

Identifying barriers to performing sphenopalatine ganglion block and developing an institutional block kit

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RATIONALE

Sphenopalatine ganglion block (SPGb) is a useful form of analgesia for PDPH where EBP is contraindicated.

HYPOTHESIS

Interest in SPGb exists but lack of experience, knowledge or equipment prevent its use.

AIM

Design a quality improvement project to identify and address barriers to SPGb use at BC Women's Hospital.

1

REVIEW: efficacy and safety literature, block methods, current equipment availability

2

INTERVIEW: Informed consent, then 1:1 interviews of anesthesiologists assessing baseline SPGb experience. Record self-reported knowledge, skills, and interest. Identify barriers to SPGb use.

3

ASSESS: Competence by simulated SPGb on a mannequin

4

DEVELOP: A block kit and information card

5

EDUCATE: Focused session to introduce new resources

6

RE-EVALUATE: anesthesiologist knowledge, skill, interest
Gather feedback on block kit and protocols

RESULTS – 18 INTERVIEWS



Experience: 5 to 47 years of anesthesia experience

SPGb experience: 10/18 (55%) had never performed SPGb

Interest: 13/18 (72%) wanted to learn more about SPGb

Efficacy: 16/18 (88%) were unsure of efficacy rate for PDPH

KNOWLEDGE, SKILL, INTEREST

Self-reported score 0-10

0=lowest, 10=highest

Domain	Knowledge	Skill	Interest
Median	4.5	4	6.5
IQR	3.25-5.75	1.25-5.75	3.5-7.75

BARRIERS

Interviewee rating 0-10

0=unimportant, 10=most important

D	Efficacy	Safety	Skill	Consensus	Infection	Equipment
M	7	6.5	5	3.5	3	1
IQ	3.25-8	5-8.75	2-9	1-5.75	2-3	1-5.5

COMPETENCY

Simulated SPGb, scored out of 34

Individual observed skills 0-2 each

0=not observed, 2=skilled behaviour

D	Consent	Preparation	Administration	Postprocedure	Total
M	100%	50%	90%	33%	65%
IQ	66-100%	50-60%	80-100%	33-50%	60-76%

KEY BARRIERS

EFFICACY Recipe card includes summary of published literature

SAFETY Introduction of standardised protocol allows familiarity and repeatability

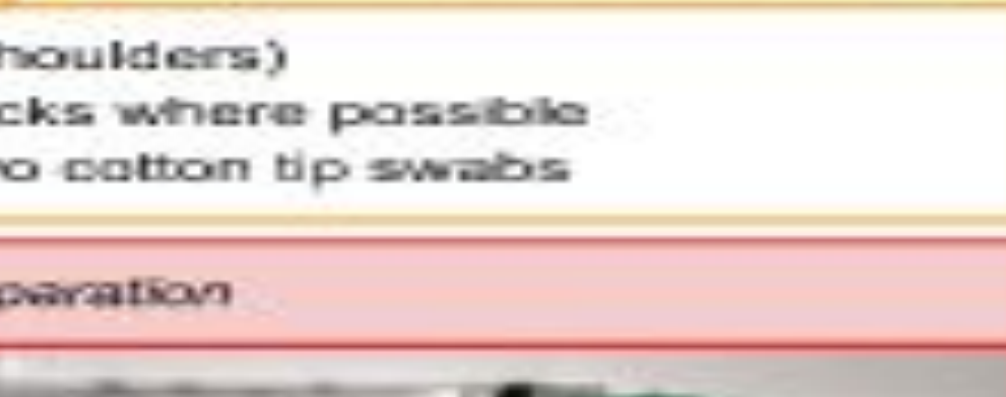
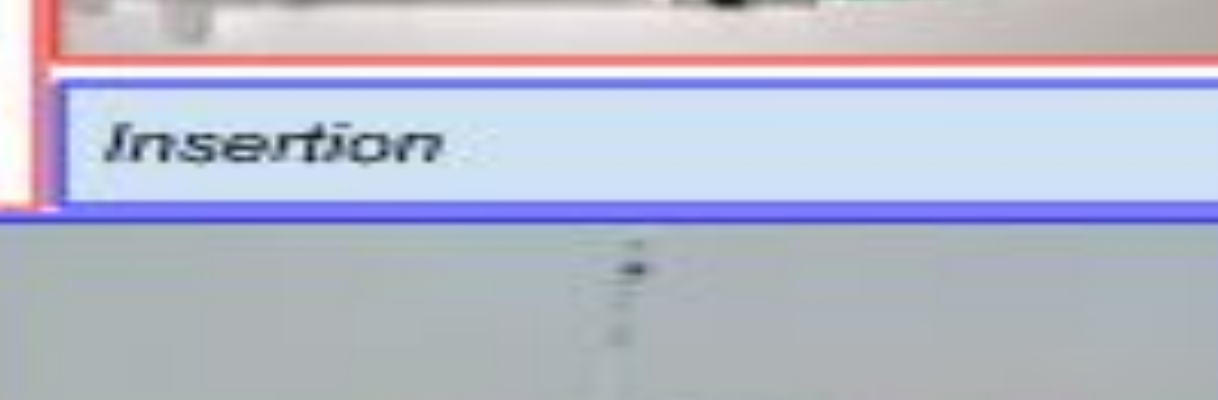
SKILL Education session and recipe card teaches a simple block method

BLOCK KIT



RECIPE CARD

Sphenopalatine Ganglion Block Recipe Card

Equipment checklist Viscous lidocaine 0.5% Bupivacaine 2" Hollow-bore cotton tip swab 18G IV, plastic cannula only – dispose of needle 3mL/5mL syringe + drawing-up needle Gauze	
Informed consent with appropriate documentation Document headache severity in sitting position Patient monitoring and IV access are not essential Prepare equipment tray Stop before block – check patient identity and laterality	
Pre-procedure Supine with head extended (pillow or roll under neck and shoulders) Laterality: It is more clinically useful to perform bilateral blocks where possible It is acceptable to block both sides simultaneously using two cotton tip swabs	Positioning 
Topicalise nares with viscous lidocaine on cotton tip swab Optional – use a vasoconstrictor spray if nasal congestion present Draw 3mL of 0.5% bupivacaine into syringe Attach 18G IV cannula to syringe	Preparation 
Insertion Insert cotton-tip swab into nostril and advance gently until firm resistance felt Swab direction – parallel to zygoma, aiming slightly cephalad and lateral	
Injection Insert cannula and syringe into proximal end of cotton-tip swab Inject 1mL 0.5% bupivacaine through cannula/swab apparatus Wait 5 mins, inject a further 1mL 0.5% bupivacaine Keep patient in position for a further 5 mins before removing swab	
Follow up Sit patient upright and record post-procedure headache severity Counselling to patient – bed rest, avoid straining, remain hydrated Block can be repeated at any point if effective – but not for use as a substitute for EBP Inform RNI of procedure Document block on CST, with pre- and post-procedure headache scores Record patient details in red book Acceptable to discharge patient home and follow as outpatient if hospital discharge criteria otherwise met prior to block insertion	

NEXT STEPS

Repeat one-to-one interviews

Introduce block kit and educate at interview

Reassess knowledge, skill, and interest ratings after block kit in use