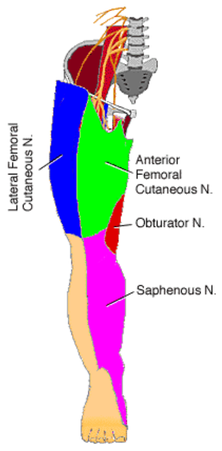
Then, the needle preference switched to insulin syringe tip and this complication was recorded in only one single patient with a unilateral hernia within 149 repairs (0.67%).

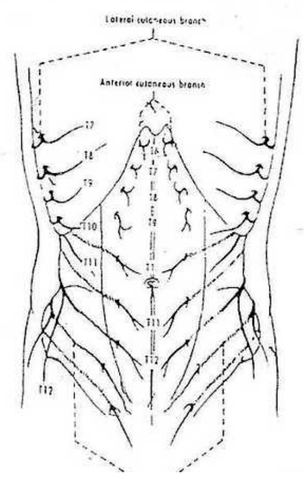
All patients enabled to walk and stabilize the knee joint within 2-4 hours. No overnight admission required.

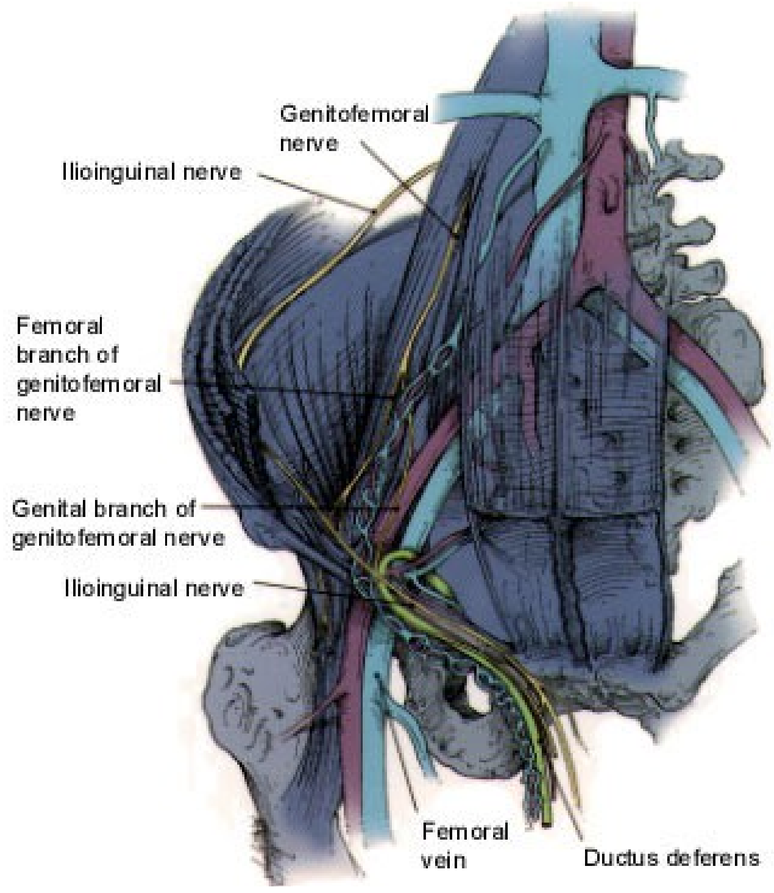
Comment

TFNP can be seen related to different conditions in patients with no previous neurological disorder. Leg weakness following ilio-inguinal nerve block was first described British surgeons in mid 90's in several case reports. The local anesthesia technique in those cases was generally preoperative percutaneous blind block. A step-by-step local infiltration technique under direct vision is considered to lower the incidence of this complication. However, it is not easy to totally avoid this complication. We think TFNP can be met in spite of using step-by-step local infiltration technique when an additional injection is given in close proximity to femoral nerve. The patient can not use the quadriceps muscle with full strength and the can not stabilize the knee joint to stand up.

In our early experience TFNP was observed with an incidence of more than 3%. However the rate, then, could be kept acceptably low by using very fine needles.







Conclusion

Leg weakness due to transient femoral nerve palsy can nearly be avoided buy using very fine needles in day case inguinal hernia repair with local anesthesia.

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