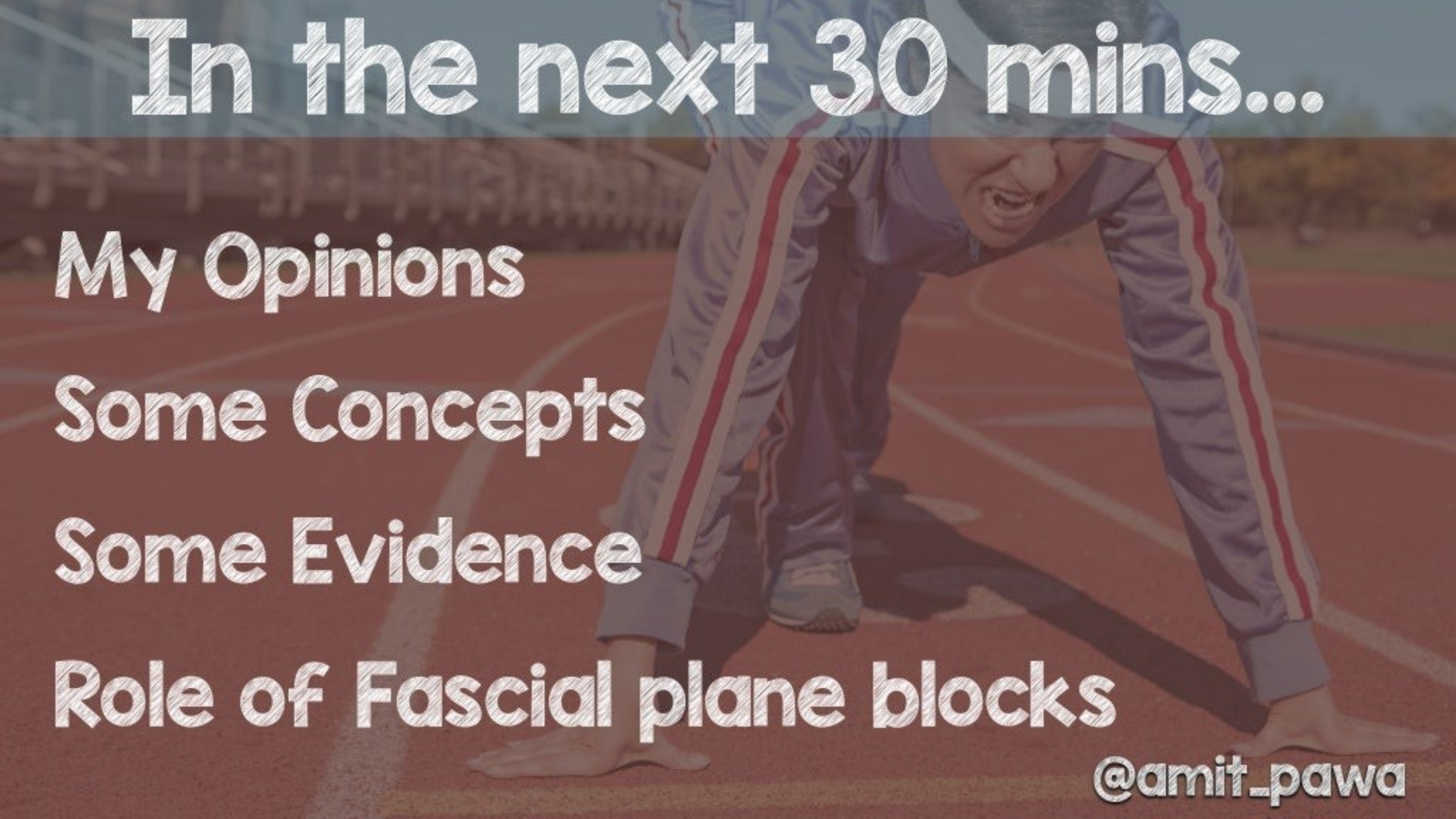

Fascial Plane Blocks
Why We Need them In Our Toolkit
Dr Amit Pawa
RA-UK
Regional Anaesthesia United Kingdom
@amit_pawa
Guy's and St Thomas' NHS
NHS Foundation Trust

I Have Contributed...



@amit_pawa

In the next 30 mins...



My Opinions

Some Concepts

Some Evidence

Role of Fascial plane blocks

@amit_pawa


This might be a bit controversial
@amit_pawa


Fascial Plane Blocks
YEAST EXTRACT
MAYMITE
RICH IN HYPERBOLE • 100% INDIGESTIBLE
@amit_pawa


Disagreement
@amit_pawa


Conclusions First!
@amit_pawa



5 Truths

@amit_pawa


1.
"Fascial Plane Blocks" are a Heterogenous Group of Techiques
@amit_pawa

2.

Fascial Plane Blocks mechanism/s of action are unknown

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3.
Fascial Plane Blocks are not always predictable
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Fascial Plane Blocks may have a role in the absence of Epidural/PVB

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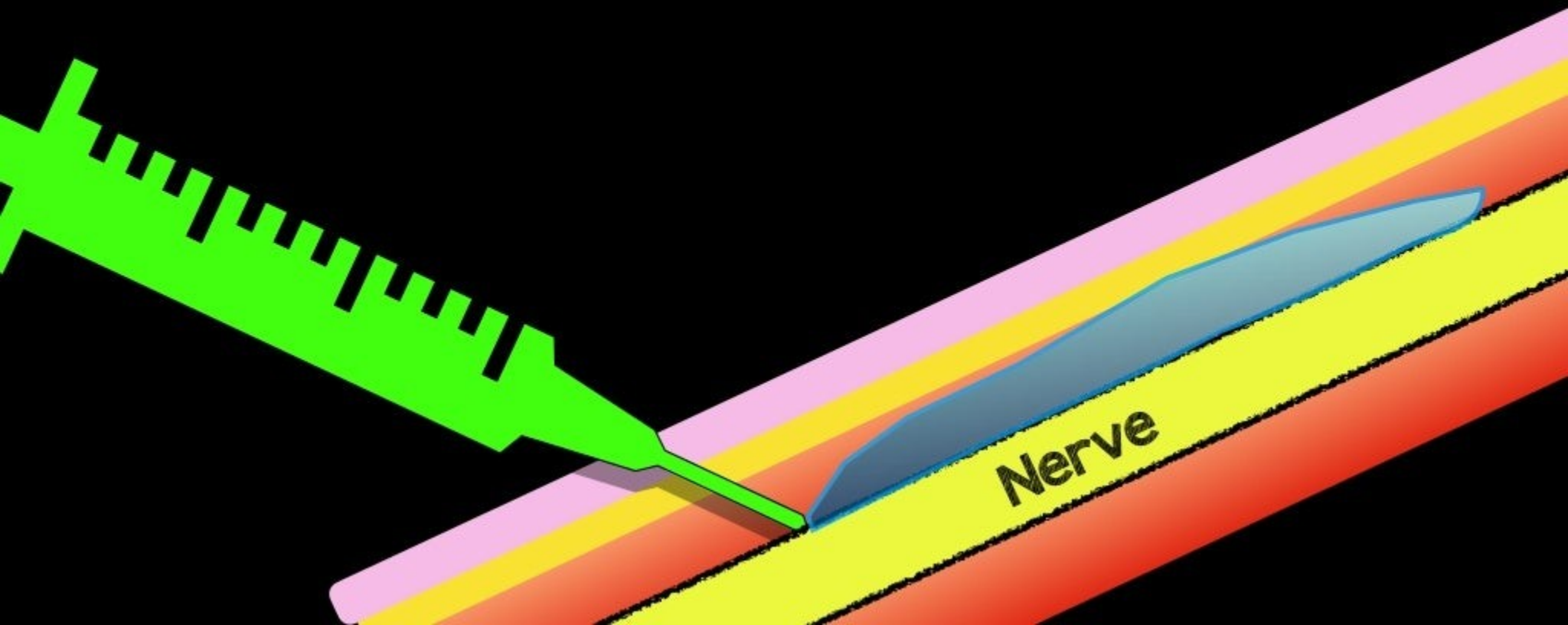

5.
Fascial Plane Blocks
increase delivery of RA
@amit_pawa

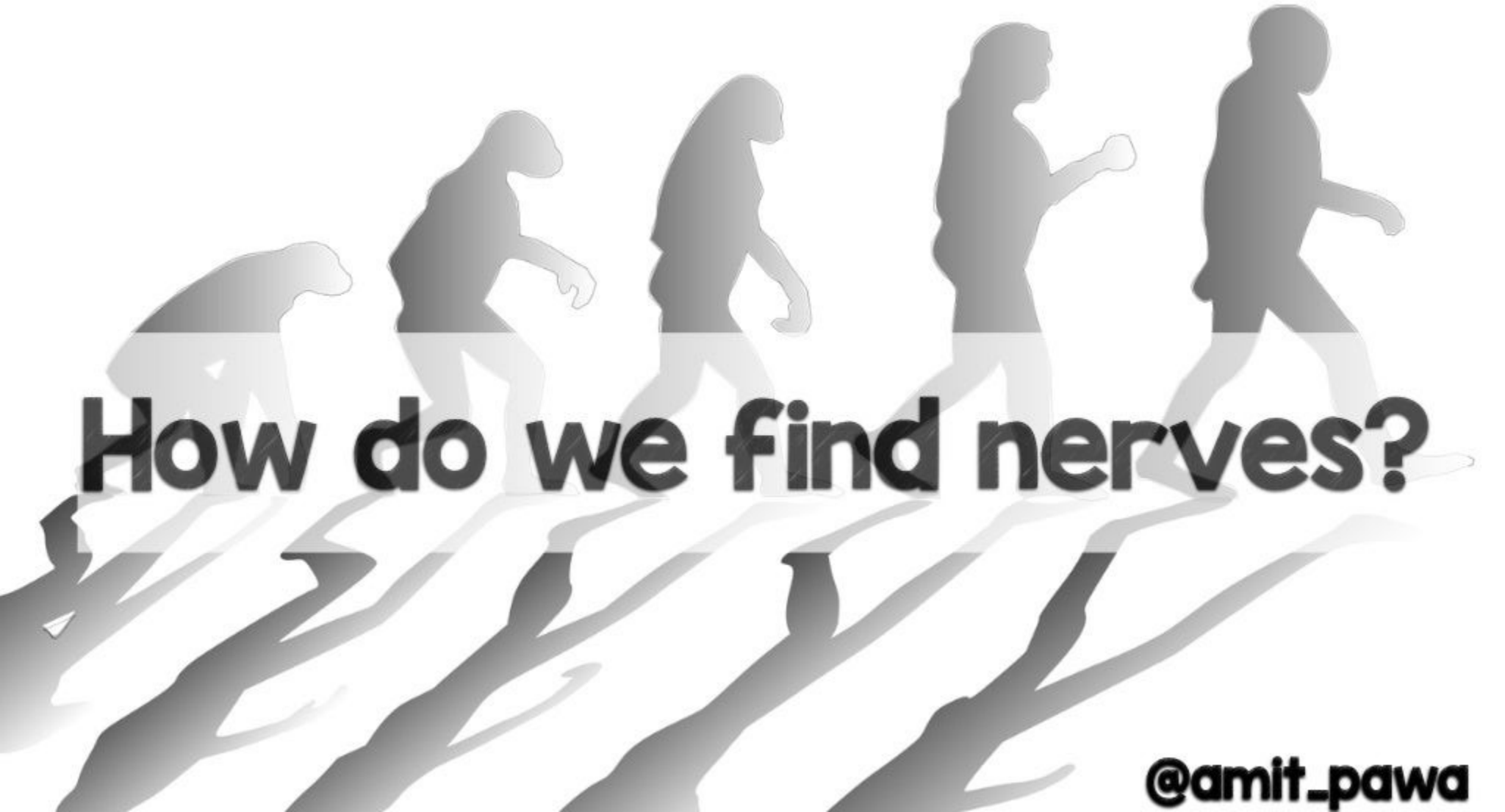
For Successful RA

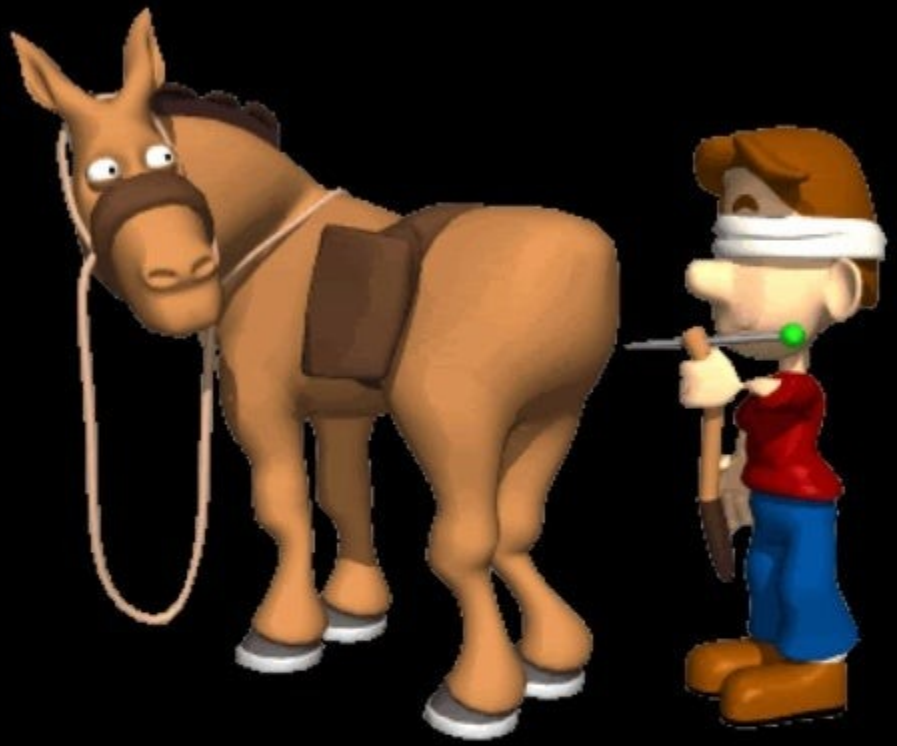
Right	Drug
Right	Place
Right	Time

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For Plexus/Peripheral RA



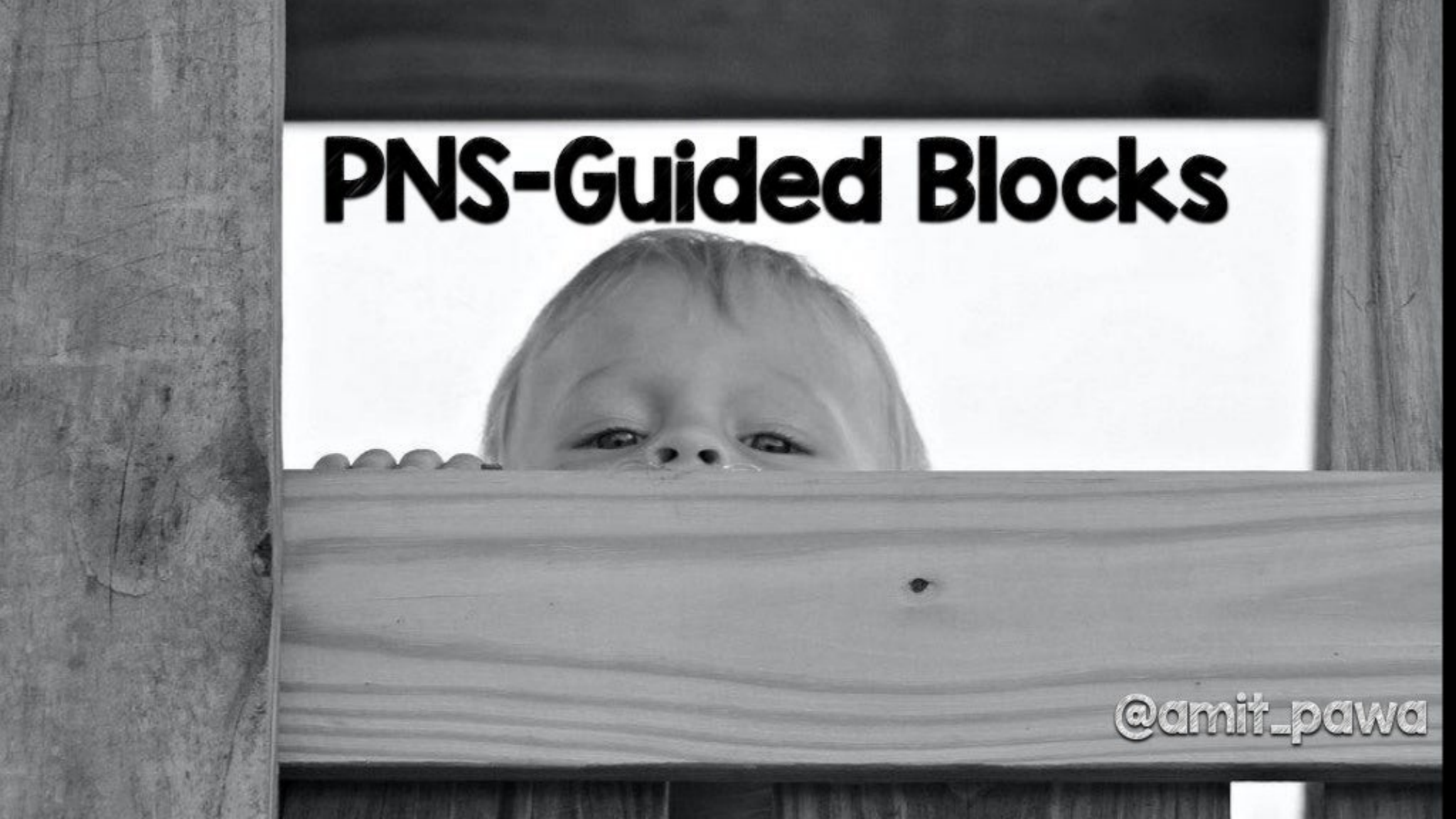

How do we find nerves?
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Landmark-Guided Blocks

@amit_pawa


44/13
TEMPLE
@amit_pawa


PNS-Guided Blocks
@amit_pawa


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US-Guided Blocks
@amit_pawa


Too close?
@amit_pawa

With (Fascial) Plane Blocks...



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We Don't Need to See Our Target



Have we gone too far?

EDITORIAL *Acta Anaesthesiol Scand.* 2019;00:1–3.

acta Anaesthesiologica Scandinavica

Close-to-the-nerve vs interfascial plane blocks: Sniper rifle vs shotgun—which will hit the target most reliably?

Per-Arne Lönnqvist[1]
Manoj Karmakar[2]

like to block and, thus, you will rely on a random but favorable spread of the LA to get a good block. This can to some extent resemble using a shotgun with the hope that at least one of the pellets hits the clay trap.

In conclusion, just because fascial planes exist in most parts of the body, it does not mean that injecting LA into these fascial planes always produces relevant blockade of local nerve structures to the degree that it will produce clinically relevant intra- and postoperative analgesia. Since we have been using US guidance for nearly two

British Journal of Anaesthesia, 125 (5): 649–651 (2020)
doi: 10.1016/j.bja.2020.08.013
Advance Access Publication Date: 28 September 2020
© 2020 British Journal of Anaesthesia. Published by Elsevier Ltd. All rights reserved.

Fascial plane blocks in regional anaesthesia: how problematic is simplification?

Peter Marhofer[1,*], Georg C. Feigl[2] and Phil M. Hopkins[3]

Can J Anesth/J Can Anesth (2019) 66:855–863
https://doi.org/10.1007/s12630-019-01400-0

EDITORIALS

"Minimally invasive" regional anesthesia and the expanding use of interfascial plane blocks: the need for more systematic evaluation

Rakesh V. Sondekoppam, MD · Ban C. H. Tsui, MD

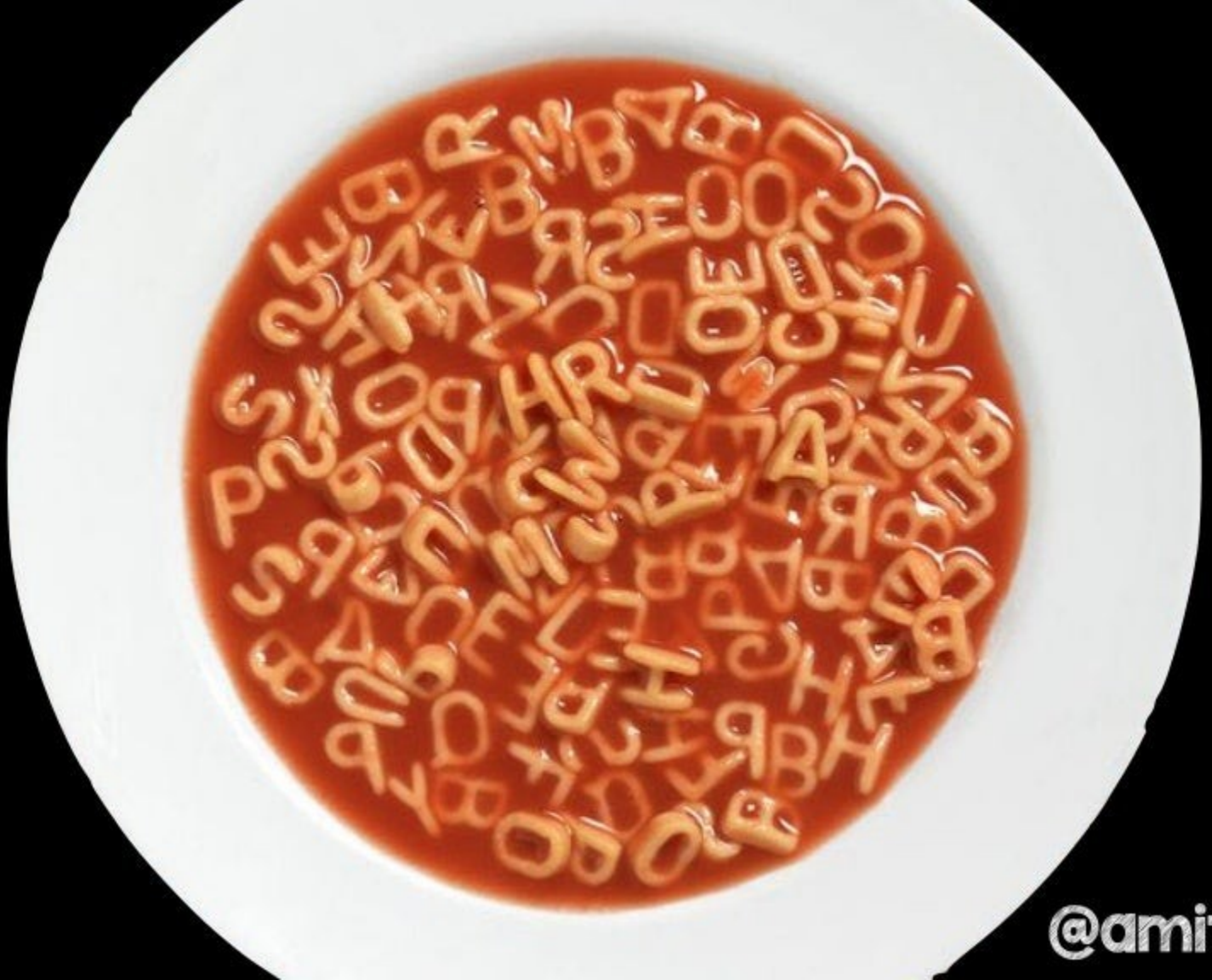


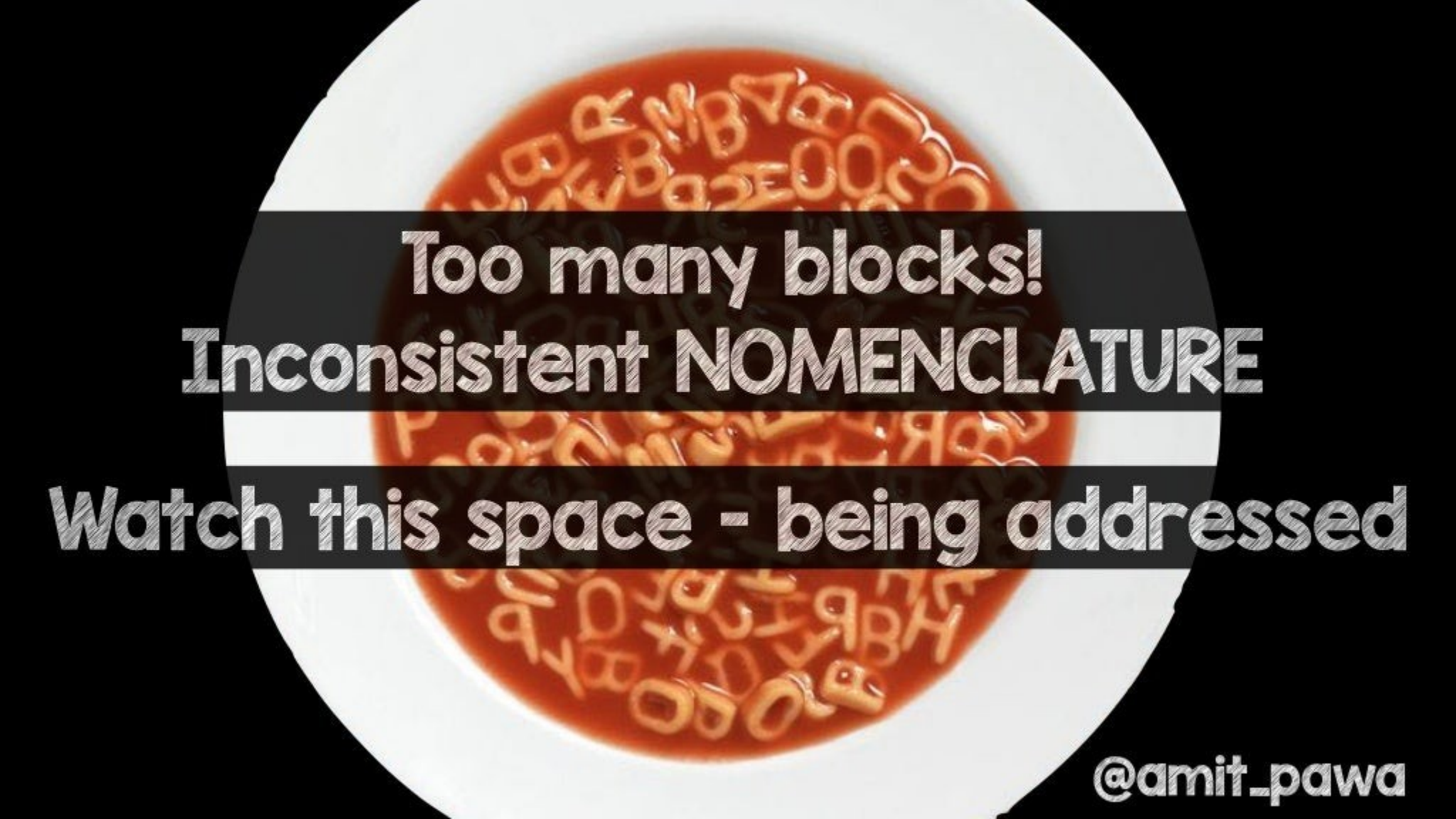
The Innovators



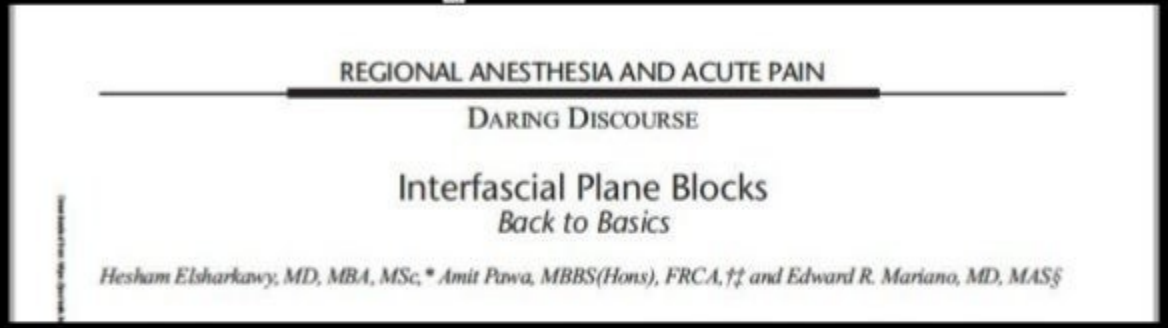
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TAP
PECS I/II
QLB I/2/3
ESP
PIFB
ACB
Fascial
Blocks
SPEDI
iPack
Femoral
Block
RLB
MTP
SSPS
RISS
PENG
MICB
TQL
Clavipectoral
Lumbar Plexus
Heterogenous group!
@amit_pawa


@amit_pawa


Too many blocks!
Inconsistent NOMENCLATURE
Watch this space - being addressed
@amit_pawa

Important References



REGIONAL ANESTHESIA AND ACUTE PAIN

DARING DISCOURSE

Interfascial Plane Blocks
Back to Basics

Hesham Elsharkawy, MD, MBA, MSc, Amit Pawa, MBBS(Hons), FRCA,†‡ and Edward R. Mariano, MD, MAS§*





www.anesthesia-analgesia.org

Fascial Plane Blocks: More Questions Than Answers?

Nick D. Black, MB BCh BAO, FRCA,* Carla Stecco, MD,† and Vincent W. S. Chan, MD, FRCPC‡





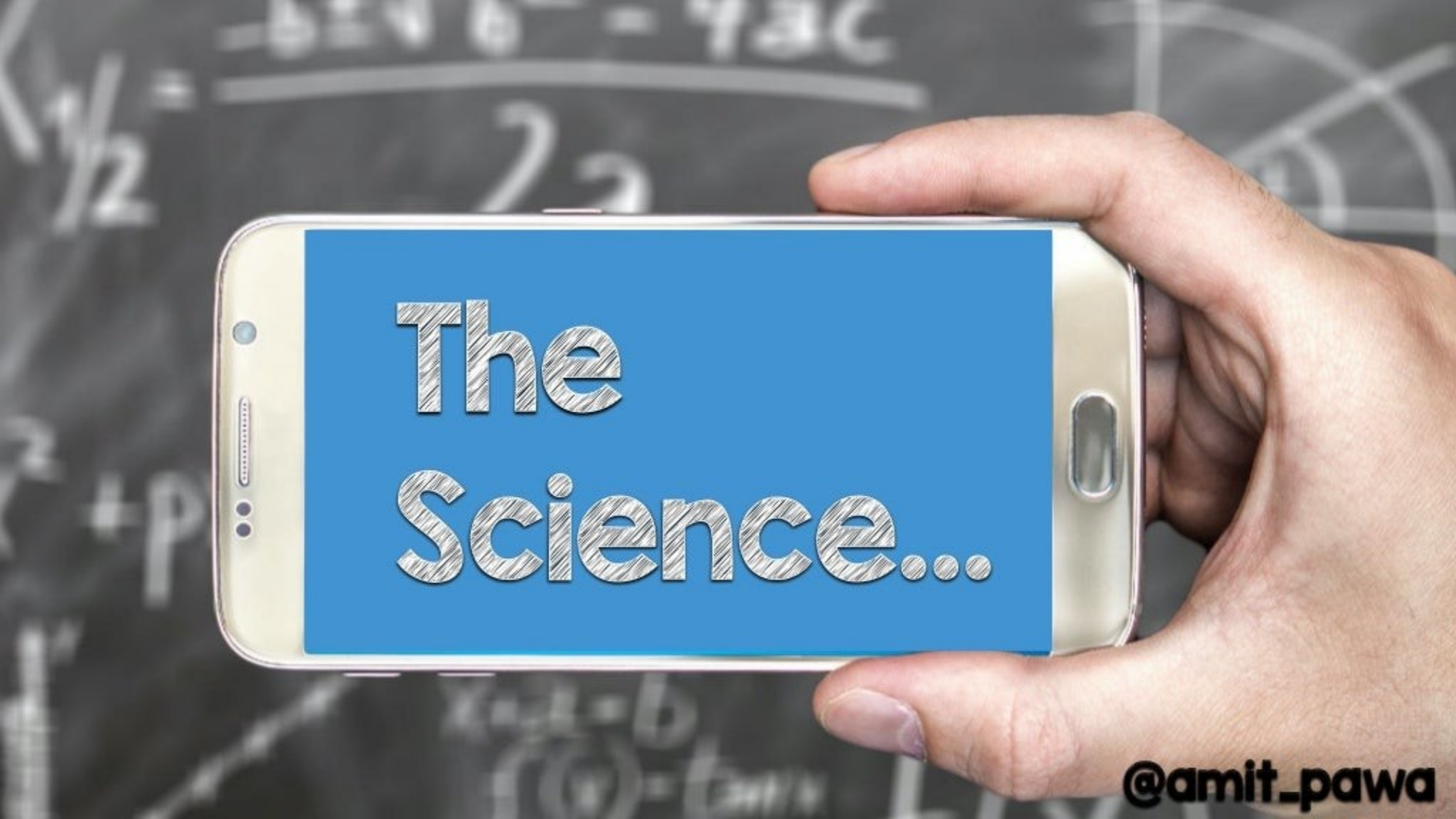
Mechanisms of action of the erector spinae plane (ESP) block: a narrative review

Mécanismes d'action du bloc du plan des muscles érecteurs du rachis (*erector spinae*, ESP) : un compte rendu narratif

Ki Jinn Chin, MBBS (Hons), MMed, FRCPC · Kariem El-Boghdadly, MBBS, FRCA, MSc



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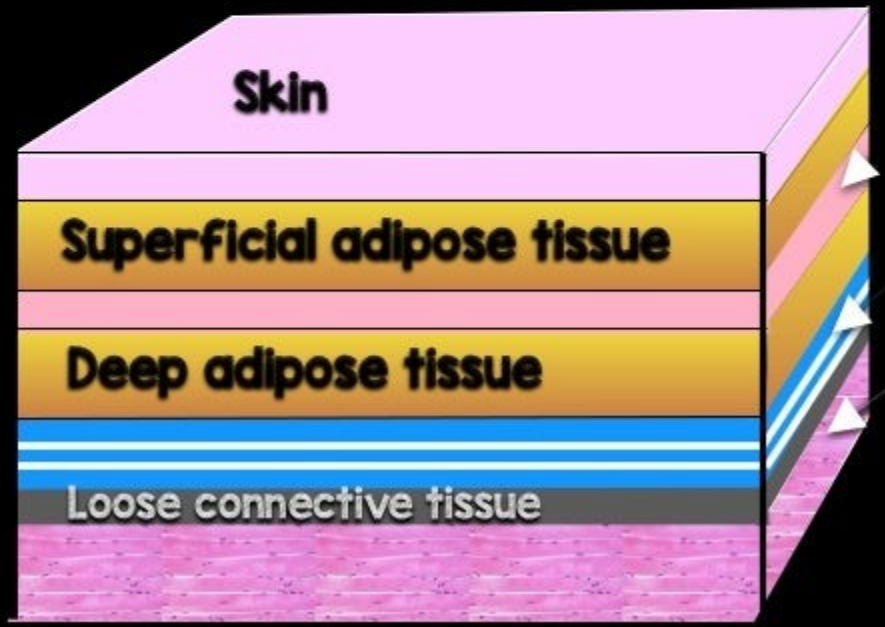

The
Science...
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What is Fascia?

Soft Collagen-Containing

Loose & Dense Fibrous Connective Tissue

Permeates Whole Body



Superficial fascia

Deep Fascia (multilayer)

Muscle & related fascia

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Deep Fascia

Multiple layers, Fibrous

Extends through whole body

Target for Fascial plane blocks

Forms sheaths for nerves/vessels/organs

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Deep Fascia Subtypes

Epimysial	Aponeurotic
Thin	Thick
Specific to 1 muscle	May cover several muscles
Adherent to muscle	Easily separated
PECS/TAP/Serratus	Rectus Sheath/Adductor Canal

Deep Fascia Subtypes

Epimysial



Aponeurotic



Lines of Fusion

Distinct fusion points
e.g. Linea Alba/Semilunaris

Creates a "compartment"

Limit Spread - Good (rectus) & Bad!

(Pathological LOF due to surgery/Adhesions)

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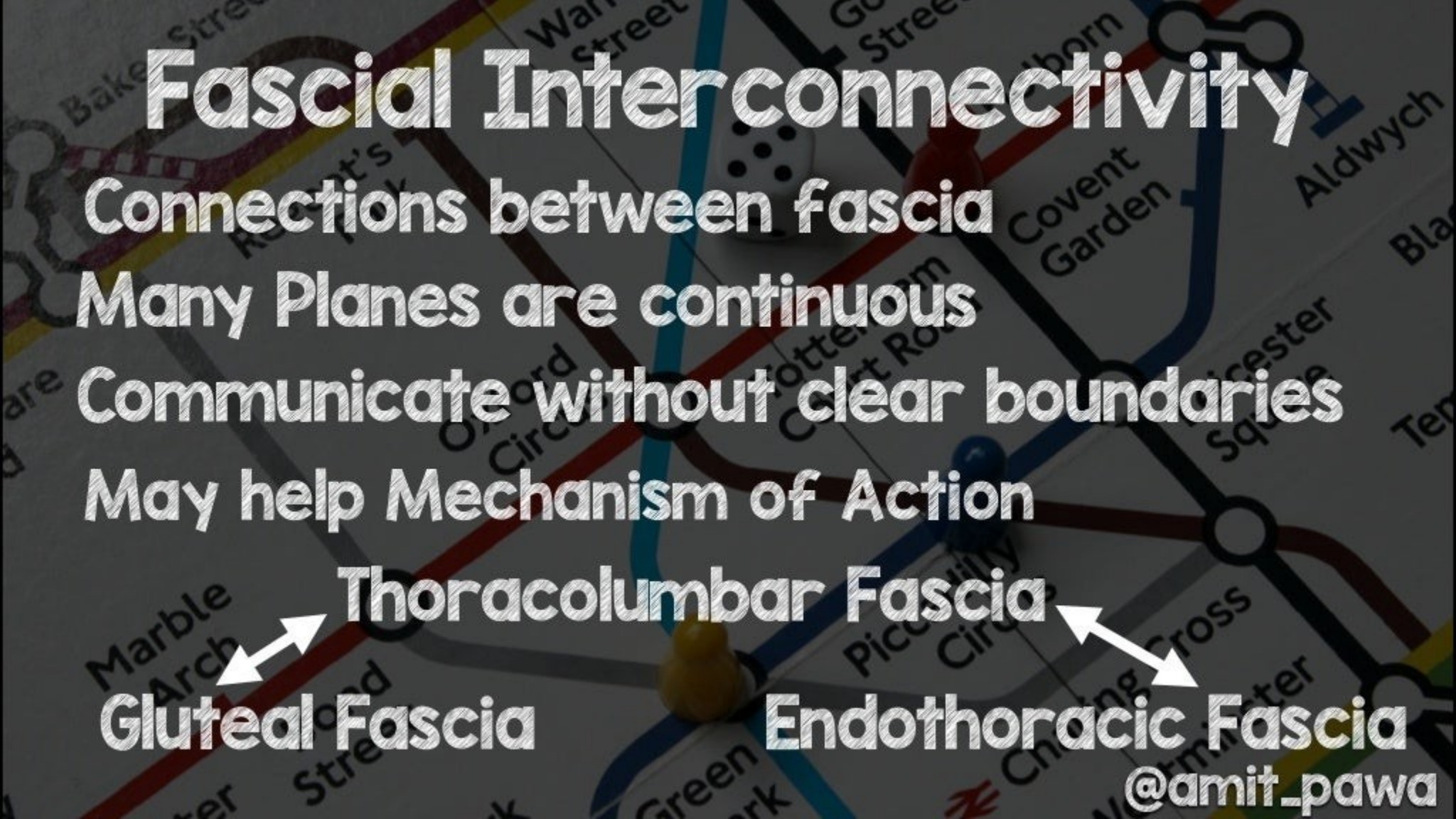
Fascial Interconnectivity

Connections between fascia

Many Planes are continuous

Communicate without clear boundaries

May help Mechanism of Action



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Not All fascias are the same

Number of layers
- Pectoral region - 1
- The Limbs - 2 or 3
- Middle Thoracolumbar 2 or 3

Function & Mobility

More mobile may increase LA spread

Surrounding structures

Lungs/liver/spleen

IPPV vs SV

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Mechanism of Action?

Mechanism of Action?

LA action on:

Nerves in the injected Plane

Nerves in adjacent Planes/tissue

Nerves in distant Planes/tissue (Systemic Absorption)

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Mechanisms of Action Of Fascial Plane Blocks - Jinn KJ, Lirk P, Hollmann M, Schwarz S - Ahead of Print RAPM 2021

What Nerves might the LA act on?

Cutaneous

Lat. cut. intercostal branches
(Serratus Plane)

Non-Cutaneous - usually silent Nociceptors

Muscle/Ligaments/Joint capsules/Bone/others in fascia
Upregulated in inflammation /injury

Motor Nerves

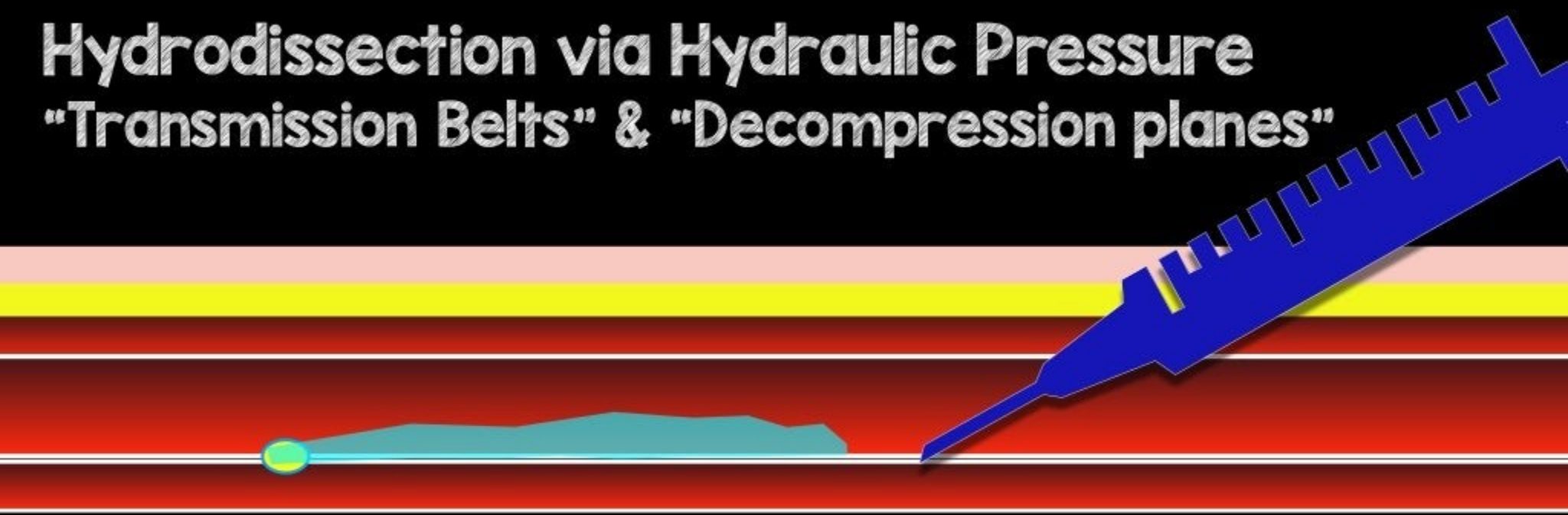
Some fibres still sensory/nociceptive
Blockade relieves spasm

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Nerves in the injected Plane

Hydrodissection via Hydraulic Pressure

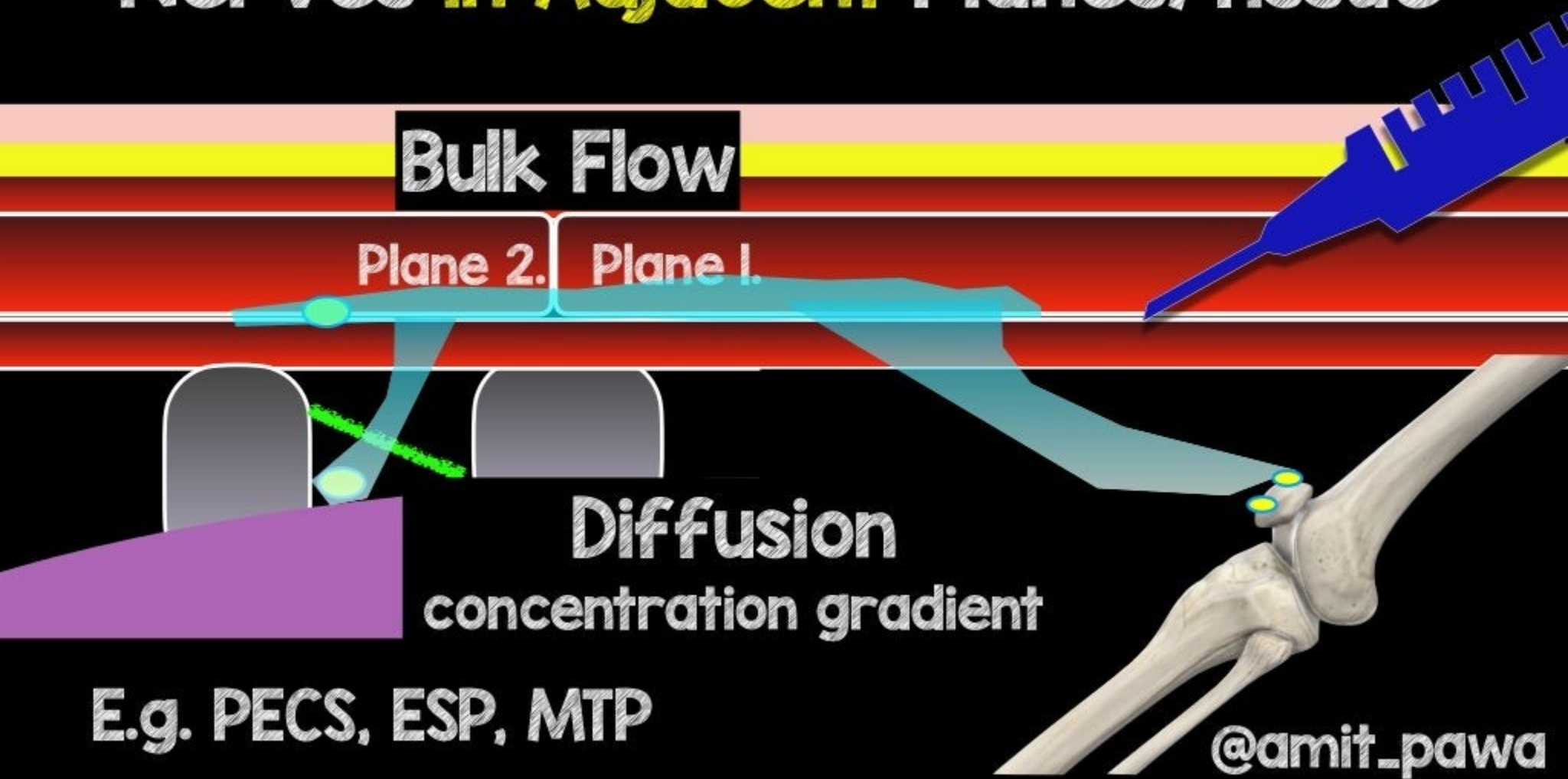
"Transmission Belts" & "Decompression planes"



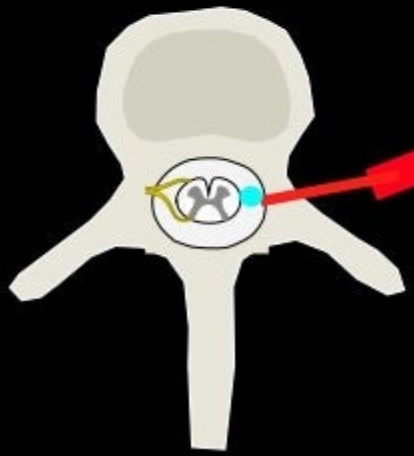
Eg Rectus Sheath, TAP, PECS

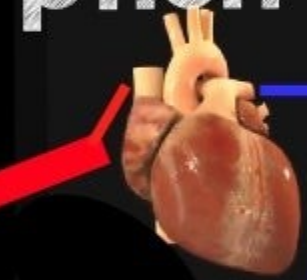
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Nerves in Adjacent Planes/Tissue



Nerves at Distant Sites via Systemic Absorption

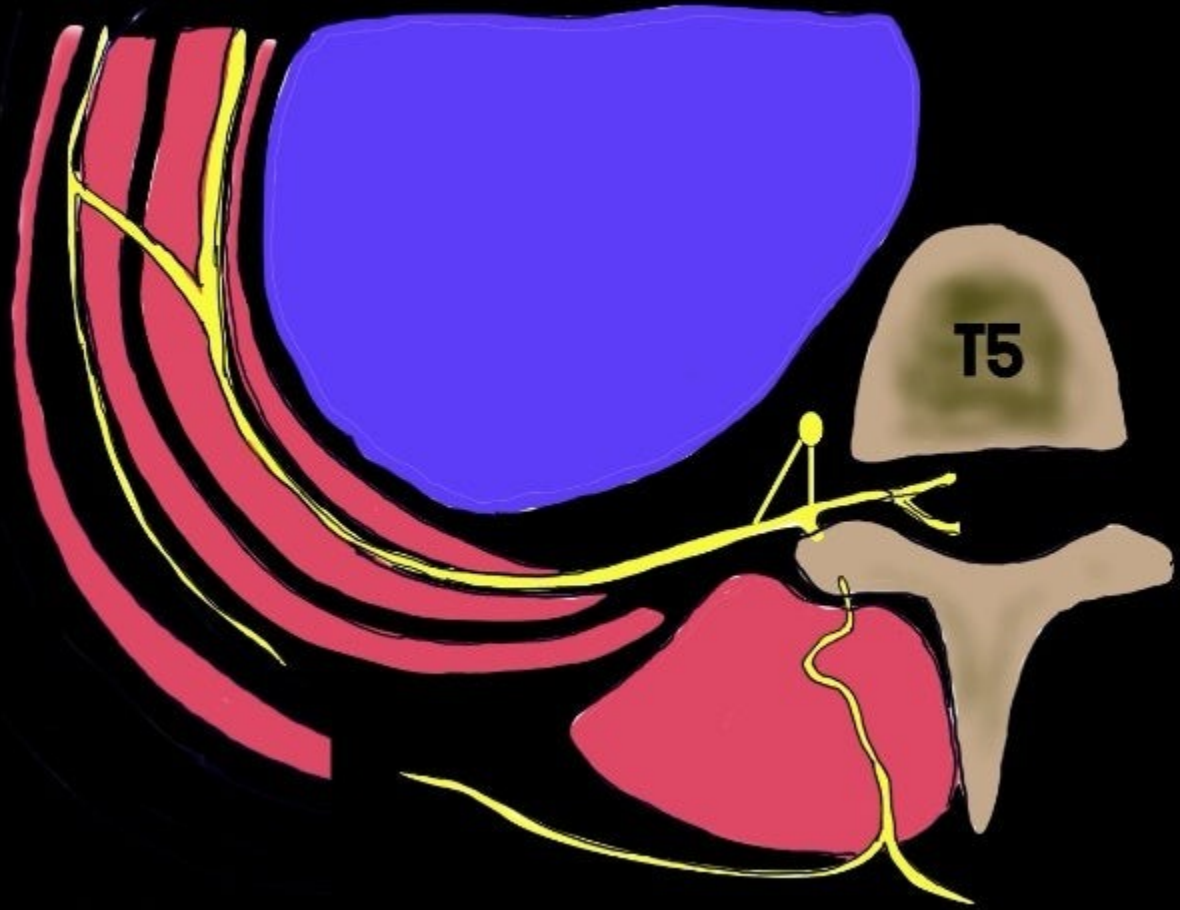




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"Back-Door" ?
"by-proxy"
@amit_pawa

E S P - Mode of Action?..



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Biomechanical properties
Fascia Is Dynamic
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Biomechanical properties

Pumping mechanism due to muscle tendons?

Contractile elements within fascia?

-> Variable/extensive dermatomal spread?

Effect of:

Depth of Anaesthesia & Muscle Relaxation?

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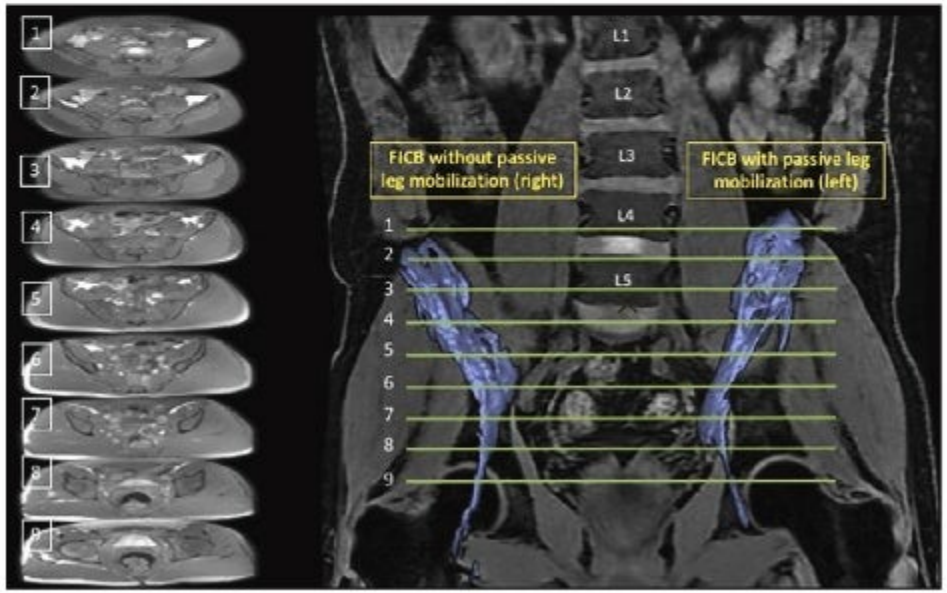
Contents lists available at ScienceDirect

Journal of Clinical Anesthesia

journal homepage: www.elsevier.com/locate/jclinane

Letter to the Editor

The effect of passive muscle mobilization on the distribution of local anesthetics after supra-inguinal fascia iliaca compartment block, a pilot case study



Supra inguinal FIB

Volunteer Study

Passive Muscle movement altered LA distribution

@amit_pawa

4. Local Fascial Innervation

Nerve elements may lie within the fascia

A & C Fibres - Responsible for nociception?

Wide Dynamic Range neurons

Mechanoreceptors

Do these influence Fascial plane blocks?

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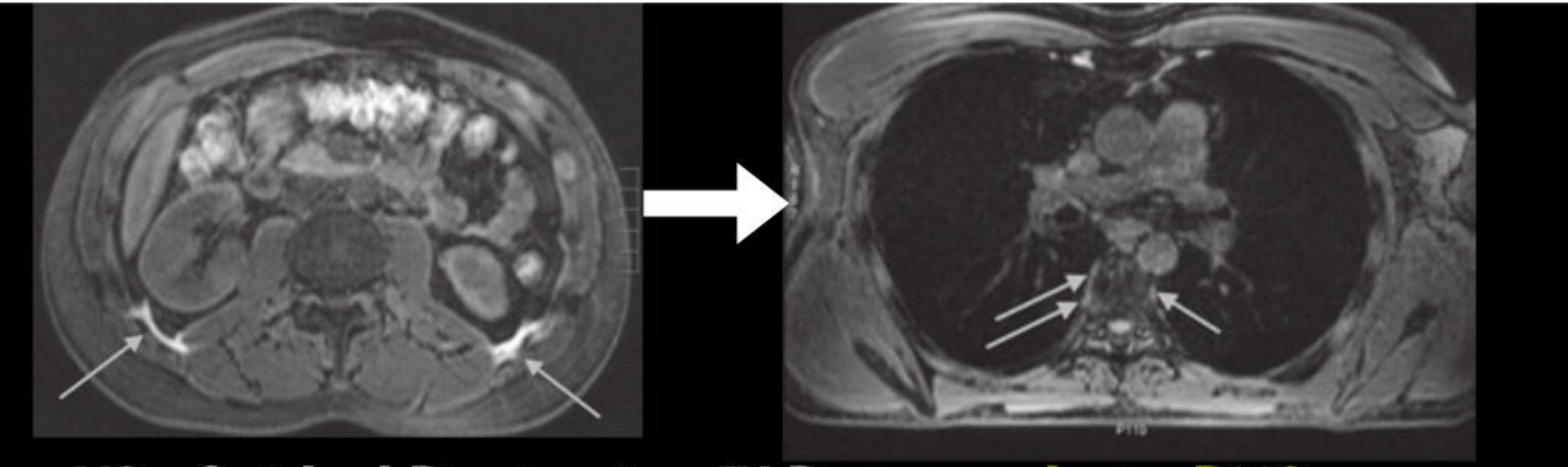
ORIGINAL ARTICLE

Studies on the spread of local anaesthetic solution in transversus abdominis plane blocks*

Anaesthesia, 2011, **66**, pages 1023–1030

J. Carney,[1] O. Finnerty,[1] J. Rauf,[1] D. Bergin,[4] J. G. Laffey[2] and J. G. Mc Donnell[3]

1 Registrar, 2 Professor, 3 Senior Clinical Lecturer, Department of Anaesthesia and Intensive Care Medicine, 4 Senior Clinical Lecturer, Department of Radiology, Galway University Hospitals, Galway, Ireland



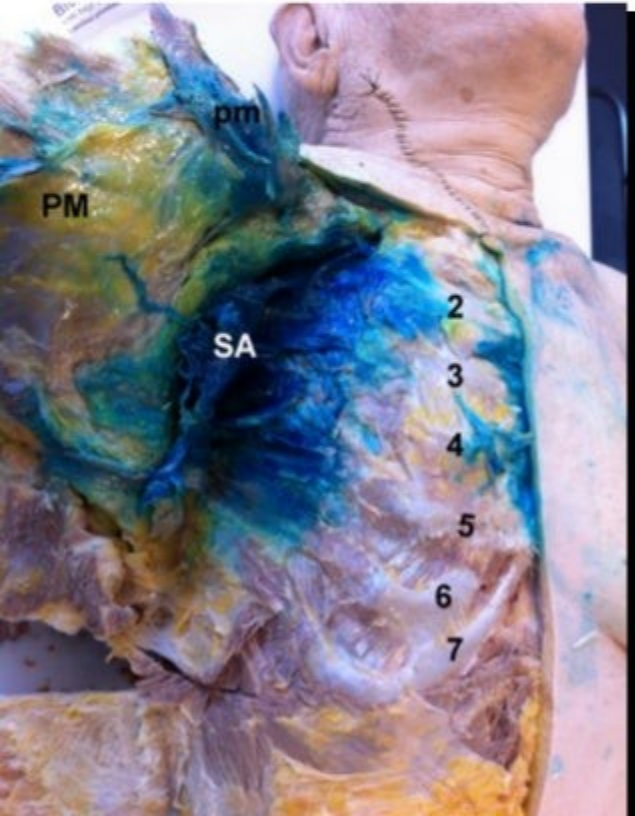
US- Guided Posterior TAP spreads to PVS

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Axillary local anesthetic spread after the thoracic interfacial ultrasound block – a cadaveric and radiological evaluation

Rev Bras Anestesiol. 2017;67(6):555–564

Patricia Alfaro de la Torre[a], Jerry Wayne Jones Jr.[b], Servando López Álvarez[c], Paula Diéguez Garcia[c], Francisco Javier Garcia de Miguel[d], Eva Maria Monzon Rubio[e], Federico Carol Boeris[f], Monir Kabiri Sacramento[g], Osmany Duany[h], Mario Fajardo Pérez[i,*], Borja de la Quintana Gordon[j]



"PECS" spreads to

Intercostobrachial

Medial Brachiocutaneous

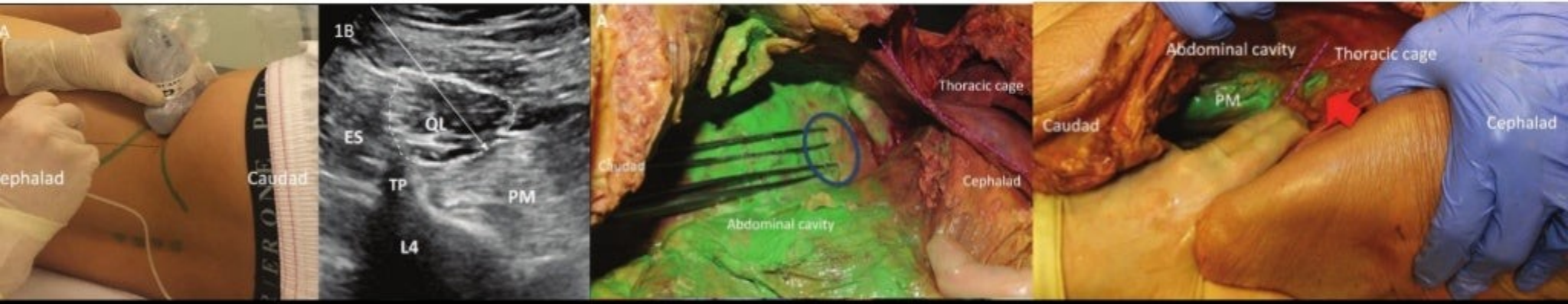
Lateral Cutaneous Branches TI-3

@amit_pawa

The Pathway of Injectate Spread With the Transmuscular Quadratus Lumborum Block: A Cadaver Study

ANESTHESIA & ANALGESIA
July 2017 • Volume 125 • Number 1

Mette Dam, MD,* Bernhard Moriggl, MD, PhD,† Christian K. Hansen, MD,* Romed Hoermann,†
Thomas F. Bendtsen, MD, PhD,‡ and Jens Børglum, MD, PhD*



TQL spreads to PVS & Sympathetic trunk

Lumbar plexus was not stained

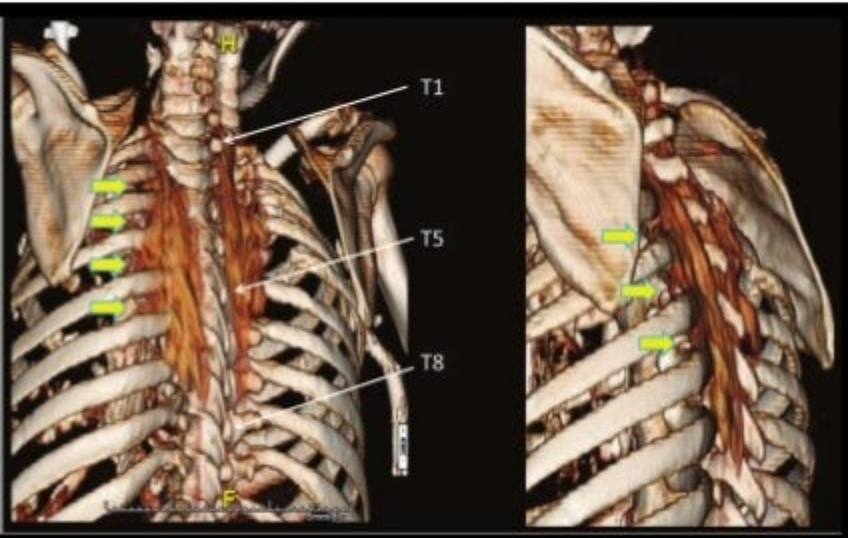
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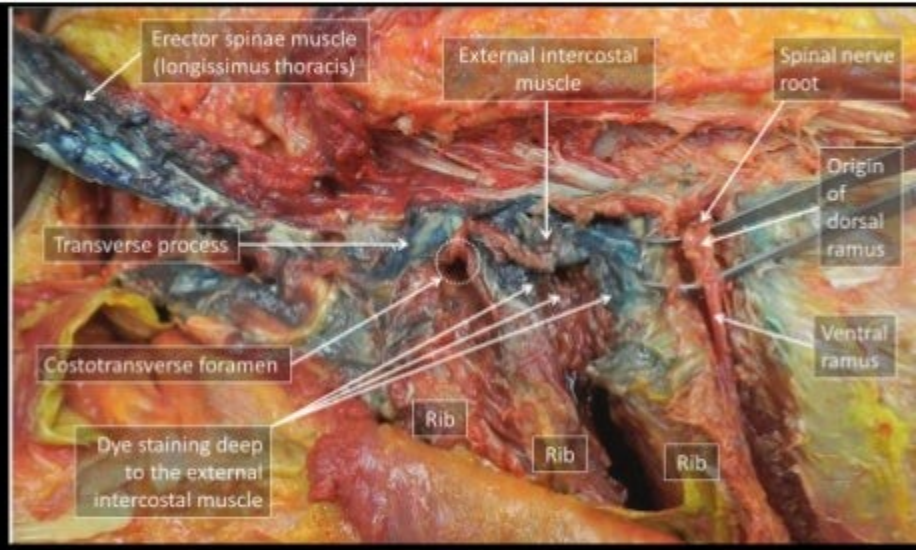
The Erector Spinae Plane Block

A Novel Analgesic Technique in Thoracic Neuropathic Pain

Mauricio Forero, MD, FIPP, Sanjib D. Adhikary, MD,† Hector Lopez, MD,‡ Calvin Tsui, BMSc,§ and Ki Jinn Chin, MBBS (Hons), MMed, FRCPC||*

Regional Anesthesia and Pain Medicine • Volume 41, Number 5, September-October 2016





ESP injection travels up & down & spreads to PVS

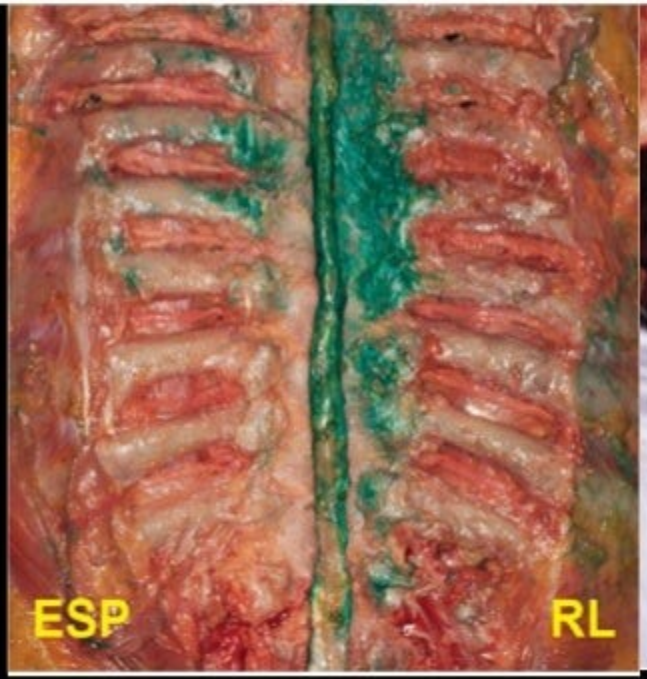
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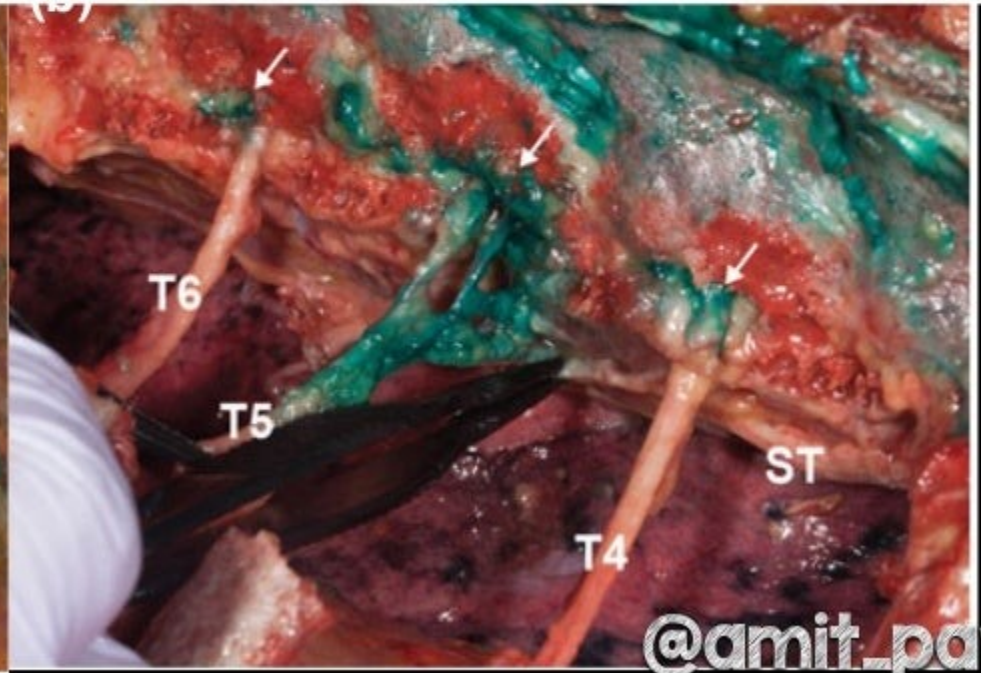
ESP Mechanism?

Comparison of injectate spread and nerve involvement between retrolaminar and erector spinae plane blocks in the thoracic region: a cadaveric study

Anaesthesia 2018, 73, 1244–1250

H.-M. Yang,[1] Y. J. Choi,[2] H.-J. Kwon,[3] J. O,[3] T. H. Cho[3] and S. H. Kim[4]





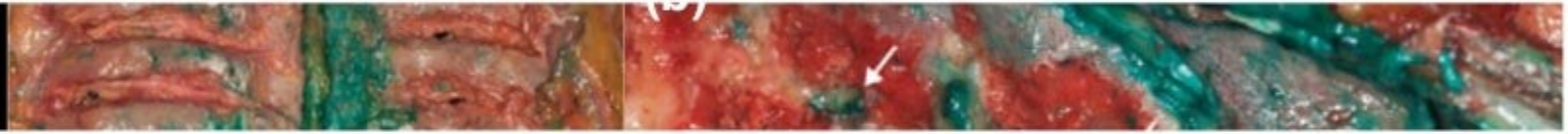
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ESP Mechanism?

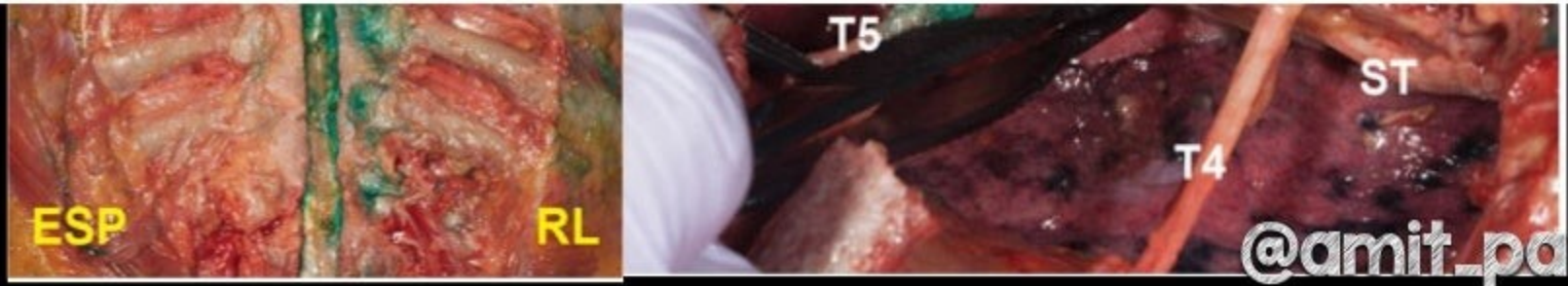
Comparison of injectate spread and nerve involvement between retrolaminar and erector spinae plane blocks in the thoracic region: a cadaveric study

Anaesthesia 2018, 73, 1244–1250

H.-M. Yang,[1] Y. J. Choi,[2] H.-J. Kwon,[3] J. O,[3] T. H. Cho[3] and S. H. Kim[4]



"the amount of dye within the paravertebral space following both retrolaminar and ESP injections seemed to be too small to allow for upward or downward flow."



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ESP Mechanism?

A Cadaveric Study Investigating the Mechanism of Action of Erector Spinae Blockade

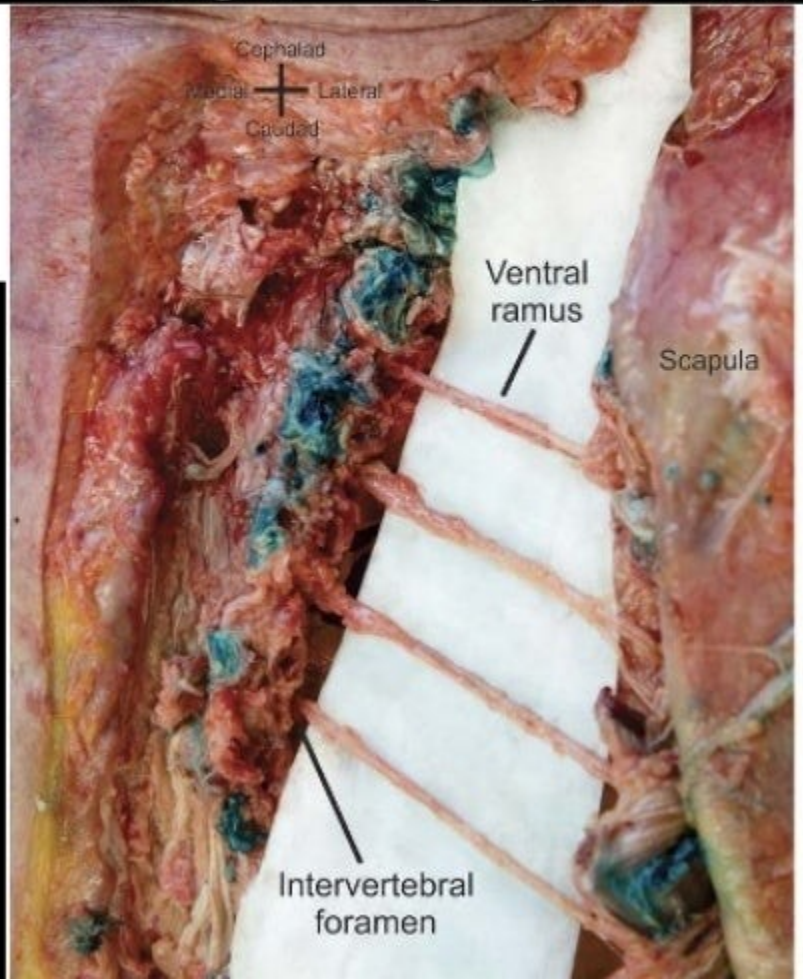
Jason Ivanusic, PhD, Yasutaka Konishi, MD,†‡ and Michael J. Barrington, PhD, MBBS, FANZCA†§*

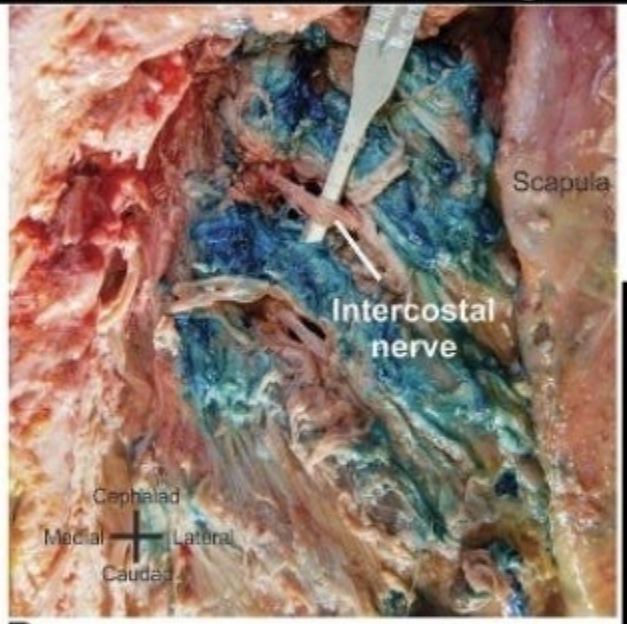
Regional Anesthesia and Pain Medicine • Volume 43, Number 6, August 2018

Dorsal Rami Spread only?

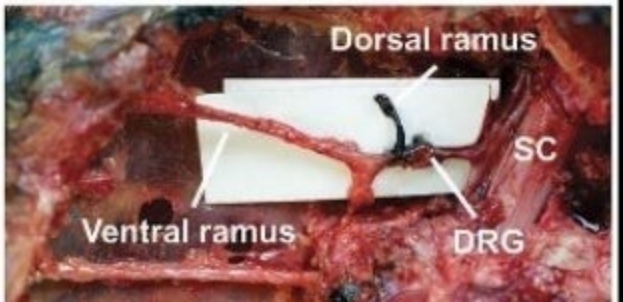
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ESP Mechanism?





B



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What can we say so far?

Table 3 Anatomical spread of injectate in human cadaveric studies of the erector spine plane block

Author/Year	ESP injections	Epidural space	PVS	VR	DR	Sympathetic chain	Intercostal space
Thoracic ESP block (16 studies)							
Aponte 2019 [20]	T7 (n=6)	No	No	No	Yes (n=4)	NA	NA
Forero 2016 [3]	T5 (n=4)	No	No	Yes (n=1)	Yes (n=2)	No	Yes (n=2)
Ivanusic 2018 [15]	T5 (n=20)	No	No	Yes (n=1)	Yes (n=14)	No	No
Chin 2017[49]	T7 (n=2)	No	No	NA	NA	NA	Yes (n=2)
Shibata 2020 [24]	T4 (n=5)	NA	No	No	Yes (n=5)	NA	No
Vidal 2018 [50]	T4/5/10 (n=9)	No	Yes (n=9)	NA	NA	NA	Yes (n=9)
Nielsen 2019 [134]	T5 (n=5)	No	Yes (n=3)	Yes (n=3)	Yes (n=3)	NA	NA
Elsharkawy 2019 [135]	T10–11 (n=6)	No	Yes (n=3)	Yes (n=3)	Yes (n=6)	NA	Yes (n=4)
Govender 2020 [144]	T8 (n=1) T10 (n=1)	No	Yes (n=2)	Yes (n=2)	Yes (n=2)	NA	Yes (n=2)
Yang 2018 [48]	T5 (n=10)	NA	Yes (n=10)	Yes (n=10)	Yes (n=10)	Yes (n=10)	No
Dautzenberg 2019 [141]	T2 (n=11) T8 (n=11)	NA	Yes (n=5)	Yes (n=5)	Yes (n=5)	NA	NA
Choi 2019 [128]	T5 (n=14)	Yes (n=1)	Yes (n=7)	Yes (n=7)	Yes (n=14)	Yes (n=1)	No
Altinpulluk 2019 [142]	T9 (n=8)	Yes (n=5)	Yes (n=6)	Yes (n=6)	Yes (n=8)	NA	NA
Adhikary 2018 [47]	T5 (n=3)	Yes (n=3)	Yes (n=3)	Yes (n=3)	Yes (n=3)	NA	Yes (n=3)
Diwan 2019 [140]	T4–5 (n=5)	Yes (n=5)	Yes (n=5)	Yes (n=5)	Yes (n=5)	Yes (n=2)	Yes (n=5)
Govender 2020 [139]	T5 (n=1) T8 (n=1)	Yes (n=2)	Yes (n=2)	Yes (n=2)	Yes (n=2)	NA	NA



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What can we say so far?

There is limited evidence of "By-Proxy" spread

Variation exists in Cadaver studies too!

Cadaver results may not relate to "Real Life" (Mechanical Ventilation/Movement)

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Controversies

Fascial Plane Blocks can be Unpredictable

Inconsistent Effect

Inconsistent Efficacy

Inconsistent Evidence

Dense Neural Blockade is Rare

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LA Spread Affected by...

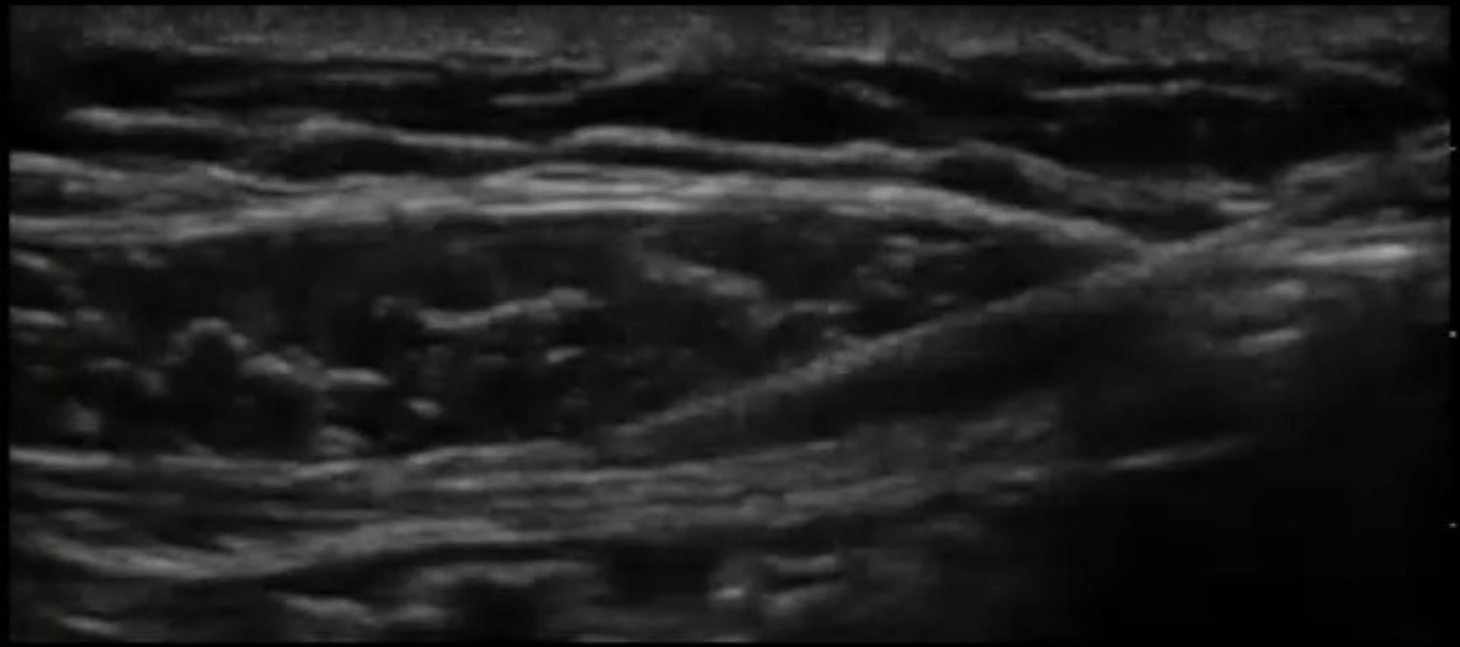
Thickness of fascia

Thick fascia - easy to identify, limited diffusion, "contains LA", but spread limited

Thin fascia - harder to identify, better diffusion, LA "spills out" so spread variable

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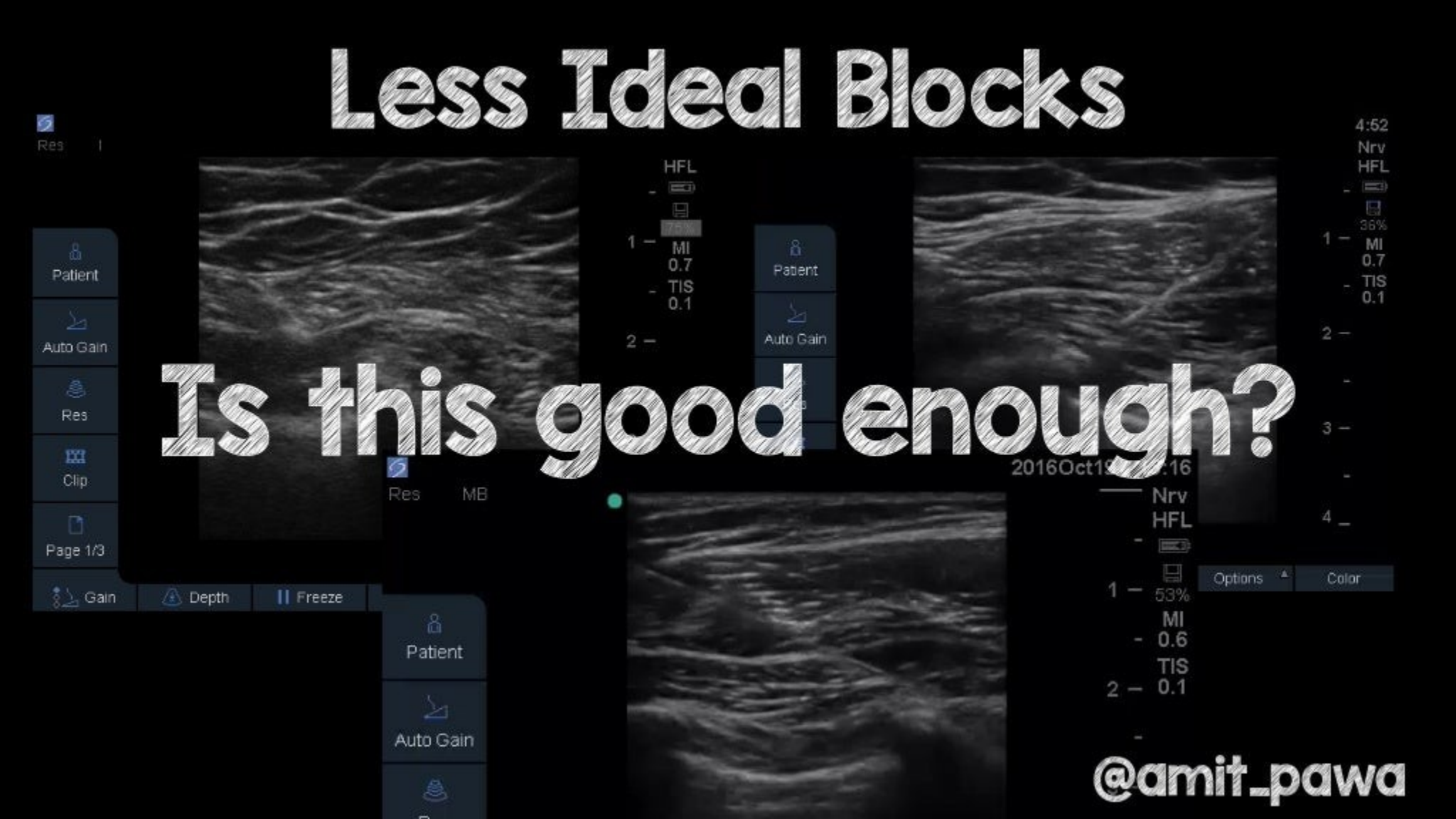
The Ideal Block



Credit: Dr Arun Venkataraju

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Less Ideal Blocks



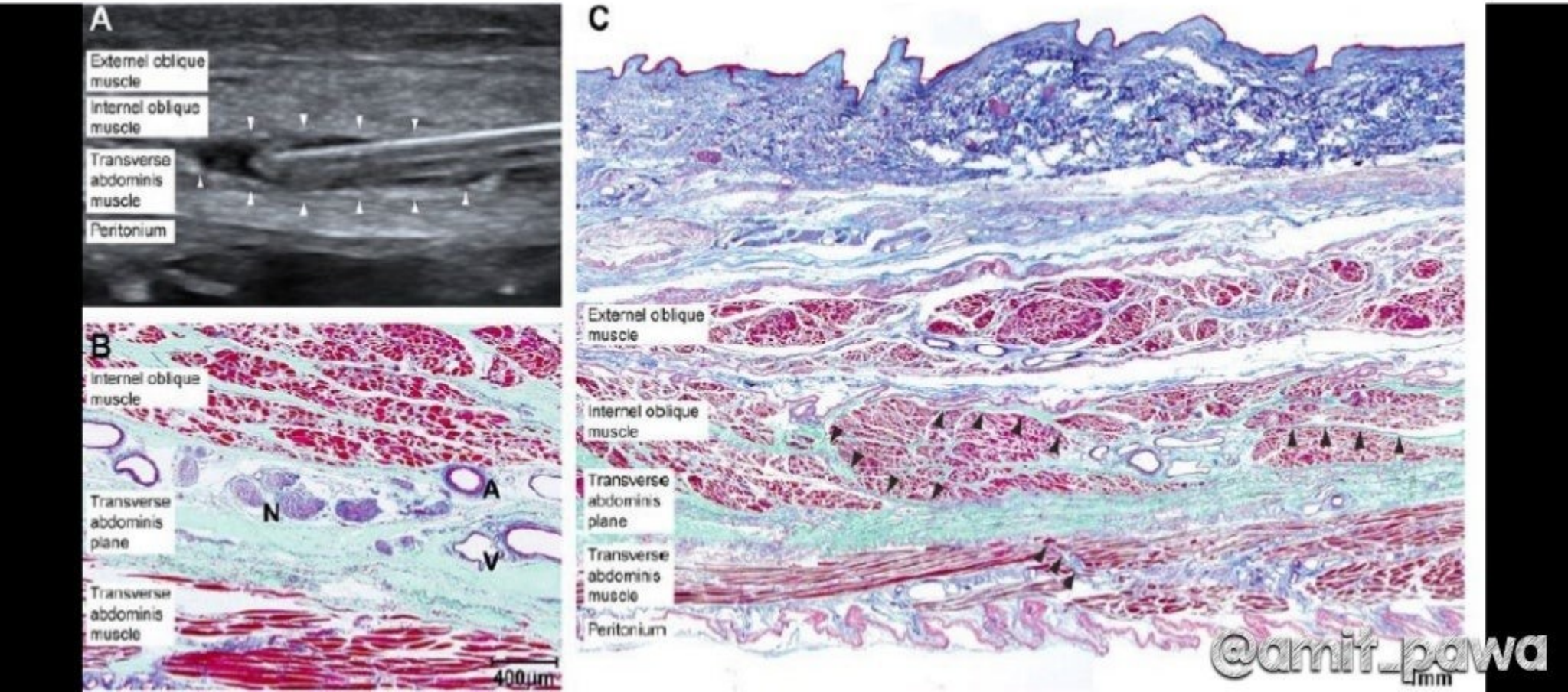
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Yang H, Kim SH Injectate spread in interfascial plane block: a microscopic finding
Regional Anesthesia & Pain Medicine Published Online First: 05 July 2019.
doi: 10.1136/rapm-2019-100693

Even when you get in the correct plane - does the LA stay there?

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Yang H, Kim SH Injectate spread in interfascial plane block: a microscopic finding
Regional Anesthesia & Pain Medicine Published Online First: 05 July 2019.
doi: 10.1136/rapm-2019-100693



Yang H, Kim SH Injectate spread in interfascial plane block: a microscopic finding
Regional Anesthesia & Pain Medicine Published Online First: 05 July 2019.
doi: 10.1136/rapm-2019-100693



"The Fascial plane is not a closed space"

"Injectate spread into the internal oblique & transversus abdominus muscle via the Perimysium"



Could this affect the amount of LA available to act?



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Receptors within Fascia

Somatic Nerves (Sensory/Motor) - variable path

Sympathetic

Nerves to the Fascia - "Fasciatome"

Could action on last two subtypes explain successful block without dermatomal loss of sensation?

Does Inconsistent Dermatomal sensory loss = Failed Block?

Analgesia & Opioid Reduction still evident

Differential block - (C >A-delta fibres)?

If pt derives benefit, does it matter?

PROM & Minimum Clinically Important Difference (MCID) in QoR

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Mechanisms of Action Of Fascial Plane Blocks - Jinn KJ, Lirk P, Hollmann M, Schwarz S - Ahead of Print RAPM 2021

Does Inconsistent Dermatomal sensory loss = Failed Block?

Anatomical Cutaneous innervation is complex

Overlapping innervation across midline

Interindividual variation

Pharmacokinetic variability & concentration of LA at target

Accuracy of deposition & Variability of spread

Non-cutaneous contributions to nociception

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Mechanisms of Action Of Fascial Plane Blocks - Jinn KJ, Lirk P, Hollmann M, Schwarz S - Ahead of Print RAPM 2021

How Can We Improve Efficacy?

Deposit LA closer to target- (e.g. Rectus > Lat TAP)

Inject at more than I site?

Increase Concentration of LA ?

Increase Mass of LA deposited ?

Use Epinephrine?

Catheters - Intermittent Boluses

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Mechanisms of Action Of Fascial Plane Blocks - Jinn KJ, Lirk P, Hollmann M, Schwarz S - Ahead of Print RAPM 2021

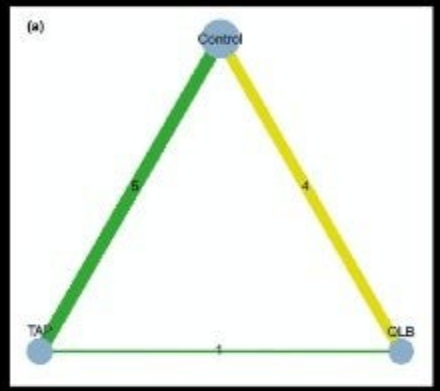

What about clinical studies?
Spirit
ORIGINAL
LAMAL
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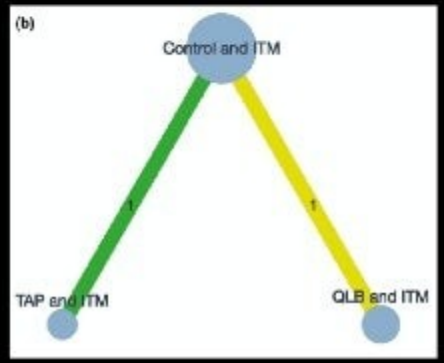
Anaesthesia 2021 doi:10.1111/anae.15160

Review Article

Quadratus lumborum block vs. transversus abdominis plane block for caesarean delivery: a systematic review and network meta-analysis*

K. El-Boghdadly,[1,2] N. Desai,[1,2] S. Halpern,[3] L. Blake,[4] P. M. Odor,[5] S. Bampoe,[5] B. Carvalho[6] and P. Sultan[7]





TAP & QLB better than Control in LSCS

No added benefit if intrathecal morphine

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Can J Anesth/J Can Anesth (2020) 67:1557–1575
https://doi.org/10.1007/s12630-020-01793-3

REVIEW ARTICLES/BRIEF REVIEWS

Quadratus lumborum block for postoperative analgesia: a systematic review and meta-analysis

Bloc du muscle du carré des lombes (*quadratus lomburum*) pour l'analgésie postopératoire : revue systématique et méta-analyse

Vishal Uppal, MBBS, MSc, FRCA · Susanne Retter, MD · Emma Kehoe, MD · Dolores M. McKeen, MD, MSc, FRCPC

Abdo wall/hip surgery - QLB > placebo

Less benefit when compared with TAP/ESP

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ESP Clinical studies

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Erector spinae plane block as an alternative to epidural analgesia for post-operative analgesia following video-assisted thoracoscopic surgery: A case study and a literature review on the spread of local anaesthetic in the erector spinae plane

Indian J Anaesth. 2018 Jan; 62(1): 75–78

Sanjib Das Adhikary, Ashlee Pruett, Mauricio Forero[1], Venkatesan Thiruvenkatarajan[2,3]

The Erector Spinae Plane Block Provides Visceral Abdominal Analgesia in Bariatric Surgery

A Report of 3 Cases

Ki Jinn Chin, MBBS(Hons), FRCPC, Laith Malhas, MBChB, FRCA, and Anahi Perlas, MD, FRCPC

Reg Anesth Pain Med. 2017 May/Jun;42(3):372-376

Original Contribution Journal of Clinical Anesthesia 50 (2018) 65–68

Ultrasound guided erector spinae plane block reduces postoperative opioid consumption following breast surgery: A randomized controlled study

Yavuz Gürkan, Can Aksu*, Alparslan Kuş, Ufuk H. Yörükoğlu, Cennet T. Kılıç

Original Contribution Journal of Clinical Anesthesia 49 (2018) 101–106

Evaluation of ultrasound-guided erector spinae plane block for postoperative analgesia in laparoscopic cholecystectomy: A prospective, randomized, controlled clinical trial

Serkan Tulgar[a,*], Mahmut Sertan Kapakli[b], Ozgur Senturk[a], Onur Selvi[a], Talat Ercan Serifsoy[a], Zeliha Ozer[a]

Original Article

Bilateral Erector Spinae Plane Block for Acute Post-Surgical Pain in Adult Cardiac Surgical Patients: A Randomized Controlled Trial

Original Contribution

Erector spinae plane block and thoracic paravertebral block for breast surgery compared to IV-morphine: A randomized controlled trial

Yavuz Gürkan, Can Aksu*, Alparslan Kuş, Ufuk H. Yörükoğlu

Journal of Clinical Anesthesia 59 (2020) 84–88

European Spine Journal
https://doi.org/10.1007/s00586-019-06133-8

CASE REPORT

Opioid-sparing multimodal analgesia with bilateral bi-level erector spinae plane blocks in scoliosis surgery: a case report of two patients

Ki Jinn Chin[1] · Michael J. Dinsmore[1] · Stephen Lewis[2] · Vincent Chan[1]

What do these say?

QL/ESP fascial plane blocks:

I. Reduce Pain Scores

2.Reduce Opioid Requirements

When compared to SYSTEMIC analgesia alone

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What About Meta-analyses/SR?

OPEN

Pectoral nerve block in anesthesia for modified radical mastectomy

Medicine (2019) 98:18

A meta-analysis based on randomized controlled trials

Jia Zhao, MS[a], Fanglei Han, MS[a], Yang Yang, PhD[a], Hangyu Li, MS[b], Zinan Li, MS[a,*]

Anaesthesia 2019, 74, 663–673 doi:10.1111/anae.14607

Review Article

Analgesic efficacy of the Pecs II block: a systematic review and meta-analysis

B. Versyck,[1] G.-J. van Geffen[2] and K.-J. Chin[3]

Pectoral nerve blocks and postoperative pain outcomes after mastectomy: a meta-analysis of randomized controlled trials

Lovett-Carter D, *et al*. *Reg Anesth Pain Med* 2019;**0**:1–6. doi:10.1136/rapm-2019-100658

Danielle Lovett-Carter,[1] Mark C Kendall,[1] Zachary L McCormick,[2] Edward I Suh,[1] Alexander D Cohen,[1] Gildasio S De Oliveira[1]

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What do these say?

PECS blocks (mostly PECS II)

1. Reduce Pain Scores

2. Reduce Opioid Requirements

3. May be as effective as Th PVB?...

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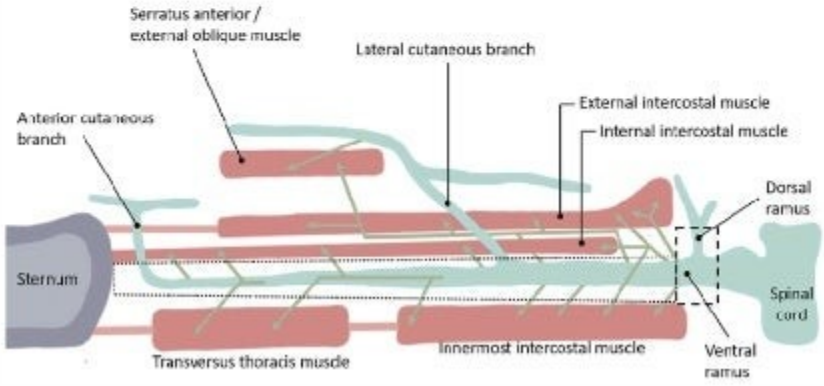
Hot off the Press!

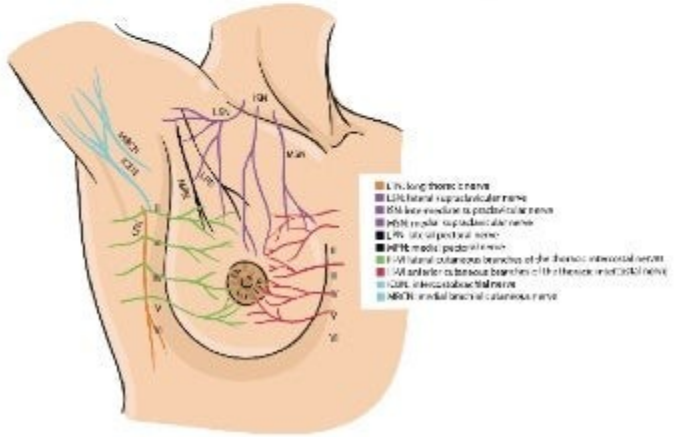
Anaesthesia 2021, 76 (Suppl. 1), 110–126 doi:10.1111/anae.15276

Review Article

Ultrasound-guided fascial plane blocks of the chest wall: a state-of-the-art review

K. J. Chin,[1] B. Versyck[2,3] and A. Pawa[4]





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Anaesthesia 2021, 76 (Suppl. 1), 110–126 doi:10.1111/anae.15276

Review Article

Ultrasound-guided fascial plane blocks of the chest wall: a state-of-the-art review

K. J. Chin,[1] B. Versyck[2,3] and A. Pawa[4]

PECS/Serratus/ESP -significant benefit in breast/thoracics

Similar to Th PVB (PECS)

Their role in trauma & cardiac surgery is holds great potential

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Where May Fascial Plane Blocks have a role?

If No Epidural/Spinal/PVB

Coagulation/Sepsis/Certain Specialties (Cardiac/Tx)

Hypotension (sympathectomy)/Side effects

Rescue technique (Failed Epidural/PVB)

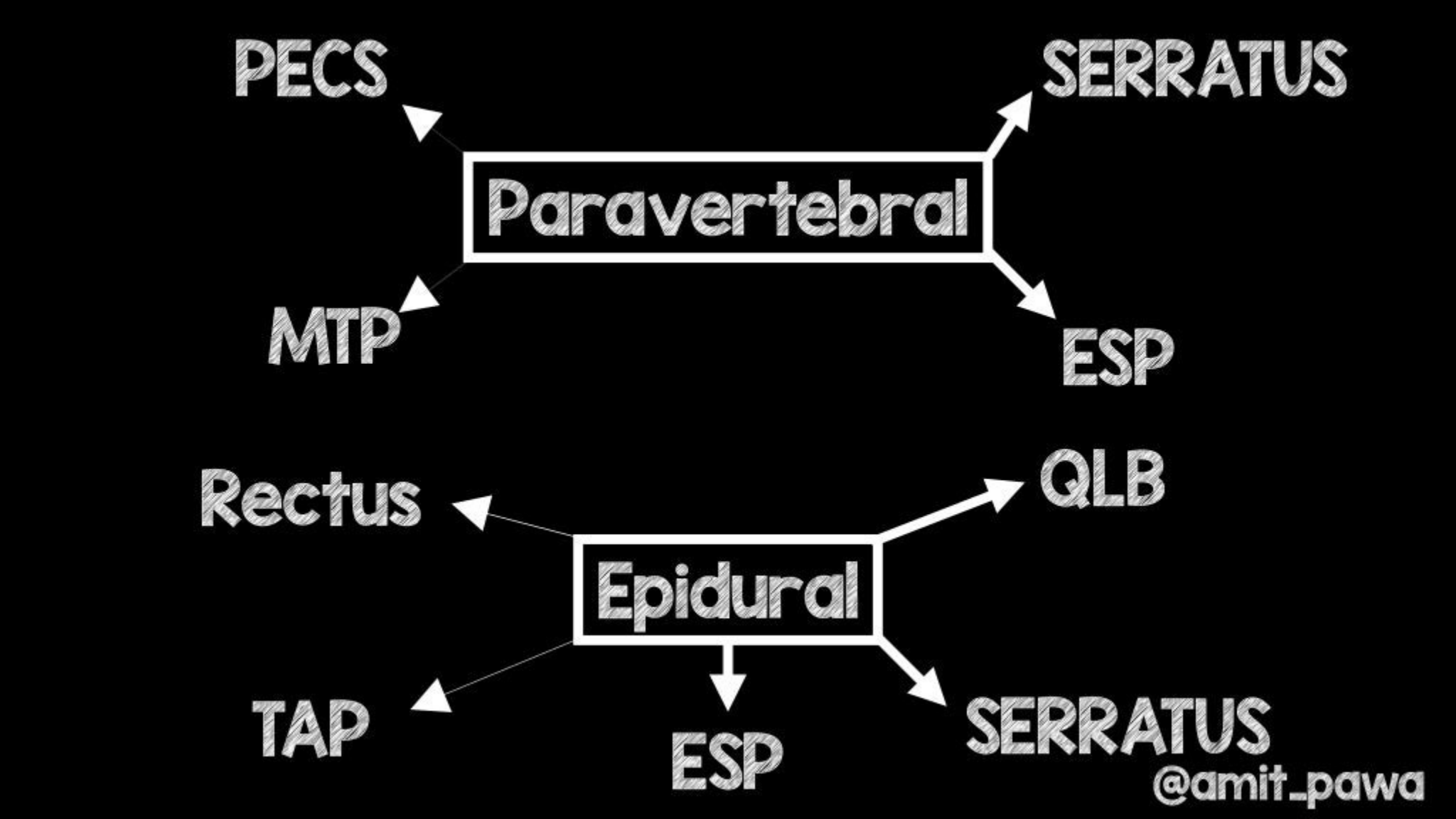
Inability to perform Epidural/PVB

- Patient Positioning

- Lack of skilled practitioner/Post-op Monitoring

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OPTIONS


PECS
SERRATUS
Paravertebral
MTP
ESP
Rectus
QLB
Epidural
TAP
ESP
SERRATUS
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Increasing Access to RA

Much of USGRA - daunting to uninitiated

Idea of Fascial Plane Blocks is Simple

Superficial Planes - eg Rectus/PECS/TAP

Similar technique - Split the plane

Focus on "Plan A blocks" - Build from there

Anaesthesia 2020, 75, 293–297 doi:10.1111/anae.14768

Editorial

Future directions in regional anaesthesia: not just for the cognoscenti

L. R. Turbitt,[1] E. R. Mariano[2] and K. El-Boghdadly[3]

Promote competence in a few HIGH VALUE "Plan A" Blocks

Increase Patient access to RA

RA-UK Regional Anaesthesia United Kingdom

Endorsed

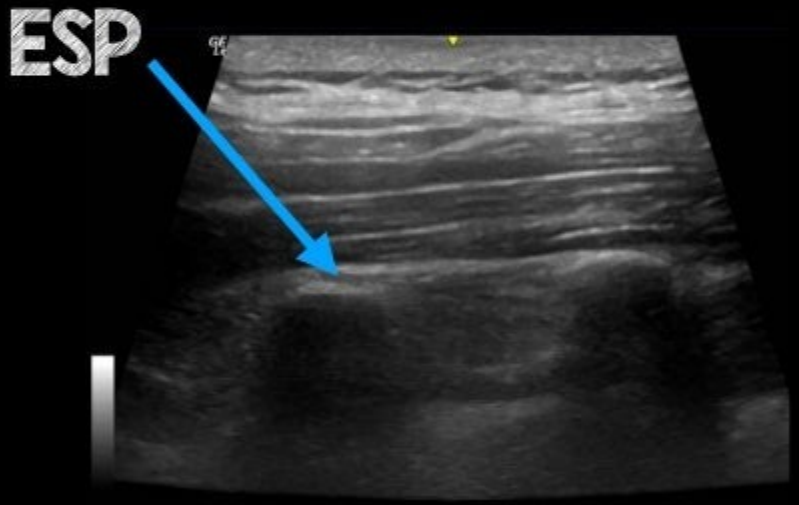
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Anatomical Location	Plan A Block
Shoulder	Interscalene
Upper limb below Shoulder	Axillary
Hip	Femoral Nerve
Knee	Adductor Canal
Foot & Ankle	Popliteal Sciatic
Chest Wall	Erector Spinae Plane
Abdominal Midline	Rectus Sheath

Skill Progression



Inspired by Ki Jinn Chin

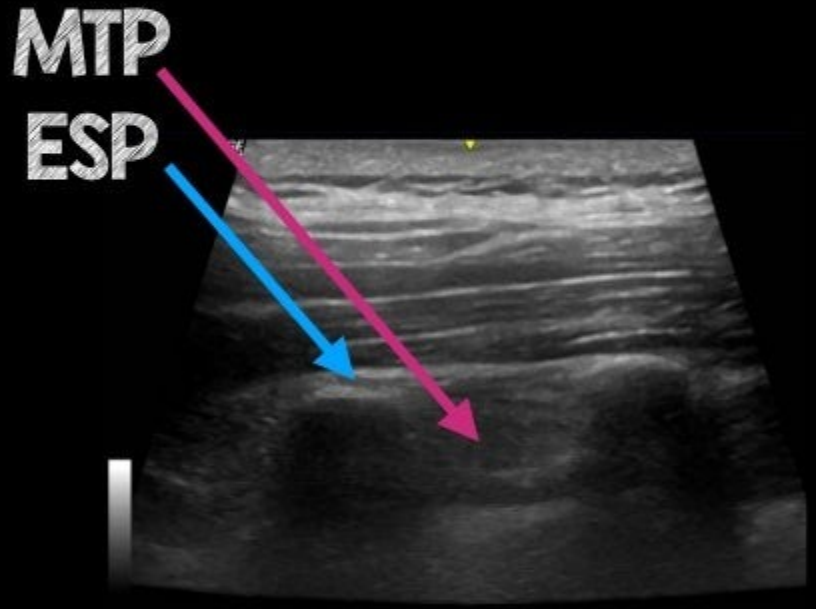


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Skill Progression



Inspired by Ki Jinn Chin

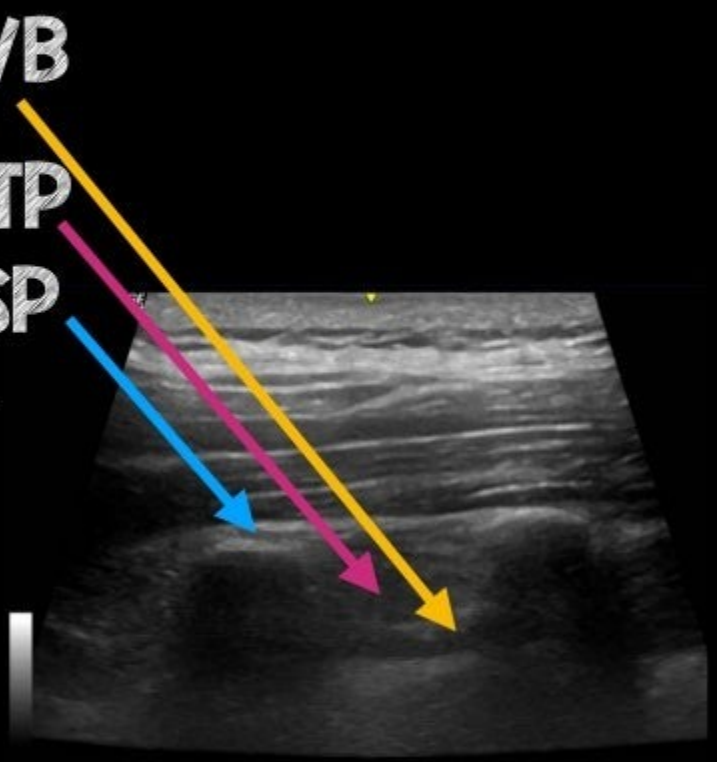


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Skill Progression



Risk Difficulty



Inspired by Ki Jinn Chin

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TAKE
AWAY

Conclusions

1. Fascial Plane Blocks are Heterogenous
2. Unknown Mechanism of Action
3. Unpredictable efficacy
4. May have a role where No Epi/PVB
5. Increasing RA Delivery

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Why We Need Fascial Plane Blocks In Our Toolkit

Regional Anaesthesia is part of MMA

We need to increase RA delivery so more patients benefit

Some fascial plane blocks are simple to teach & perform

We need Alternatives when we can't Perform classic blocks, or when they fail

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