

Supplementary file 3: Included studies

Studies				Results		
Reference	Design	Number of patients	Objectives	Deep infection	Epidural haematoma	Neurological outcome
Abouleish 1982 ¹	Retrospective and prospective cohorts	Retrospective: 6901 Prospective: 1417	Neurological complications following epidurals in obstetrics	No data	No data	In 6901 retrospective patients: Persistent: 0 Transient: 0 In 1417 prospective patients: Persistent: 0 Transient: 4 1 patient with pain, numbness, motor dysfunction, duration 4 weeks 1 patient with tingling, no symptoms before discharge 1 patient with tingling for 2 weeks 1 patient with motor dysfunction, numbness, probably not due to epidural All recovered within 1 month No data
Adam & Dinulescu 1996 ²	Prospective cohort	294	Comparison of two antiseptics in obstetric epidurals Data collection over 6 months	0	No data	No data
Albright & Forster 1999 ³	Retrospective cohort	6002 blocks (combined spinal and epidural analgesia/ anesthesia) Labor analgesia: 4164 CSE, 36 spinal and 52 epidurals	Safety and efficacy of CSE (combined spinal and epidural) - analgesia/anesthesia	0	0	Persistent: 0 Transient: 0 5 patients with temporary peripheral nerve injury, only one of which believed to be related to anaesthesia (1/7931). There is a difference between CSE (6002 blocks) and 7931 "regional anesthetics" which is not clearly explained, and because of this the single case of temporary neurological damage was not included in the analysis

Auroy & Benhamou 2002 ⁴	Prospective audit	29,732	Major complications of regional anesthesia in France	0	No data	Unknown duration: 0
Bleayert & Soetens 1979 ⁵	Prospective cohort	3000	Study examining bupivacaine 0.125% in obstetrics	No data	No data	Persistent: no data Transient: 0 (follow up time after delivery was 1 week)
Collaborative Low-dose Aspirin Study in Pregnancy (CLASP) 1994 ⁶	Randomized trial	2783 1422 aspirin-allocated vs. 1361 placebo-allocated	RCT in pregnant women to examine the effect of aspirin in order to prevent pre-eclampsia	No data	3 patients with hemorrhage (1 aspirin vs. 2 placebo), limited to blood-stained fluid in the cannula. No epidural hematoma assumed	No data
Crawford 1985 ⁷	Data analysis(Review)	26490 patients	Complications of maternal epidurals 1968-1985	1 patient with epidural abscess. Laminectomy was required	No data	Persistent: no data Transient: 31 patient with some sensory and motor loss in the lower part of one leg (resolving) 1 patient with pain, tingling and numbness in the right iliac fossa and difficulty with micturition (symptoms for 1 month) 1 patient with a 6th cranial nerve palsy on the 18th day for 3 days Unknown duration: 11 patient with causalgia like leg pain after a painful insertion of the catheter

Eisen & Rosen 1960 ⁸	Retrospective cohort	9532	Epidurals in obstetrics	0	No data	Persistent: no data Transient: 16 16 patients with paraesthesias (9 with small areas of anaesthesia). Most of these symptoms resolved after 3-4 days, but at least in 2 patients symptoms persisted for several weeks.
Evron & Sessler 2004 ⁹	Randomized trial	547	Paper about identification the epidural space. 3 groups: air (180), air with lidocaine (182), lidocaine alone (185)	No data	No data	Persistent: 0 Transient: 7
Guasch & Suarez 2003 ¹⁰	Retrospective study of computer records	1168	Platelet count and bloody epidural puncture	No data	0	No data
Hellmann 1965 ¹¹	Retrospective cohort	26127	Epidural anesthesia in obstetrics in general	0	No data	Persistent: 0 Transient: no data
Holdcraft & Morgan 1976 ¹²	Retrospective cohort	1000	Maternal and epidural complications	No data	No data	Persistent: no data Transient: 1 1 patient with foot drop after an extremely difficult forceps rotation 1 patient with paraesthesias over the L2 distribution of one thigh following an outlet forceps delivery (authors report this unrelated to an epidural, so not included). Both patients recovered within 6 weeks.
Holdcroft & Gibberd 1995 ¹³	Prospective multidisciplinary audit	13007	Neurological complications associated with pregnancy	1 patient with meningitis	No data	Unknown duration: 6

Kandel & Spoerel 1966 ¹⁴	Retrospective cohort	1000 vaginal deliveries managed by continuous epidurals	Epidural analgesia for labor and delivery	0	No data	Persistent: no data Transient: 12 8 patients with leg pain, not present at discharge 3 patients with transient sensory or motor disturbance in legs 1 patient with foot drop with slow recovery at discharge
Kindler & Seeberger 1996 ¹⁵	Case series 1990-1995 prospective data collection, 1983-1989 retrospective data collection	4162	Extradural blocks for obstetric patients	2 patients with extradural abscess	No data	No data
McArthur & Lewis 1992 ¹⁶	Follow up study (postpartum questionnaires)	4766 (for pain relief and/or caesarean section)	Long term problems after obstetric epidural anesthesia (1978-1985)	No data	No data	Unknown duration: 23 23 patients with numbness or tingling in the lower back, buttocks and leg (most symptoms lasted longer than 6 weeks)
Moen & Dahgren 2004 ¹⁷	Retrospective cohort	205000	Severe complications after central blockades	1 patient with epidural abscess	1 patients with epidural hematoma (patient with HELLP) 2 patients with subdural hematomas	Persistent: 1 1 patient with Abducens pareses Transient: no data Unknown duration: 3 2 patients with cord lesions 1 patient with Horner syndrome with facial pain
Moore & Bridenbaugh 1978 ¹⁸	Retrospective cohort	3493	Bupivacaine and epidural and caudal analgesia / anesthesia	No data	No data	Persistent: 0 Transient: 0

Ong & Cohen 1987 ¹⁹	Retrospective cohort	Epidural anesthesia: 9403 23827 deliveries	Paresthesias and motor dysfunction after labor and delivery (analgesia and anesthesia)	No data	No data	Persistent: no data Transient: 34 34 patients with paresthesias and motor dysfunction; all recovered within 72 hours
Paech & Godkin 1998 ²⁰	Prospective cohort	Total: 10995 Epidurals for labor analgesia: 7648 Elective caesarean: 2071 Unplanned caesarean: 1240 Epidurals for anesthesia for caesarean section: 3311	Complications of obstetric epidural analgesia and anesthesia	0	0	Unknown duration: 1 1 patient with apparent epidural catheter-induced traumatic mononeuropathy with post partum L3 sensory loss following severe paraesthesia in the same dermatomal distribution during insertion of an epidural catheter. No resolution by discharge on the ninth postpartum day.
Palot & Visseaux 1994 ²¹	Retrospective cohort	An audit in France concerning labor analgesia 288351 obstetric patients	Epidemiology of complications in labor analgesia	3 patients with meningitis cases (1/96117) 0 abscesses	1 patient with hematoma subdural (1/288351)	Persistent: no data Transient: 88
Richardson & Wissler 1999 ²²	Prospective cohort	534 catheters in 500 patients In 467 patients single catheter, 2 catheters in 32 patients and 3 catheters in 1 patient	Needle bevel orientation during epidural catheter placement	No data	No data	Persistent: 0 Transient: 8 8 patients with transient neurological sensory symptoms; 7 of these with paresthesias or numbness, 3 with motor weakness. All symptoms resolved on the second postpartum day.

Rolbin & Abbott 1988 ²³	Retrospective cohort	80,000 since 1956	Thrombocytopenia and epidural analgesia	No data	0	No data
Scott & Hibbard 1990 ²⁴	Retrospective cohort	506000 extradural blocks, 84% for pain relief, 16% for caesarean section	Non fatal complications with extradural block in obstetric patients Data collection with using a postal questionnaire between 1982-1986	1 patient with extradural abscess: (outcome unclear)	1 patient with extradural hematoma: (outcome unclear) 1 patient with subdural hematoma with no permanent injuries	Persistent: 2 1 patient with permanent paraplegia (anterior spinal artery syndrome?) 1 patient with permanent quadriceps weakness Transient: 37
Scott & Tunstall 1995 ²⁵	Retrospective cohort	108133 epidural blockade (spinal 14865)	Quantification of complications of epidurals and subarachnoid blocks	2 patients with suspected meningitis on clinical grounds. Rapid and complete recovery with conventional treatment	No data	Persistent: no data Transient: 38
Vaes, L. 1988 ²⁶	Retrospective cohort	14951	Analgesia for deliveries and anesthesia for caesarean section	No data	No data	Persistent: 0 Transient: 0
Yuen & Layzer 1995 ²⁷	Retrospective cohort	Approximately 13000 in total, approximately half of them in obstetrics, 6500 assumed as obstetric	Neurological complications of lumbar epidural anesthesia and analgesia	No data	No data	Persistent: no data Transient: 6

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