

Isolated transient diplopia and nystagmus after spinal anesthesia

Gökçen Basaranoglu · Leyla Saidoglu

Received: 25 July 2012 / Accepted: 3 February 2013 / Published online: 28 February 2013
© Japanese Society of Anesthesiologists 2013

Keywords Spinal · Diplopia · Anesthesia

To the Editor:

Postdural puncture headache (PDPH) is a common complication of spinal anesthesia. Tinnitus, diplopia, and photophobia may accompany PDPH. We report isolated diplopia and nystagmus without any other subjective symptom after spinal anesthesia.

A 32-year-old man (ASA I), 165 cm in height and 65 kg in weight, was scheduled for elective unilateral varicose stripping. The laboratory evaluation and coagulation tests were in normal.

We performed unilateral spinal anesthesia with a 22-gauge Quincke spinal needle at the L3–L4 interspace at the first attempt. We administered 2 ml hyperbaric 0.5 % bupivacaine. Spinal anesthesia developed to a T7–T8 level on the left side and L5 level on the right side. The surgery and anesthesia were uneventful, without any hypotensive period. However, 18 h later the patient complained of nystagmus and diplopia, which were observed during standing up and resolved when resuming the supine position. These findings could be consequent to cerebrospinal fluid (CSF) leakage. The optic nerve, fundus, globe motion, and thickness of macula were normal, and his pupils were isochoric. Binocular and horizontal diplopia occurred. Nystagmus was present when the patient looked toward the

right. Direct, indirect light reflex, and cranial computerized tomography examination were normal. The patient was given caffeine 50 mg and theophylline medication per os three times per day. On the fourth postoperative day, diplopia was decreased. After 7 days, diplopia and nystagmus were completely resolved.

In the differential diagnosis of diplopia cornea, lens, muscle, optic nerve, and brain problems must be considered. Myasthenia gravis, Guillain–Barré syndrome, multiple sclerosis, and other muscle disorders for the differential diagnosis of diplopia were excluded with neurological consultation. Our patient had no history of neurological or psychological disorder and subdural hematoma. The patient had no previous medical history suggesting diplopia and there was no symptom of neurological disease, e.g., myasthenia gravis. The early theophylline–caffeine combination may have had the effect of increasing CSF. It was interesting for us why headache was not concomitant with diplopia and nystagmus. Although there are already several case reports about diplopia available in the literature, diplopia and nystagmus without PDPH is a very rare and uncommon complication of spinal anesthesia [1–5].

Using large-bore spinal needles for spinal anesthesia is associated with a high incidence of CSF leakage and PDPH. In contrast with the absence of other serious complications in our case, a similar situation may reflect much more serious complications.

The loss of CSF through the dural rent, resulting in traction on intracranial structures, is defined as the mechanism by which these symptoms occur. We think that the diplopia was likely caused by CSF leakage, resulting in traction on nervus abducens. Clinicians must be aware of other serious complications and should employ ophthalmologic examination and radiologic imaging after the occurrence of diplopia in the differential diagnosis.

G. Basaranoglu (✉)
Bezmi Alem Vakif University, Medical Faculty, Department
of Anesthesiology and Reanimation, Soganli mah Alper
sok yuvam apt no= 1/20 B. Evler, Istanbul, Turkey
e-mail: gbasaranoglu@hotmail.com

L. Saidoglu
Kanuni Sultan Süleyman Hastanesi, Istanbul, Turkey

When other neuromuscular etiologies are excluded and the influence of dural puncture in ocular symptom is highly suspected, therapy based on the treatment of postdural puncture headache should be started and must include caffeine, bed rest, and iv and oral fluid administration.

References

1. Hassen GW, Kalantari H. Diplopia from subacute bilateral subdural hematoma after spinal anesthesia. *West J Emerg Med.* 2012;13:108–10.
2. Béchard P, Perron G, Larochelle D, Lacroix M, Labourdette A, Dolbec P. Case report: epidural blood patch in the treatment of abducens palsy after a dural puncture. *Can J Anaesth.* 2007;54:146–50.
3. Arai M, Matsushima S, Terada H. Divergence paresis without positional headache: an unusual presentation of cerebrospinal fluid hypovolemia after spinal anesthesia. *Anesth Analg.* 2006;102:1865–6.
4. Kose KC, Cebesoy O, Karadeniz E, Bilgin S. Eye problem following foot surgery—abducens palsy as a complication of spinal anesthesia. *MedGenMed.* 2005;17(7):15.
5. Vial F, Bouaziz H, Adam A, Buisset L, Laxenaire MC, Battaglia A. Oculomotor paralysis and spinal anesthesia. *Ann Fr Anesth Reanim.* 2001;20:32–5.