Incidence of hypotension after spinal blockade can be up to 74%12.

Cause of hypotension induced by neuraxial anesthesia partly due to sympathetic nervous system.

Bezold-Jarisch reflex is also activated upon initiation of spinal anesthesia.

Afferent innervation via the unmyelinated, C fibers of the vagus nerve.

Leads to inhibition of sympathetic outflow along with a triad of bradycardia, peripheral vasodilation, and hypotension.4

Rapid decrease in end-diastolic volume due to drop in sympathetic tone and venous pooling.

Activation of receptors from fast ventricular contractions around a chamber with very little compliance.

Chemoreceptors in the ventricles are identified as 5HT3 receptor.

When these ligand-gated receptors are activated, increased efferent vagal nerve activity results.

Selective 5HT3-antagonist (ondansetron) can reduce the responses of the Bezold-Jarisch reflex.

### RESULTS

- 7 of 8 current studies demonstrate decreased occurrence of maternal hypotension with pre-synaptic ondansetron.
- 4 mg and 8 mg of ondansetron had a reducing effect in blood pressure drop post spinal insertion.6,11
- 6 mg and 12 mg ondansetron also both proved successful, but no differences noted between the two doses.8
- Single study showing no reduction in hypotension used intrathecal opioid and varying doses of bupivacaine.7
- No change in Apgar scores with ondansetron administration 5 minutes before spinal anaesthetic.
- Consistently decreased vasopressor requirements when compared with placebo.8,12

### DISCUSSION/CONCLUSION

- Current literature supports the reduction in hypotension by ondansetron administration near preneural blockade.
- Definitive dose of ondansetron for maximal benefit has not been established.
- More research and larger sample sizes are needed to gain greater validity.
- Further research may lead to an increased margin of safety concerning hemodynamic stability after spinal anesthesia.
- Additional studies are needed examining effects on the fetus to alleviate concerns.

### REFERENCES


### KEY REFERENCES