

CASE REPORT

Spinal anaesthesia in a patient on a combination of aspirin and ginkgo biloba

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SUMMARY

We report a caesarean section (CS) that was safely performed under spinal anaesthesia in a patient on aspirin and ginkgo biloba (herbal medicine) therapy. Both of these medicines have anti-platelet activities with effects on the coagulation profile and their concurrent administration with aspirin has been said to be associated with increased risk of bleeding. Our patient was offered the choice of either general or regional anaesthesia and she opted for the later. An emphasis is laid on full documentation of all communication to the patient or attendants.

Key words: Ginkgo biloba; Spinal haematoma; Spinal anaesthesia

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INTRODUCTION

Evidence suggests that regional anaesthesia (RA) is safer than general anaesthesia (GA) for caesarean sections (CS), particularly in obese women. Generic risk of spinal haematoma following intrathecal intervention is minimal; though uncertainty exists regarding stratification of such risk in patients taking drugs with anti-platelet activities. Aspirin use before intrathecal intervention is generally regarded to be safe, although its discontinuation for 7 days, if permissible, has been advocated. It is widely accepted that concurrent administration of two or more drugs with anti-platelet activity may significantly increase the risk of spinal haematoma following intrathecal intervention¹. Some herbal medicines are known to have antiplatelet activity and their concurrent administration with aspirin has been said to be associated with increased risk of bleeding. However, spinal haematoma after intrathecal intervention is unknown after use of this combination [2]. We report a CS that was safely performed under spinal anaesthesia in a patient on aspirin and ginkgo biloba (a Chinese herbal medicine) therapy.

CASE REPORT

A 26-years old, morbidly obese (BMI 40) woman presented for pre-anaesthetic assessment a day prior to elective CS for macrosomia. Her obstetric history included 3 miscarriages and she was on long term aspirin (75 mg per day) therapy. During assessment, she disclosed that she had been taking ginkgo biloba during current pregnancy for tinnitus. A haematology advice suggested that aspirin and ginkgo should be discontinued for a minimum of 96 and 36 hours respectively, prior to the surgery; however, an obstetric review excluded the possibility of delaying CS for such a period. Associated risks, including spinal haematoma, and benefits of CS under RA or GA were discussed with her; she made an informed choice to proceed with CS under spinal anaesthesia. After establishing routine monitoring, spinal injection was performed uneventfully with a 25G pencil point needle, at the L3-L4 intervertebral space, using 2.5 ml of 0.5% hyperbaric bupivacaine and 20 µg of fentanyl. A bilateral T4 block to touch was established prior to skin incision. Following delivery of a healthy baby, CS was completed without any untoward incident. She made an

uneventful recovery before being discharged from hospital on day 4 and was followed up for another week over the phone.

DISCUSSION

Despite extensive literature search, we could not find any case report(s) and/or published guideline(s) that might have discussed the safety of RA in patients on ginkgo, although, it had been implicated in intracranial bleeding, spontaneous hyphaema and bleeding following laparoscopic cholecystectomy^{2,3}. The antiplatelet action of ginkgo is due to inhibition of platelet activating factor and resides in terpenoid and flavonoid components, which have half lives of three to ten hours⁴. In a meta-analysis, random-effects models of effects on baseline change or mean difference showed a positive effect of GBE on blood perfusion, as shown by a significant reduction in blood viscosity, but no evidence of any significant effect on ADP-induced platelet aggregation, fibrinogen concentration, aPTT, and PT⁵. In an old study, blockage of many of the effects of platelet-activating factor (platelet aggregation, blood clotting)⁶ was shown to be related to the development of a number of cardiovascular, renal, respiratory and central nervous system disorders. Ginkgolides, especially ginkgolide B, are potent antagonists against platelet-activating factor; and this effect was claimed to be useful in protection and prevention of thrombus, endotoxic shock, and from myocardial ischaemia⁷. The haematology advice to discontinue ginkgo for 36 hours, was based on expert opinion and was not supported by valid evidence base. This case report illustrates that herbal medicine may affect surgery and anaesthesia and it is important to know about any herbal medication taken by the patients, their interactions and their medical implications.

REFERENCES

1. Horlocker T T, Wedel D J, Benzon H *et al.* Regional anesthesia in the anticoagulated patient: defining the risks. (The second ASRA Consensus Conference on Neuraxial Anesthesia and Anticoagulation.) *Reg Anesth Pain Med* 2003;28(3):17297
2. Ang-Lee MK, Moss J, Yuan CS. Herbal Medicines and Perioperative Care. *JAMA* 2001;286(2):208-2163.

<http://www.umm.edu/altmed/articles/ginkgo-biloba-000247.htm> Retrieved on 25 November 2010.
4. Ginkgo. In: Mills S, Bone K, eds. *Principles and Practice of Phytotherapy*. New York, NY: Churchill Livingstone Inc; 2000:404-417
5. Kellermann AJ, Kloft C. Is there a risk of bleeding associated with standardized Ginkgo biloba extract therapy? A systematic review and meta-analysis. *Pharmacotherapy* 2011;31(5):490-502
6. Smith, P; MacLennan, K; Darlington, CL. The neuroprotective properties of the Ginkgo biloba leaf: a review of the possible relationship to platelet-activating factor (PAF). *Journal of Ethnopharmacology* 1996;50(3):319.
7. LU Ding-qiang, CHEN Jun "Pharmacological Activities of Ginkgolides"(School of Biological and Environmental Engineering, Jiangsu University of Science and Technology, Zhenjiang, Jiangsu 212013, China) in <http://defeatosteosarcoma.org/category/generalcancerresearch/nutrition-and-cancer/ginkgo-biloba-kaempferol/> Retrieved on 25 November 2010.



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