



Mobitz Type II AV Block in a Healthy Cesarean Delivery

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Causes of Mobitz type II AV Block

- Age-related degeneration of the conduction system
- Acute myocardial infarction, particularly involving the anterior wall
- Fibrotic changes affecting conduction pathways
- Infiltrative disorders (e.g., sarcoidosis, amyloid deposition)
- Less commonly, electrolyte abnormalities or acute inflammatory processes
- CD during Spinal Anesthesia?¹

1st Degree Block



2nd Degree Block Type I (Wenckebach or Mobitz I)



2nd Degree Block Type II (Mobitz II)



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1. Bernards CM, Hymas NJ. Progression of first-degree heart block to high-grade second-degree block during spinal anesthesia. *Can J Anaesth*. 1992;39:173–175.





35-year-old AA G5P2022 at 39w2d presented for a scheduled rCD under SAB

Pregnancy was complicated by advanced maternal age (AMA) and prior cesarean deliveries.

- Preoperative evaluation demonstrated:
 - >4 METs without cardiac disease history.
 - Mallampati class II; ASA II.
- Following SAB administration and initiation of a phenylephrine infusion, the patient developed intermittent type II AV block intraoperatively. She was asymptomatic and hemodynamically stable
- Arrhythmia resolved spontaneously without intervention in PACU after the levels coming down
- Postoperatively, she was discharged home in stable condition on POD two after meeting all milestones.



Discussion - Although uncommon, neuraxial-associated dysrhythmias pose significant risk in pregnant patients due to physiologic vulnerability and autonomic shifts.

- Dysrhythmias during SAB for CD have been reported in approximately 7% of cases, with type I and type II AV block each occurring in 3.5%
 - AMA is the most significant associated risk factor.²
- SAB produces sympathetic blockade with decreased venous return, while surgical stimulation may further augment vagal tone. Extent of sympathetic blockade is variable and influenced by individual anatomic and functional variation.³
- Hypothesis: This intermittent AV block is possibly explained by an anatomic variant permitting more extensive blockade of cardiac sympathetic pathways, resulting in near-complete sympathetic block and unopposed parasympathetic dominance. The spontaneous resolution supports a functional, neuraxial-related mechanism.

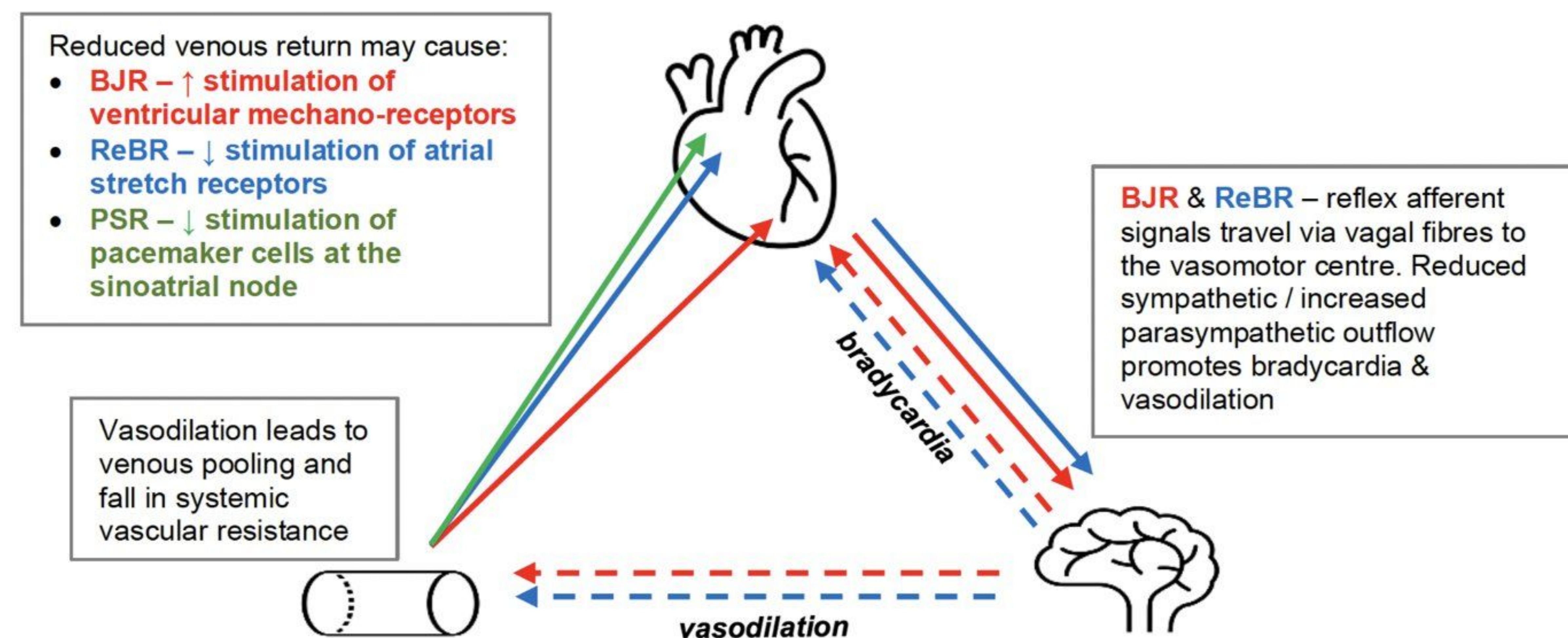


Figure 1 Schematic representation of the physiology of cardiac reflexes and their role in precipitating profound bradycardia and hypotension after spinal anaesthesia. BJR: Bezold–Jarisch reflex; ReBR: reverse Bainbridge reflex; PSR: pacemaker stretch reflex; ↓: decrease, ↑: increase.

From Lacey JR, Dubowitz JA, Riedel B. *Anaesthesia Reports*. 2022;10:e12198.

2. Shen CL, Ho YY, Hung YC, Chen PL. Arrhythmias during spinal anesthesia for cesarean section. *Can J Anaesth*. 2000;47:393–397.

3. Hanss R, Ohnesorge H, Kaufmann M, et al. Changes in heart rate variability reflect sympatholysis during spinal anesthesia. *Acta Anaesthesiol Scand*. 2007;51:1297–1304.