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2021

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2nd December 2021

Dr Raffael Ismail
Dept of Orthopaedics, Traumatology & Rehabilitation
Kulliyah of Medicine
UIAM Kuantan

Dear Dr Raffael Ismail,

Re: The Second Combined ASEAN Hand Meeting 2021

On behalf of the Organizing Committee, I am pleased to extend an official invitation to you as our honorable speaker for the above conference.

Date : 11th December 2021

Time: 0912 - 0924 hours

Topic : Cubital Tunnel Syndrome – What Does The Latest Evidence Say?

As an invited speaker, your registration fee is waived.

Link for video upload :

<https://drive.google.com/drive/folders/1uFbEuR0Wj6kSCpQUYvN1cZS30fJs7jdI?usp=sharing>

We look forward to your participation.

Warmest regards,

Dr Iskandar Amin
President

CUBITAL TUNNEL SYNDROME -LATEST EVIDENCE-



DR RAFFAEL ISMAIL

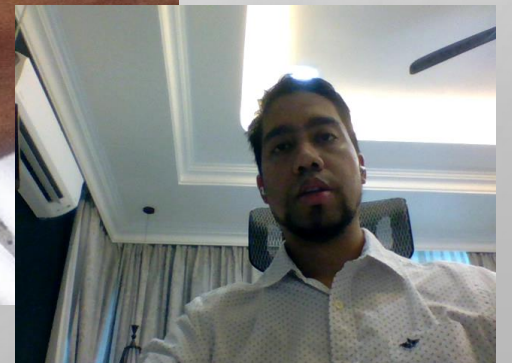
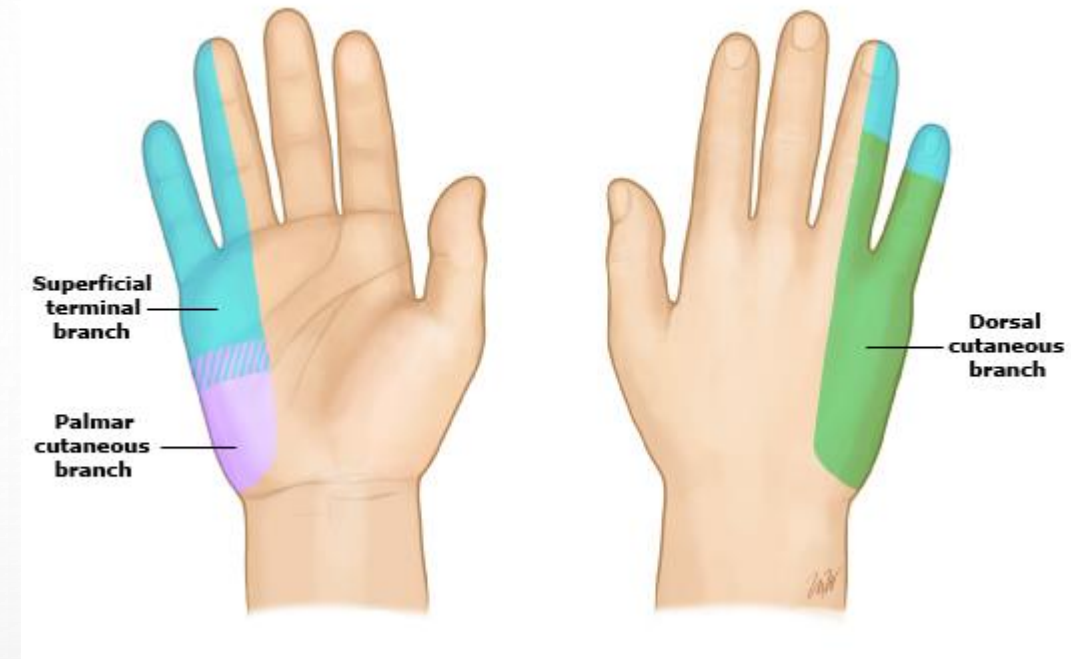
HAND, UPPER LIMB & MICROSURGERY UNIT

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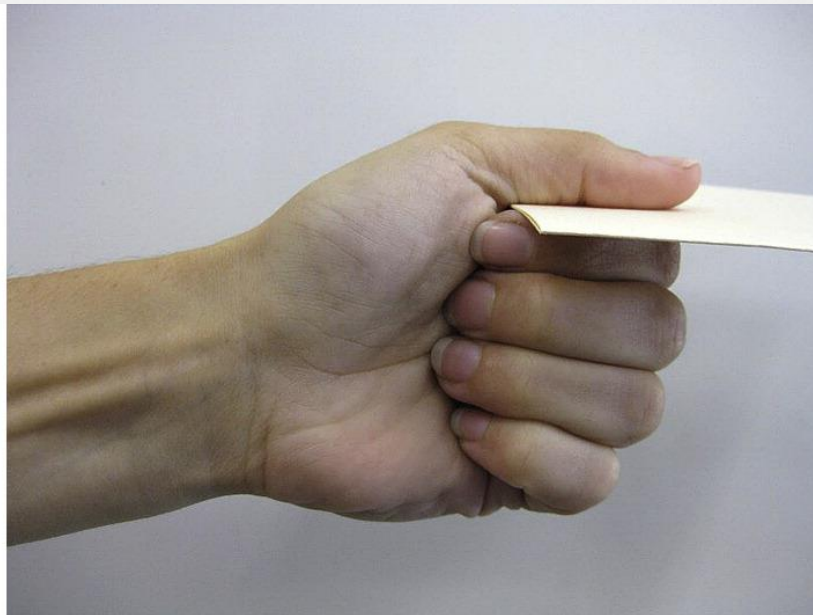
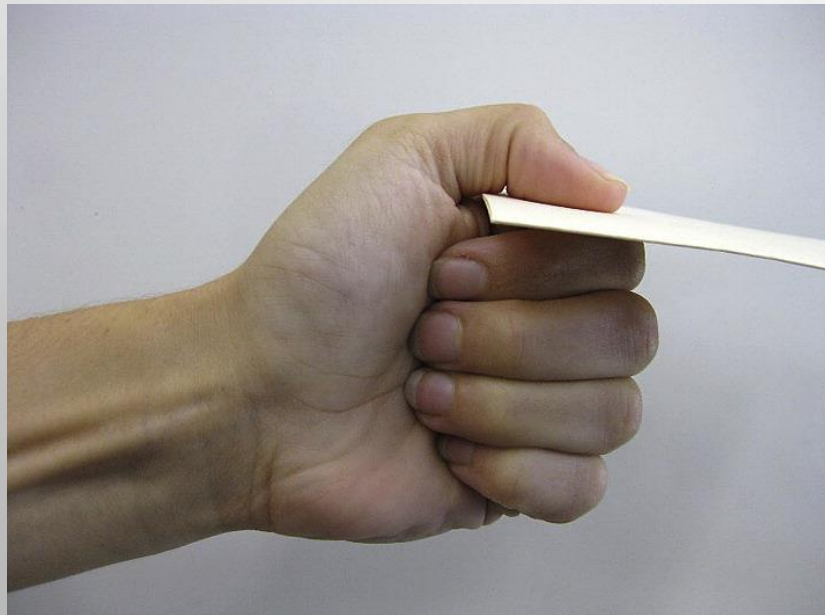
CLINICAL FEATURES

- NUMBNESS/PARESTHESIA OF RING AND LITTLE FINGER AND DORSOULNAR HAND
- WEAKNESS/LOSS OF BULK IN INTRINSIC AND EXTRINSIC WITH LOSS OF FINE MOTOR FUNCTION
- SYMPTOMS AT NIGHT OR AFTER MAINTAINING A FLEXED ELBOW POSTURE

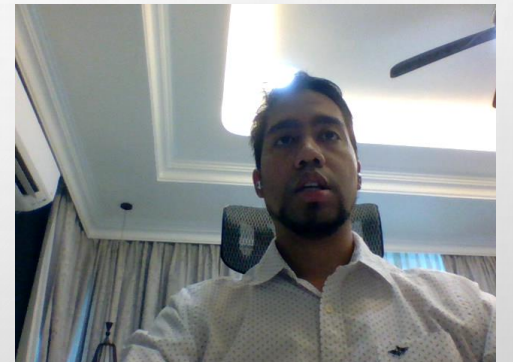




Warternberg's Sign

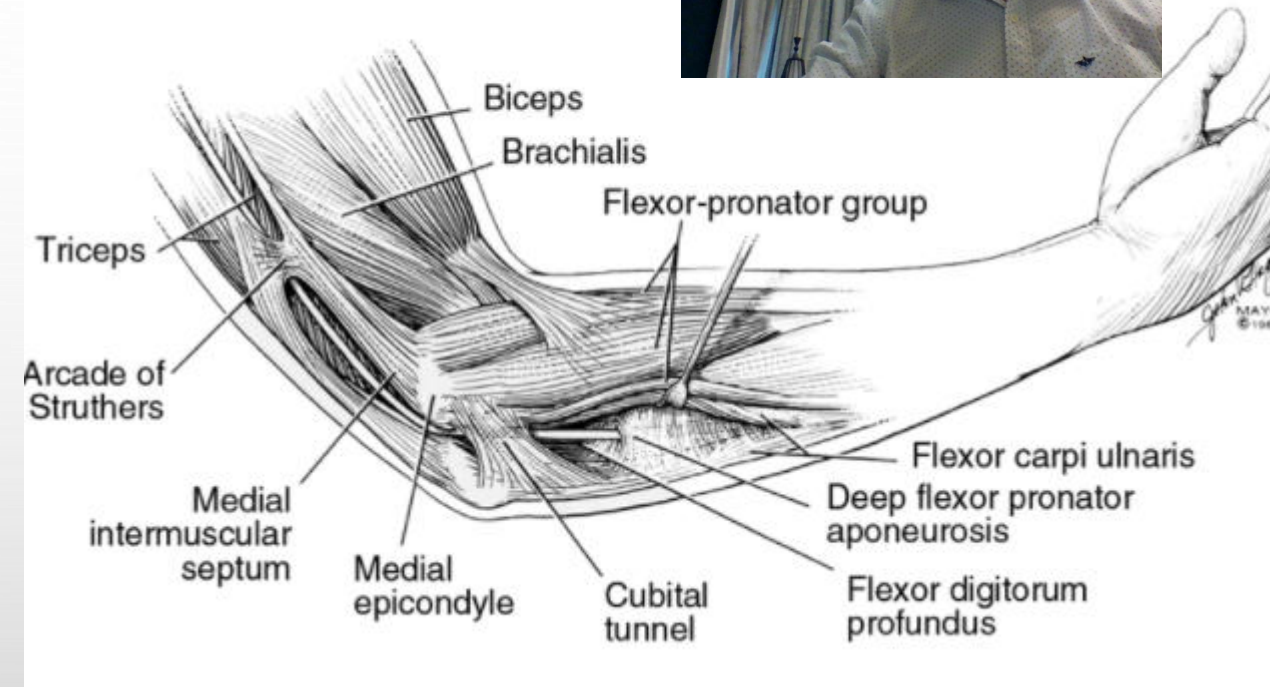


Froment's test



PROVOCATIVE TESTS



- TINEL'S TEST
- DIRECT COMPRESSION TEST





Scientific article

Scratch Collapse Test for Evaluation of Carpal and Cubital Tunnel Syndrome

Christine J. Cheng MD, MPH, Brendan Mackinnon-Patterson MPH, John L. Beck MD, Susan E. Mackinnon MD  



Positioning



Setting Resistance



"Scratch"

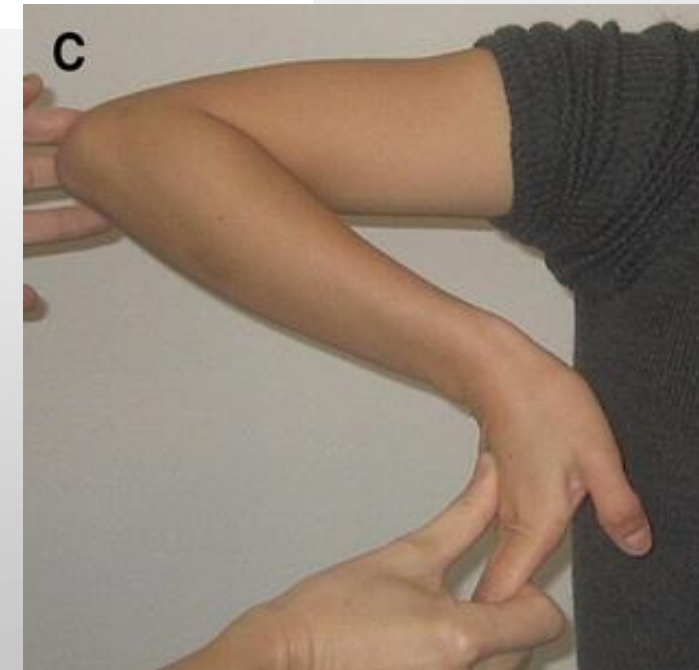
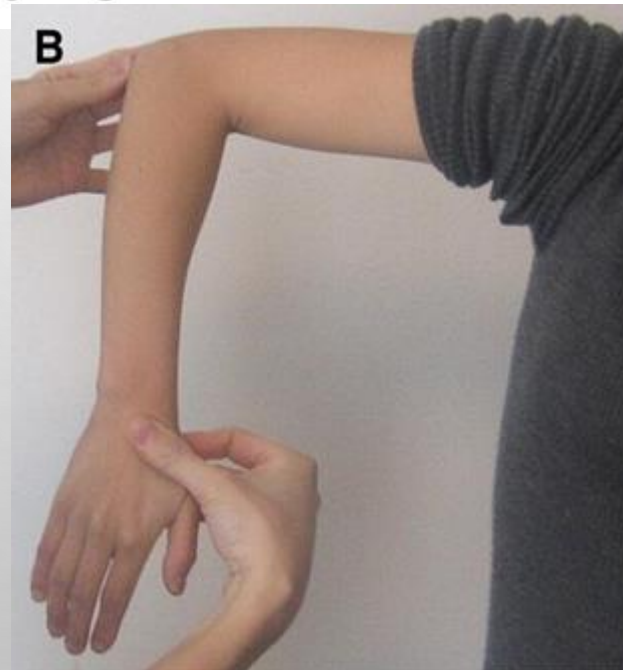
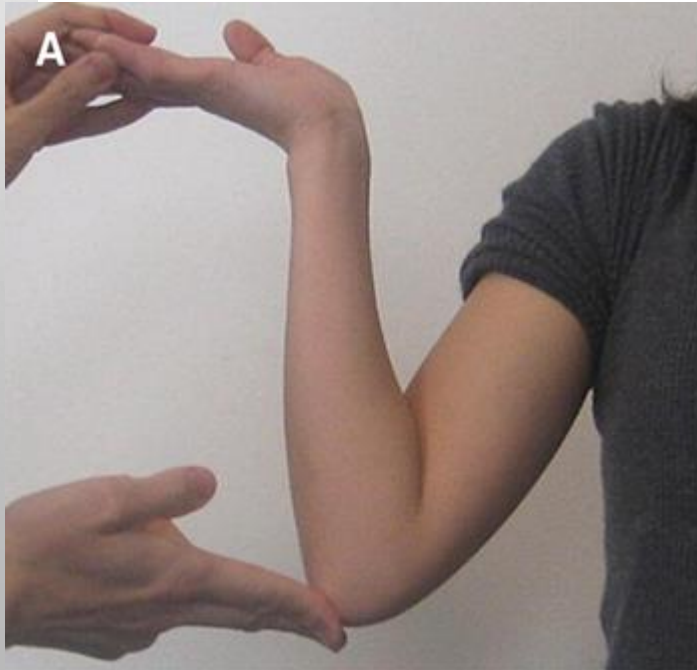


Resistance Collapse



Shoulder internal rotation elbow flexion test for diagnosing cubital tunnel syndrome

Kensuke Ochi, MD^{a,*}, Yukio Horiuchi, MD^a, Aya Tanabe, MD^b, Makoto Waseda, MD^b, Yasuhito Kaneko, MD^a, Takahiro Koyanagi, MD^a



ELECTRODIAGNOSTIC EXAMINATION

- NEGATIVE IN DYNAMIC ISCHEMIA
- DEMYELINATION
 - REDUCE VELOCITY
- AXONAL LOSS
 - DECREASED CMAP (REDUCED MOTOR UNIT RECRUITMENT)
 - FIBRILLATIONS IN RESTING PHASE



Motor studies		Latency (millisecond)		Amplitude(millivolt)		NCV(meter per second)	
Stimulation site of Ulnar nerve	Parameter	Right	Left	Right	Left	Right	Left
Wrist	Mean	3.09	3.08	12.10	11.97		
	SD(\pm)	0.473	0.426	2.84	2.52		
	Significance	t=0.11;p>0.05		t=0.24;p>0.05			
U.Groove	Mean	6.98	6.99	11.25	11.85	62.04	61.89
	SD(\pm)	0.62	0.56	3.58	3.26	7.55	8.16
	Significance	t=0.18;p>0.05		t=0.88;p>0.05		t=1.24;p>0.05	
Elbow	Mean	9.57	9.62	10.90	11.50	80.36	79.98
	SD(\pm)	0.86	0.81	3.85	4.00	9.97	8.18
	Significance	t=0.30;p>0.05		t=0.76;p>0.05		t=0.98;p>0.05	

Ulnar nerve Study



ULTRASOUND

➤ [J Hand Surg Am. 2006 Sep;31\(7\):1088-93. doi: 10.1016/j.jhsa.2006.06.007.](#)

Ultrasound in the diagnosis of ulnar neuropathy at the cubital tunnel

Ethan R Wiesler ¹, George D Chloros, Michael S Cartwright, Hae W Shin, Francis O Walker

[Arch Phys Med Rehabil. 2010 Feb; 91\(2\): 318–320.](#)

PMID: [20159139](#)

doi: [10.1016/j.apmr.2009.10.010](#)

Ulnar Neuropathy With Normal Electrodagnosis and Abnormal Nerve Ultrasound

[Joon Shik Yoon, MD, PhD, Francis O. Walker, MD, and Michael S. Cartwright, MD](#)



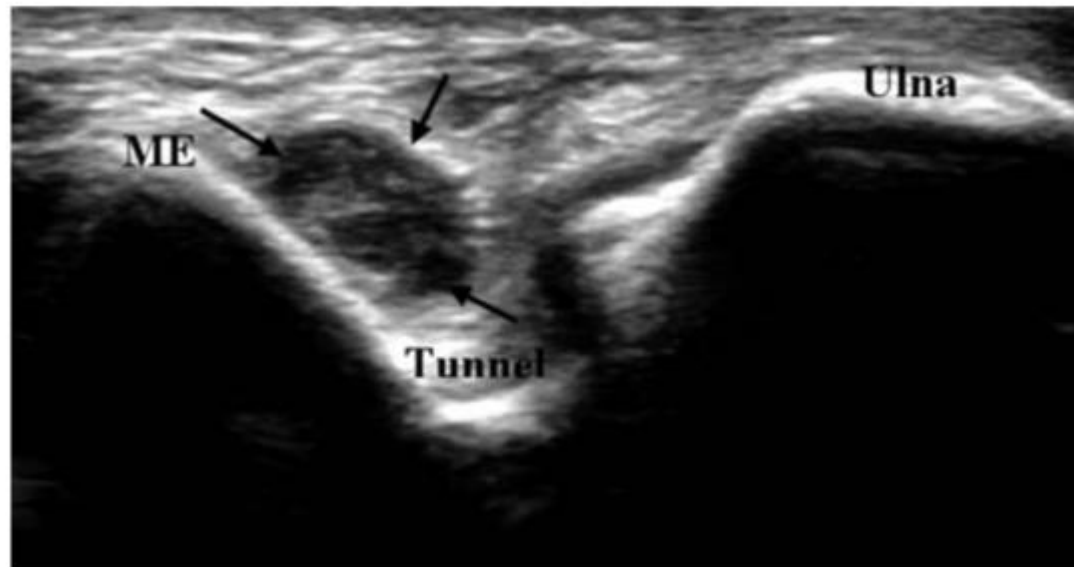


Figure 2. In this patient with UCT the ulnar nerve has a CSA of 0.29 cm^2 . The cross-section of the ulnar nerve is depicted by arrows outlining its periphery. The nerve also is hypoechoic, a finding that can be seen with increased edema. ME, medial epicondyle; TUNNEL, ulnar tunnel.

- ENLARGEMENT OF NERVE (MEAN 0.065 CM^2 VS 0.19 CM^2)
- NO FUNCTIONAL INFORMATION UNLIKE NCS



MAGNETIC RESONANCE IMAGING

> Clin Neurophysiol. 2006 Mar;117(3):590-5. doi: 10.1016/j.clinph.2005.09.022. Epub 2006 Feb 14.

Utility of magnetic resonance imaging in diagnosing ulnar neuropathy at the elbow

S Vucic¹, D J Cordato, C Yiannikas, R S Schwartz, R C Shnier

- 25% MORE SENSITIVE THAN EMGS
- PATHOLOGY DISPLAYED AS HIGH SIGNAL INTENSITY AND/OR NERVE ENLARGEMENT
- MRI UNABLE TO SHOW SEVERITY
 - UTILIZED FOR DIAGNOSIS BUT NOT PROGNOSIS OF RECOVERY



NON-OPERATIVE MANAGEMENT

- NERVE CONDUCTION VELOCITY $>40\text{MS}$
- NO IMPAIRMENT OF 2-POINT SENSIBILITY/MUSCLE ATROPHY

METHODS

- RIGID NIGHT SPLINTS/ REDUCE ELBOW FLEXION VIA TOWEL WRAP
- PADDING WHEN AT WORK
- NERVE GLIDING EXERCISES
- NSAIDS AND MECOBALAMINE TDS



SURGICAL TREATMENT

- CONSISTS OF 2 MAIN BRANCH:
 - PRESERVATION OF NORMAL ANATOMIC NERVE POSITION
 - RELEASE OF NERVE WITH CREATION OF AN ALTERNATE ANATOMY



Open Versus Endoscopic Cubital Tunnel In Situ Decompression: A Systematic Review of Outcomes and Complications

Alexander Toirac¹, Juan M. Giugale², and John R. Fowler²

HAND
1-7

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Hand Surgery 2016
DOI: 10.1177/1558944716662011
hand.sagepub.com



- 82.7% VS 92% EXCELLENT OUTCOME
- ECUTR – LESS INJURY TO MEDIAL ANTEBRACHIAL CUT. NERVE

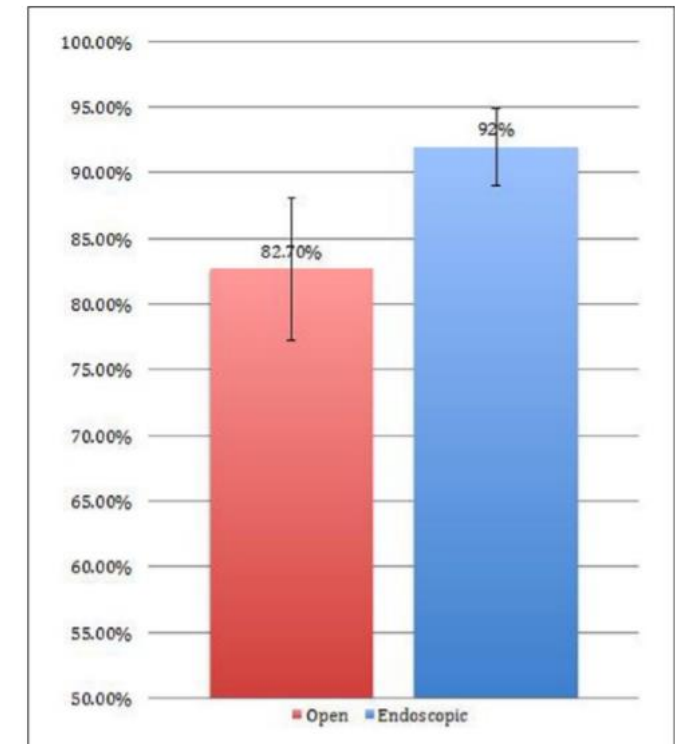



Figure 2. Endoscopic versus open in situ release: Clinical outcomes (as determined by rate of excellent/good scores on the Bishop scale).

REVIEW ARTICLE

A systematic review and meta-analysis comparing open versus endoscopic in situ decompression for the treatment of cubital tunnel syndrome

Vadim A. Byvaltsev^{1,2}  · Ivan A. Stepanov¹ · Talgat T. Kerimbayev³

- 3 RCTS AND 5 RETROSPECTIVE OBSERVATIONAL STUDIES
- SIMILAR POSTOPERATIVE OUTCOMES
- EISD GROUP SHOWED A SAME INCIDENCE OF COMPLICATIONS COMPARED TO THE OISD GROUP





Original Investigation | Surgery

Safety and Outcomes of Different Surgical Techniques for Cubital Tunnel Decompression

A Systematic Review and Network Meta-analysis

Ryckie G. Wade, MBBS, MSc, MClinEd; Timothy T. Griffiths, MRes; Robert Flather, MRes; Nicholas E. Burr, MBBS, BSc; Mario Teo, MBChB, BMedSci; Grainne Bourke, MB, BCh

- A TOTAL OF 30 STUDIES OF 2894 LIMBS UNDERGOING 8 DIFFERENT OPERATIONS WERE INCLUDED
- ALL FORMS OF IN SITU DECOMPRESSION WERE MORE EFFECTIVE THAN ANY TYPE OF TRANSPOSITION PROCEDURE
- POSTOPERATIVE COMPLICATION
 - IN SITU DECOMPRESSIONS RANKED THE LEAST RISKY AND REQUIRING REOPERATION
 - SUBMUSCULAR TRANSPOSITION WAS ASSOCIATED WITH 5 TIMES THE RISK OF REOPERATION



CONCLUSION

- NO CONCRETE EVIDENCE OVER SUPERIORITY OF EACH SURGERY
- AVOID RESURGERY
- SURGEON'S PREFERENCE

