

RECOMMENDATIONS

RECOMMENDATIONS

- 1- Dexmedetomidine is recommended in spinal anaesthesia for caesarean section in patients with pregnancy induced hypertension.
- 2- Further studies should be designed to compare different doses of dexmedetomidine regarding duration of analgesia and first requirement for analgesics.
- 3- Further studies should be designed to use dexmedetomidine in non-pregnant surgeries.
- 4- Further studies should be designed to use dexmedetomidine in other regional techniques like epidural analgesia.
- 5- Further studies should be designed to compare dexmedetomidine to opioids other than fentanyl.

REFERENCES

REFERENCES

1. Morgan GE, Mikhail MS, Murray MJ. Obstetric anesthesia. *Clinical Anesthesiology* 2006; 43:890-922.
2. Bucklin BA, Hawkins JL, Anderson JR, Ullrich FA. Obstetric anesthesia workforce survey: twenty-year update. *Anesthesiology* 2005; 103:645–53.
3. Hold CT. Principles and practice of obstetric anesthesia. Backwell 2000; 44: 325-30.
4. Ross A, Birnbach DJ, Gatt SP, Datta S. Physiologic changes of pregnancy. Text Book of obstetric Anesthesia. New York: Churchill Livingstone, 2000; 31-45.
5. Duvokot J, Peeters L. Maternal cardiovascular hemodynamic adaptation to pregnancy. *Obstet Gynecol Surg* 1994; 49: 12.
6. Weissgerber TL, Wolfe LA. Physiological adaptation in early human pregnancy: adaptation to balance maternal-fetal demands. *Appl Physiol Nutr Metab* 2006; 31:1-11.
7. Wong CA, Lofferedi M, Ganchiff JN. Gastric emptying of water in full term pregnancy. *Anesthesiology* 2002; 96: 1395-400.
8. Sibai BM, Frangich A. Maternal adaptations to pregnancy. *Curr Opin Obstet Gynecol* 1995; 7:420.
9. Eltzhing HK, Liberman ES, Camann WR. Regional anesthesia and analgesia for labour and delivery. *N Engl J Med* 2003; 319-48.
10. Ronald D. Miller. Anesthesia for complicated obstetrics. *Miller's Anesthesia*. Churchill Livingstone, 5th ed 2000; 2:1914.
11. Birnbach DJ, Datta S, Gatt SP. Textbook of obstetric anaesthesia. New York ; Edinburgh: Churchill Livingstone 2000; 504-23.
12. Ishrat HM, Raja AT. Spinal anaesthesia in pre-eclamptic parturient-prospective cohort study. *Internet J Anaesthesiol*. 2007;14:1092–406.
13. McConchie I, McGeachie J, Healy TE, Cohen PJ. Practice of Anesthesia. 6th ed. London, Boston, Sydney Auckland: Wylie and Churchill-Davidson's, 1995; 34:708-34.
14. Warvirich R, Williams PL, Dyson M. Neurology. In: Gray's anatomy 37th ed. Edinoburgh, London. Melbourne, New York. Curchill Living Stone 1998; 315-29.

15. Ellis H, Feldman S. In: *Anatomy of Anesthetists* 5th ed. Blackwell Scientific Publication 1998; 3: 103-8.
16. Blomberg RG. Fibrous structures in the subarachnoid space, a study with spinaloscopy in autopsy subjects. *Anesth Analg* 1995; 80: 875-9.
17. Morgan GE, Mikhail MS, Muray MJ. Spinal, Epidural and Caudal blocks. *Clinical Anesthesiology*, 4th ed. 2006; 16:289-323.
18. Hogan QH. Lumbar epidural anatomy. A new look by Cryomicrotome section. *Anesthesiology* 1991; 75: 767-75.
19. Brown DL. Spinal, Epidural and caudal anesthesia. In: Miller RD. *Anesthesia* 4th ed. New York, Edinburgh, London, Melbourne, Churchill Living Stone 2000; 1491-1519.
20. Murphy TM, Fitzgibbon D. Local anesthetic technique. In: Aitkenhead AR, Jone RM, eds. *Text book anesthesia* 3rd ed. New York, Edinburgh, London, Madrid, Melbourne, San Fransisco, Tokyo, Churchill Living Stone 1996; 557-93.
21. Malcom B, Carpenter. Meningies and CSF. *Care Text of Neuroanatomy*. 2nd ed. 1990; 1: 1-14.
22. Nazli H, Subhana T, Tayyab M. Spinal anaesthesia for Caesarean section. *JSP* 2002; 7(1):19-21.
23. Osseyran SF, Errando CL, Plaza LM, Diaz CO, Garcia N. Prophylaxis for hypotension during cesarean section under spinal anesthesia: a randomized trial comparing hydroxyethyl starch to ephedrine. *Rev Esp Anesthesiol Reanim* 2011; 58:17-24
24. Ngan Kee WD, Khaw K, Lee BB. A dose response study of prophylactic intravenous ephedrine for the prevention of hypotension during spinal anesthesia for caesarian delivery. *Anesth Analg* 2000, 90: 1390-5.
25. Van den Berg, Ghatge S, Armendariz G, Cornelius D. Obstetric Responses to dural puncture during institution of combined spinal-epidural analgesia: a comparison of 27 gauge pencil-point and 27 gauge cutting-edge needles. *Anaesth Intensive Care* 2011; 39:247-51.
26. Karaman S, Akercan F, Akarsu T, Firat V. Comparison of the maternal and neonatal effects of epidural block and of combined spinal-epidural block for Cesarean section. *Eur J Obstet Gynecol Reprod Biol* 2005; 121: 18-23.

27. Shaikh J, Memon A, Memon M, Khan M. Post dural puncture headache after spinal anaesthesia for caesarean section: a comparison of 25 g Quincke, 27 g Quincke and 27 g Whitacre spinal needles. *Ayub Med Coll Abbottabad* 2008; 20:10-3.
28. Srivastava V, Jindal P, Sharma P. Study of post dural puncture headache with 27G Quincke & Whitacre needles in obstetrics/non obstet. *Middle East J* 2010; 20:709-17
29. Darvish B, Gupta A, Alahuhta S, Dahl V, Thorsteinsson A, Irestedt L, Dahlgren G. Management of accidental dural puncture and post-dural puncture headache after labour: a Nordic survey. *Acta Anaesthesiol Scand* 2011; 55:46-53
30. Lamberg T, Pitkanen MT, Marttila T. Hearing loss after continuous or single-shot spinal anesthesia. *Reg Anesth* 1997; 22: 539
31. Traore M, Diallo A, Coulibaly Y, Guinto C, Timbo S, Thomas J. Cauda equina syndrome and profound hearing loss after spinal anesthesia with isobaric bupivacaine. *Anesth Analg* 2006; 102:1863-4
32. Dahl JB, Jeppesen IS, Jorgensen H. Intraoperative and postoperative analgesic efficacy and adverse effects of intrathecal opioids in patients undergoing Cesarean section. *Anesthesiology* 1999; 91: 1919-27.
33. Stoeling RK. Local anaesthetics. In: *Pharmacology and physiology in anaesthetics practice* 3rd ed. Philadelphia, New York: Lippincott-Raven 1999; 158-81.
34. Colc CD, MC Morland GH, Axelson JE. Epidural blockade for cesarean section comparing lidocaine hydrobonated and lidocaine hydrochloride. *Anesthesiology* 1994; 83: 348-50.
35. Viitanen H, Porthan L, Viitanen M, Heula AL, Heikkila M. Postpartum neurologic symptoms following single-shot spinal block for labour analgesia. *Acta Anaesthesiol Scand* 2005; 49:1015–22.
36. Bursell B, Ratzan RM, Smally A. Lidocaine toxicity misinterpreted as a stroke. *West J Emerg Med* 2009; 10: 292-4.
37. Kitagawa N, Oda M, Totoki T: Possible mechanism of irreversible nerve injury caused by local anesthetics: detergent properties of local anesthetics and membrane disruption. *Anesthesiology* 2004; 100: 962
38. Johnson ME, Saenz JA, DaSilva AD. Effect of local anesthetic on neuronal cytoplasmic calcium and plasma membrane lysis (necrosis) in a cell culture model. *Anesthesiology* 2002; 97: 1466

39. Raucher D, Sheetz MP: Phospholipase C activation by anesthetics decreases membrane-cytoskeleton adhesion. *J Cell Sci* 2001; 114: 3759
40. Schneider M, Ettlin T, Kaufmann M. Transient neurologic toxicity after hyperbaric subarachnoid anesthesia with 5% lidocaine. *Anesth Analg* 1993; 76: 1154
41. Edomwonyi N, Isesele T. Transient neurological symptoms following spinal anesthesia for cesarean section. *Middle East J Anesthesiol* 2010; 20:809-13
42. Gozdemir M, Muslu B, Usta B, Sert H, Karatas F, Surgit O. Transient neurological symptoms after spinal anaesthesia with levobupivacaine 5 mg/ml or lidocaine 20 mg/ml. *Acta Anaesthesiol Scand* 2010;54:59-64
43. Freedman JM, Li DK, Drasner K. Transient neurologic symptoms after spinal anesthesia: An epidemiologic study of 1,863 patients. *Anesthesiology* 1998; 89: 633
44. Tetzlaff EJ. Epidural and caudal blocks. In Morgan GE, Mikhail MS, eds. *Clinical anesthesiology*. 4th ed. Norwalk, Connecticut: Appleton and Lange 2005;211-44.
45. Somboonviboon W, Kyokong O, Charuluxananan S, Narasethakamol A. Incidence and risk factors of hypotension and bradycardia after spinal anesthesia for cesarean section. *J Med Assoc Thai* 2008; 91: 181-7.
46. Kelsaka E, Baris S, Karakaya D. Comparison of ondansetron and meperidine for prevention of shivering in patients undergoing spinal anesthesia. *Reg Anesth Pain Med* 2006; 31: 40-5.
47. Piper SN, Fent MT, Rohm KD. Vrapidil does not prevent post anesthetic shivering: A dose ranging study. *Can J Anesth* 2001; 48: 742-7.
48. Tsia YC, Chu KS. A comparison of tramadol, amitriptyline and meperidine for post epidural shivering in parturients. *Anesth Analg* 2001; 93:1288-92.
49. Guffin A, Girard D, Kaplan JA. Shivering following cardiac surgery; hemodynamic changes and reversal. *J cardiothor Anesth* 1987; 1:24-8.
50. Ostheimer GW, Datta S. Observation in the post partum recovery room after various local anesthetic techniques. *Reg Anesth* 1981; 6:13-7.
51. Clarke RSJ. Intravenous anaesthetic agents. In: Healy TE, Cohen PJ (eds). *Wylie and Churchill-Davidson's A practice of Anaesthesia*. 6th ed. London, Boston, Sydney, Auckland 1995; 91-103.

52. Aitkenhead AR, Smith G. Intravenous anaesthetic agents. In Text book of anaesthesia. 3rd ed. Edinburgh, London, New York: Churchill Livingstone 1996; 1996; 139-157.
53. Barash PG, Cullin BF, Stoelting RK. Opioids. In: Handbook of clinical anaesthesia 3rd ed. Philadelphia, New York, Lippincott 1997; 158-176.
54. Shesky MC, Rocco AG, Bizzari-Schmid M. A dose response study of bupivacaine for spinal anaesthesia. *Anesth Analg* 1988; 89:147.
55. Ritchie JM, Greene NM. Local anesthetics. In: Gilman AG, Goodman LS, Gilman A, eds. *The Pharmacological Basis of therapeutics* 6th ed. New York; MC Millan 1995; 300-6.
56. Kokki H, Hendolin H, Tuovinen K. spinal anesthesia for paediatric day care surgery, comparison of isobaric and hyperbaric bupivacaine. *Br J Anaesth* 1998; 81:502-6.
57. Baily PL, Stanley TH. Pharmacology of iv narcotic or anesthetics. In: Miller RD (eds). *Anaesthesia* 3rd ed. New York, Edinburgh, London, Churchill Livingstone 1990; 287-315.
58. Kestuin JG. Spinal anesthesia in obstetrics. *Br J Anaesth*.1991; 66:596-607.
59. Ko J, Lee HK, Shin IW. The effect of fentanyl added to different dose of intrathecal bupivacaine on spinal anesthesia duration. *Anesth Analg* 2001;93(6):1598-605.
60. Arcangeli A, D'Alo C, Gaspari R. Dexmedetomidine use in general anaesthesia. *Curr Drug Targets* 2009; 10(8):687-95.
61. Gertler R, Brown HC, Mitchell DH, Silvius EN. Dexmedetomidine: a novel sedativeanalgesic agent. *Proc (Bayl Univ Med Cent)* 2001;14(1):13-21.
62. Mantz J, Jossierand J, Hamada S. Dexmedetomidine: new insights. *Eur J Anaesthesiol* 2011;28(1):3-6.
63. Panzer O, Moitra V, Sladen RN. Pharmacology of sedative-analgesic agents: dexmedetomidine, remifentanil, ketamine, volatile anesthetics, and the role of peripheral Mu antagonists. *Anesthesiol Clin* 2011;29(4):587-605.
64. Afonso J, Reis F. Dexmedetomidine: current role in anesthesia and intensive care. *Rev Bras Anesthesiol* 2012;62(1):118-33.
65. Blaudszun G, Lysakowski C, Elia N, Tramer MR. Effect of perioperative systemic alpha2 agonists on postoperative morphine consumption and pain intensity:

- systematic review and meta-analysis of randomized controlled trials. *Anesthesiology* 2012;116(6):1312-22.
66. Arain SR, Ruehlow RM, Uhrich TD, Ebert TJ. The efficacy of dexmedetomidine versus morphine for postoperative analgesia after major inpatient surgery. *Anesth Analg* 2004;98(1):153-8.
 67. Kabukcu HK, Sahin N, Temel Y, Titiz TA. Hemodynamics in coronary artery bypass surgery: effects of intraoperative dexmedetomidine administration. *Anaesthesist* 2011;60(5):427-31.
 68. Kunisawa T, Nagata O, Nagashima M, Mitamura S, Ueno M, Suzuki A, et al. Dexmedetomidine suppresses the decrease in blood pressure during anesthetic induction and blunts the cardiovascular response to tracheal intubation. *J Clin Anesth* 2009;21(3):194-9.
 69. Candiotti KA, Bergese SD, Bokesch PM, Feldman MA, Wisemandle W, Bekker AY. Monitored anesthesia care with dexmedetomidine: a prospective, randomized, double-blind, multicenter trial. *Anesth Analg* 2010;110(1):47-56.
 70. Oster Svedberg K, McKenzie J, Larrivee-Elkins C. Compatibility of ropivacaine with morphine, sufentanil, fentanyl, or clonidine. *J Clin Pharm Ther* 2002; 27:39-45.
 71. Bonhomme V, Doll A, Dewandre PY. Epidural administration of low-dose morphine combined with clonidine for postoperative analgesia after lumbar disc surgery. *J Neurosurg Anesthesiol* 2002; 14:1-6.
 72. Culebras, Xavier, Gaggero. Advantage of intrathecal nalbuphine, compared with intrathecal morphine after cesarean delivery. *Anesth Analg* 2000; 91(3):601-5.
 73. Mackey DC. Physiological effects of regional block. In: Brown DL, editor. *Regional anesthesia and analgesia*. 1st ed. Philadelphia: WB Saunders 1996; 22:397-422.
 74. Onigbogi O, Ajayi AA, Ukponmwan OE, *Pharmacol. Biochem Behavior* 2000; 65:333-7.
 75. Kress JP, Pohlman AS, O'Connor MF & Hall JB. Daily interruption of sedative infusions in critically ill patients undergoing mechanical ventilation. *The New England Journal of Medicine* 2000; 342: 1471 - 1477.
 76. Lopriore E, van Burk F, Walther F, Arnout J. Correct use of the Apgar score for resuscitated and intubated newborn babies: questionnaire study. *BMJ*.2004;329 :143-144.

77. Sorlie T, Busund R, Sexton H, Sorlie D. Patient satisfaction after hospitalisation for surgery. *Tidsskr Nor Laegeforen* 2005;125:756-9.
78. Kotz S, Balakrishnan N, Read CB, Vidakovic B. *Encyclopedia of statistical sciences*. 2nd ed. Hoboken, N.J.: Wiley-Interscience 2006;2.
79. Kirkpatrick LA, Feeney BC. *A simple guide to IBM SPSS statistics for version 20.0*. Student ed. Belmont, Calif.: Wadsworth, Cengage Learning 2013;6.
80. Hodgson PS, Liv SS. Developments in spinal anesthesia. *Anesth Clin North Ann* 2000; 18: 235-9.
81. Riley ET, Cohen SE, Macario a. spinal versus epidural anesthesia for cesarean section. A comparison of time efficiency, costs, charges, and complications. *Anesth Analg* 1995; 80:709-12.
82. Kanazi GE, Aouad MT, Jabbour-Khoury SI, Al Jazzar MD, Alameddine MM, Al-Yaman R. Effect of low-dose dexmedetomidine or clonidine on the characteristics of bupivacaine spinal block. *Acta Anaesthesiol Scand* 2006; 50:222-7.
83. Puri BK. *SPSS in Practice: An Illustrated Guide*: Arnold, London 2002; 320.
84. Tan PH, Chia YY, Lo Y. Intrathecal bupivacaine with morphine or neostigmine for postoperative analgesia after total knee replacement. *Can J Anaesth* 2001; 48:551-56.
85. Dobrydnjov I, Axelsson K, Samarutel J, Holmstrom B. Postoperative pain relief following intrathecal bupivacaine combined with intrathecal or oral clonidine. *Acta Anaesthesiol Scand* 2002; 46:806-14.
86. Karthivel S, Sadhasivam S, Saxena A, Kannan TR, Ganjoo P. Effects of intrathecal ketamine added to bupivacaine for spinal anaesthesia. *Anaesthesia* 2001; 55:899-904.
87. Wang JK, Nauss LA, Thomas JE. Pain relief by intrathecally applied morphine in man. *Anesthesiology*. 1979;50(2):149-51.
88. Reves JG, Glass PSA, Lubarsky DA. Nonbarbiturate intravenous anesthetics. In: Miller RD, editor. *Textbook of anesthesia*. Fifth edition. New York: Churchill Livingstone 2000; 5: 228-237.
89. Tuominen M. Bupivacaine in spinal anesthesia. *Acta Anesthiol Scand* 1998; 35:1.
90. Ngan Kee WD, Khaw K, Lee BB. A dose response study of prophylactic intravenous ephedrine for the prevention of hypotension during spinal anesthesia for caesarian delivery. *Anesth Analg* 2000, 90: 1390-5.

91. Miller JW, Anderson HH. The effects of spinal anesthesia on cardiovascular system. Miller's Anesthesia 5th ed. Churchill Livingstone 2005; 43:1406.
92. Sousaan R, Moslemi F. Spinal anesthesia with minidose bupivacaine-fentanyl for cesarean section. Saudi Med j 2008; 29: 460-2.
93. Mandell GL, Jamnback L, Ramanathan S. Hemodynamic effects of subarachnoid fentanyl in labouring parturients. Reg Anesth 1996; 2:103-11.
94. Cascio M, Pygon B, Bennett C, Ramanathan S. Labour analgesia with intrathecal fentanyl decrease maternal stress. CanJ Anaesth 1997; 44:605-9.
95. Hannas R , Ohnesorge H, Kaufmann M, Gaupp R , Ledowski T. Changes in heart rate variability parameters in the course of spinal anesthesia. [Acta Anaesthesiol Scand](#) 2007; 51:1297-304.
96. Iirola T, Aantaa R, Laitio R, Kentala E, Lahtinen M, Wighton A, et al. Pharmacokinetics of prolonged infusion of high-dose dexmedetomidine in critically ill patients. Crit Care. 2011;257-15.
97. Mabzad Alimian, Valiollah Hasani, Bebrooz Zaman, Mabnaz Salari. Comparison of clonidine and fentanyl in spinal anesthesia with hyperbaric bupivacaine in lower limb elective surgeries. Anesth Analg 2003; 96; 1496-1503.
98. Coombs DW, Richard LS, Lanchance D, Savage S, Rangn. Effect of intrathecal clonidine on hemodynamics. Anesthesiology 1991; 60:401-9.
99. Keniya VM, Ladi S, Naphade R. Dexmedetomidine attenuates sympathoadrenal response to tracheal intubation and reduces perioperative anaesthetic requirement. Indian J Anaesth 2011; 55: 352.
100. Hall JE, Uhrich TD, Barney JA, Shahbaz RA, Ebert TJ. Sedative, amnestic and analgesic properties of small dose dexmedetomidine infusions. Anaesth Analg 2000; 90: 699-705.
101. Anta RE, Kanto JH, Scheinin M, Kallio A, Scheinin H. Dexmedetomidine, an α_2 adrenoreceptor agonist, reduces anaesthetic requirement for patients undergoing minor gynaecological surgery. Anaesthesiology 1990; 73: 230.
102. Sharwood-Smith G, Drummond GB. Hypotension in obstetric spinal anaesthesia: a lesson from pre-eclampsia. Br J Anaesth 2009;102:291-4.
103. Mercier FJ, Bonnet MP, De la Dorie A, Moufouki M. Spinal anesthesia for caesarian section: fluid loading, vassopressors and hypotension. Ann Fr Anesth Ranim 2007; 7:688-93.

104. Toeh WH, Sia AT. Colloid preload versus coload for spinal anesthesia for caesarian delivery. *Anesth Analg* 2009; 108: 1592-8.
105. Desalu I, Kushimo OT. Is ephedrine infusion more effective at preventing hypotension than traditional crystalloid preloading during spinal anesthesia for caesarian section? *Int J Obstet Anesth* 2005; 14:294-9.
106. Cardoso M, Bliacheriene S, Freitas C, Cesar S, and Torres M. Preload during spinal anesthesia for cesarean section: comparison between crystalloid and colloid solutions. *Rev Bras Anesthesiol* 2004; 54:781-7.
107. Dahlgren G, Granath F, Pregner K, Rosblad P, Wessel H, Irestedt L. Colloid vs. crystalloid preloading to prevent maternal hypotension during spinal anesthesia for elective cesarean section. *Acta Anaesthesiol Scand* 2005; 49:1200-6.
108. Mullary MF. *Regional anesthesia* 2nd ed. Boston: little Brownand Co 1996; 12:259.
109. Crawford JS. *Principle and Practice of Obstetric Anesthesia* 5th ed. Oxford: Blackwell Scientific Publications 1984; 17:303.
110. Miller R, Lee A, Fleisher A, Johns. *Spinal anesthesia in caesarian section*. Miller, *anesthesia* 5th ed. Churchill Livingstone Philadelphia 2005; 57:1661-7.
111. Santos S, Pedesen H, Finster M, Edstorm H. Hyperbaric bupivacaine for spinal anesthesia in caesarian section. *Anesth Analg* 1984; 63: 1009-13.
112. Pedersen H, Santos A, Steinberg E, Schapiro H, Harmon T, Finster M. Incidence of visceral pain during caesarian section: the effect of varying doses of spinal bupivacaine. *Anesth Analg* 1989; 69: 46-9.
113. DeSimone C, Norris M, Leighton B, Epstein R, Palmer C, Kaplan S, Goodman D. Spinal anesthesia with hyperbaric bupivacaine for caesarian section: a comparison of two doses. *Anesthesiology* 1988; 69:670.
114. Iwasaki H, Collins JG, Saito Y. Low dose clonidine enhance pregnancy induced analgesia to visceral but not somatic stimuli. *Anesth Analg* 1991; 72:325-9.
115. Roh DH, Kim HW, Yoon SY, Seo HS, Kwon YB. Intrathecal clonidine suppresses phosphorylation of the N-methyl-D-aspartate receptor NR1 subunit in spinal dorsal horn neurons of rats with neuropathic pain. *Anesth Analg* 2008; 107:693-700.
116. Ben David B, Solomon E, Levin H. Intrathecal fentanyl with small dose dilute bupivacaine ;better anesthesia without prolongation recovery. *Anesth Analg* 1997; 85:560-5.

117. Alimian M, Hasani VA, Zaman B, Salari Mahnaz. Comparison of clonidine and intrathecal fentanyl in hypobaric Bupivacaine in lower limbs elective surgeries. *Journal of Iranian Society Anaesthesiology and Intensive Care* 2009; 31(66):37-47.
118. Kanazi GE, Aouad MT, Jabbour-Khoury SI, Al Jazzar MD, Alameddine MM, Al-Yaman R, et al. Effect of low-dose dexmedetomidine or clonidine on the characteristics of bupivacaine spinal block. *Acta Anaesth Scand* 2006;50:222-7.
119. Al-Mustafa MM, Abu-Halaweh SA, Aloweidi AS, Murshidi MM, Ammari BA, Awwad ZM, et al. Effect of dexmedetomidine added to spinal bupivacaine for urological procedures. *Saudi Med J* 2009;30:365-70.
120. Gupta R, Verma R, Bogra J, Kohli M, Raman R, Kushwaha JK. A Comparative study of intrathecal dexmedetomidine and fentanyl as adjuvants to Bupivacaine. *J Anaesthesiol Clin Pharmacol* 2011;27:339-43.
121. Robert D, Eric Evans, Laura A, Dean, Renee gaver, James C. Spinal clonidine prolongs labor analgesia from spinal fentanyl and bupivacaine. *Anesth Analg* 1999; 88:573-6.
122. Kavak Z, Basgul A, Ceyhan N. Short-term outcome of newborn infants: spinal versus general anesthesia for elective cesarean section. *Eur J Obstet Gynecol* 2001; 100:50-4.
123. Petropoulos G, Siristatidis C, Salamalekis E, Creatsas G. Spinal and epidural versus general anesthesia for elective cesarean section at term: effect on the acid-base status of the mother and newborn. *J Matern Fetal Neonatal Med* 2003; 13:260-6.
124. Mercier FJ, Bonnet MP, De la Dorie A, Moufouki M. Spinal anesthesia for caesarian section: fluid loading, vasopressors and hypotension. *Ann Fr Anesth Ranim* 2007; 7:688-93.
125. Alimian M, Hasani VA, Zaman B, Salari Mahnaz. Comparison of clonidine and intrathecal fentanyl in hypobaric bupivacaine in lower limbs elective surgeries. *Journal of Iranian Society Anaesthesiology and Intensive Care* 2009; 31(66):37-47.
126. Manullang TR, Viscomi CM, Pace NL. Intrathecal fentanyl is superior to intravenous ondansetron for the prevention of perioperative nausea during cesarean delivery with spinal anesthesia. *Anesth Analg* 2000; 90:1162-6.
127. Baily PL, Stanley TH. Pharmacology of iv narcotic or anesthetics. In: Miller RD (eds). *Anaesthesia* 3rd ed. New York, Edinburgh, London, Churchill Livingstone 1990; 287-315.

128. Vettermann J, Thomas H, Lischke V, Asskali F. Repeated addition of fentanyl to bupivacaine peridural analgesia in labour: clinical action and fentanyl plasma level. *Anaesthetist* 1996; 45:428-36.
129. [Sindhvananda W](#), [Leelanukrom R](#), [Rodanant O](#), [Sriprajittichai P](#). Maternal satisfaction to epidural and spinal anesthesia for cesarean section. [J Med Assoc Thai](#) 2004; 87:628-35.
130. [Halpern S](#), [Morgan P](#), [McCulloch J](#). Comparison of maternal satisfaction between epidural and spinal anesthesia for elective Cesarean section. [Can J Anesth](#) 2000; 47: 956-61.