

A Case of Subdural Hematoma Emerging After Spinal Anaesthesia

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✓ Subdural bleeding occurs as a consequence of a rupture in dural sinuses or superficial cortical veins. It is generally related to trauma while it may also occur in association with coagulopathy, arachnoid cyst, vascular malformation, meningioma, metastatic cancer, dural sarcoma, lumbar puncture, iatrogenic dehydration, shunt implanted for hydrocephaly and spinal anaesthesia. Subdural bleeding is a rare but serious complication of dural puncture. In the present article, a case of a subdural hematoma following spinal anaesthesia is presented. Subdural bleeding should be considered in case of a headache occurring after a spinal anaesthesia.

Key words: Lumbar puncture, spinal anaesthesia, subdural hematoma

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Spinal Anestezi Sonrasında Ortaya Çıkan Subdural Hematom Olgusu

✓ Subdural kanama dural sinuslerin veya yüzeysel kortikal venlerin yırtılması sonucu oluşur. Genellikle travmaya bağlı görülmekle birlikte koagülopati, araknoid kist, vasküler malformasyon, menenjiom, metastatik kanser, dural sarkom, lomber ponksiyon, iatrojenik dehidratasyon, hidro-sefali için takılmış şant ve spinal anesteziye bağlı da görülebilir. Subdural kanama dura ponksiyonunun ender görülen, ancak ciddi bir komplikasyonudur. Bu yazıda spinal anestezi sonrası subdural kanama gelişen bir olgu sunulmaktadır. Spinal anestezi yapılan olgularda sebat eden baş ağrısında subdural kanama akılda tutulmalıdır.

Anahtar kelimeler: Lomber ponksiyon, spinal anestezi, subdural kanama

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Subdural hematoma occurs in the cavity between dura mater and the outer arachnoid layer. Hematoma occurs as a result of a venous bleeding resulting from a rupture in the bridging veins in this area. Intracranial subdural hematoma which develops after spinal anaesthesia is a serious complication which is rarely seen and may be fatal when not treated. A cerebrospinal fluid leakage which continues

due to a dural trauma during a puncture causes strain, rupture and eventually bleeding in meningeal veins ⁽¹⁻⁸⁾.

CASE PRESENTATION

A 30-year old woman admitted to our clinic with the complaint of gradually increasing headache after spinal anaesthesia performed for caesarean section 10 days ago. Her neurological examination was normal. Cranial compute tomography (CCT) showed the presence of a 8 mm- thick left frontoparietal subacute subdural hematoma (Figure 1). Magnetic resonance imaging revealed a hyperintense subacute phase bleeding in the

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T1 and T2- weighted and FLAIR images in the left frontoparietal area (Figure 2). No surgical intervention was performed. Follow-up brain CT after 15 days showed that blood was resorbed.

DISCUSSION

Although subdural bleeding (SB) developing after spinal anaesthesia is a serious complication, it is rarely known in the literature ⁽¹⁻⁸⁾. The most common complication of a spinal anaesthesia is headache. Spinal headache starts within the first 48 (66 % of the cases), 72 (90 %) hours or immediately after or within the first 14 days after the intervention ⁽¹⁾. It has been suggested that a cerebrospinal fluid leakage higher than 250 ml a day due to a dural trauma causes a headache ⁽²⁾. A headache developing as a result of a dura mater trauma is generally postural and the patients recover within an average of 48 hours via liquid consumption and bedrest. Long-lasting headaches may be related to a SB or intracerebral hematoma ⁽³⁾. A strain and a resultant rupture occurring in cerebral bridging veins during a caudal displacement of the brain due to a sudden loss of the cerebrospinal fluid may

cause a SB ⁽⁴⁾. Nonpostural headache secondary to a SB lasts longer and does not respond satisfactorily to conventional treatments. It may be accompanied by a hearing loss, diplopia or a blackout of consciousness. Use of anticoagulant drugs, bleeding tendency, trauma, old age, brain atrophy, brain tumour, cerebrovascular diseases and meningovascular syphilis increase the incidence of a SB ^(2,3). In our case in which spinal anaesthesia was applied for a caesarean section, there was no predisposing factor. One of the factors affecting headache related to a post-dural trauma is the differences related to the regional anaesthesia techniques. While the incidence of headache increases with the use of conventional sharp and large bore needles, it has been reported that the related incidence rate decreases with the use of pen point needles and 29G needles ⁽⁴⁾. On the other hand, cases with SB developed after a spinal anaesthesia performed using a sharp needle have been reported ⁽⁷⁾. In our case, the features of the needle used cannot be known as the spinal anaesthesia intervention had been performed in another clinic. In the treatment of a headache related to a postdural trauma, it is recommended that a blood graft be performed in the epidural area in an early phase or 10 mg/kg

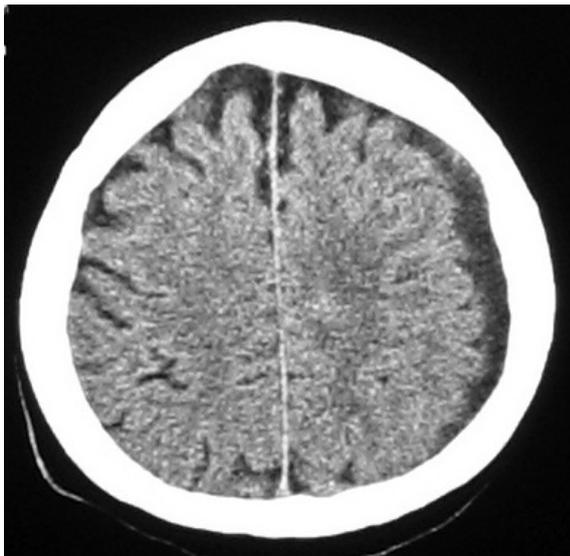


Figure 1. Computed tomography of the brain showing left frontoparietal subacute subdural hematoma.



Figure 2. Axial T weighted magnetic resonance image showing left frontoparietal hyperintense subacute subdural hematoma.

caffeine be given orally in order to prevent a cerebrospinal fluid leakage⁽⁸⁾. An obstetric case was reported which had been operated with a diagnosis of a SB 14 days after a dural puncture although an epidural blood graft had been performed in the 36th hour after an iatrogenic dural puncture⁽⁹⁾. In the present case, since the diagnosis of dural trauma could not be established, treatment could not be initiated. The intensity of the headache changed after a spinal anaesthesia and persisted despite conventional treatment modalities. Finally 10 days after the operation a subdural bleeding was documented.

CONCLUSION

Subdural bleeding may develop after a spinal anaesthesia. Therefore, the medical history of the patients should be carefully obtained in case of a headache persisting after a spinal anaesthetic intervention, and a detailed neurological and radiological evaluation should be performed.

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