

Tab. 4. Complications between the study groups

Studied variables	ISB group (N = 34)		STB group (N = 34)		FE	P value
	No.	%	No.	%		
Epidural anesthesia						
Yes	0	0	0	0	0.00	0.001*
No	34	100	34	100		
Horner syndrome						
Yes	0	0	0	0	0.00	0.002*
No	34	100	34	100		
Hematoma						
Yes	0	0	0	0	0.00	1.00
No	34	100	34	100		
Pneumothorax						
Yes	0	0	0	0	0.00	1.00
No	34	100	34	100		
Hoarseness						
Yes	0	0	0	0	0.00	1.00
No	34	100	34	100		
Neural injury						
Yes	0	0	0	0	0.00	1.00
No	34	100	34	100		
Hand grip weakness at 24 hr						
Yes	2	5.90	0	0	0.348	0.554
No	32	94.1	34	100		

ISB – interscalene group; STB – selective superior trunk group; FE – Fisher exact test

ed by a well-defined connective sheath without any anatomical variation, unlike the hypoechoic C5 and C6 roots which are enveloped by a thin fascial layer and have anatomical variation in their course [4, 20, 21].

The opioid-sparing effect of the interscalene block was maintained in the superior trunk group due to the absence of any difference in opioid consumption or pain scores during the observation period. The STB is a more proximal block approach to the brachial plexus, which is likely the reason for this finding. It offers extensive coverage [22].

The main strengths of this trial were the limited number of papers in this field and our primary outcome, diaphragmatic movement involvement, which reflects the true impact of both blocks. Fortunately, the study was conducted on ASA I and II patients, none of whom exhibited respiratory compromise, either clinically through symptoms like shortness of breath or in terms of respirometric parameters. However, our

trial is limited by the block performance done by a single experienced anesthesiologist in a single center, which can decrease the performance bias and increase the validity of the trial but limits the generalizability of the findings. Finally, we assessed perioperative analgesia only and not surgical anesthesia which is more important in patients with pre-existing pulmonary diseases.

Conclusion

We found that, compared with conventional ISB, selective STB was associated with a lower incidence of HDP and provided equipotent effective postoperative analgesia. Further studies are required to assess STB performance difficulty and determine the appropriate local anesthetic dose that decreases diaphragmatic paralysis and provides better analgesia.

PROHLÁŠENÍ AUTORŮ: Declaration of authenticity: The paper is original, has not been published elsewhere, and has not been submitted to peer-review in another medium. **Conflict of interest:** The authors declare that they have no conflict of interest. **Author contribution:** WAS designed the study and performed the practical part of the study. AS shared the practical part and collected and analysed the data with WR. NA completed the primary writing. AAM revised the manuscript for proofreading. All the authors have read and approved the final manuscript submitted to the Anaesthesiology and Intensive Care Medicine journal. **Funding:** None. **Acknowledgement:** N/A. **Registration:** It was prospectively registered at www.pactr.org (PACTR 202202483221034). **Ethics committee consideration:** (IRB approval number 2/2022 ANES 37), Menoufia University Hospital, Menoufia, Egypt on 20 February 2022.

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