

The commonest neurological complication of epidural anaesthesia is dural puncture.

One of the problems with dural puncture is that blood (which is known to be highly irritant) may enter the subarachnoid space. Indeed, a blood patch is often applied to prevent loss of spinal fluid through the breached dural membrane, so that blood products are introduced into the area.

In 1996, Costigan and Sprigge(i) published a study of dural puncture cases. They concluded that :"Headache and backache are both common following dural puncture with a 16 G needle and both frequently recur after discharge from hospital.

It was the strongly expressed opinion of this selected group* that all mothers should be warned of the risk of dural puncture before undergoing epidural analgesia." (* i.e. the patients in the study)

MacArthur et al published a study(ii) of long-term headache following dural puncture and found that of 74 women who had suffered an accidental dural puncture during epidural anaesthetic, 10 had persistent headache after several years.

They concluded that "the findings provide a clear indication of the need for further study of the possible long term sequelae of accidental dural puncture." It should be noted that the authors only looked at head and neck pain, not lumbar , thoracic or limb pain.

Blood in the subarachnoid space is a known causative factor of arachnoiditis.

Combined spinal epidural anaesthetic (CSE) is a technique that sets out to deliberately produce a multicompartment block through a breached dural membrane.

This means that potentially there may be a leak of an epidural bolus into the subarachnoid space.(iii)

i Costigan SN, Sprigge JS Acta Anaesthesiol Scand 1996 Jul;40(6):710-4 Dural puncture: the patients' perspective. A patient survey of cases at a DGH maternity unit 1983-1993.

ii MacArthur C, Lewis M, Knox EG BMJ 1993 Apr 3;306(6882):883-5 Accidental dural puncture in obstetric patients and long term symptoms

iii Vartis A, Collier CB, Gatt SP Anaesth Intensive care 1998 Jun;26(3):256-61 Potential intrathecal leakage of solutions injected into the epidural space following combined spinal epidural anaesthesia.