

## Reverse Phalen's test (Wrist extension test) (150430)

学生から Reverse Phalen's test というのがあると聞いた。一緒に検査特性について調べてみることにした。

文献 1 は CTS の検査についてまとめたシステマティックレビュー。これによると、感度 57%、特異度 78%とされている。通常の Phalen's test と比較して、診断精度が大きく優れているというわけではなさそうだ。

陽性尤度比  $57 / (100 - 78) = 2.59$

陰性尤度比  $(100 - 57) / 78 = 0.55$

TABLE 5. Average Sensitivity and Specificity of Carpal Tunnel Syndrome Diagnostic Tests across Studies Weighted by Sample Size

Test	References	Number of Cases	Average Sensitivity	Number of Controls	Specificity Average All Studies	Specificity—Asymptomatic Controls	Specificity—Symptoms and Negative Electrodiagnostic Test
Phalen's	18-22,25,26,31,32,35,51-71	3218	68	1637	73	86	65
Tinel's	18,19,22,26,31,32,35,52-56,58,60,62-75	2640	50	1614	77	84	65
Carpal compression (CC)	22,25,26,28,51-53,58,60,62,63,68,70-72,74,76	1985	64	1082	83	88	64
Wrist extension	18,26,31,53,68,72,75	640	57	360	78	86	55
CC + wrist flexion	18,62,77	190	80	238	92	90	
Flick	23,32,34,72	5036	47	3854	62		51
Gilliat	54,55,58,72,74	306	59	316	61	68	26
Tethered median nerve	29,31,46,69	254	48	92	76		
Hand diagram	20,32,38,65,67,70	293	75	226	72	90	60
Fist (lumbrical provocation)	27,74	159	48	175	81	92	71
Static two-point	17,36,54,58,78,79	381	24	212	95	92	98
Abductor pollicis brevis (APB) strength	25,72	107	29	88	80		80
APB atrophy	25,72	107	12	88	94		94
Current perception threshold	80,81	46	80	63	61		
Semmes-Weinstein monofilament	17,30,31,33,36,54,57,58,70,78,79	811	72	567	62	86	70
Vibration with tuning fork	26,31,58,78,82,83	343	55	170	81		
Vibrometry	24,48,78,79,84-87	377	50	590	73	85	67

Overall sensitivity and specificity were determined by calculating a weighted average over all studies (weighted by sample size). Mean "specificity—asymptomatic controls" was calculated from studies that used healthy controls. Mean "specificity—symptoms and negative electrodiagnostic test" was calculated from subjects who had carpal tunnel syndrome-like symptoms but negative electrodiagnostic findings. Excluded from analyses are tests classified as "unable to make recommendations" (see text for list of tests).

(参考文献 1 より引用)

文献 2 では感度 42%、特異度 35%と記載されている…。この結果だと目も当てられないが、他

の検査と比べて突出した特性ではないということが重要なポイントだと思う。

Table 5  
Sensitivity and specificity and 95% confidence interval of clinical tests in diagnosis of carpal tunnel syndrome and tenosynovitis

	Carpal tunnel syndrome		Tenosynovitis	
	Sensitivity (95% CI)	Specificity (95% CI)	Sensitivity (95% CI)	Specificity (95% CI)
Tinel	30 (24.3–36.4)	65 (58.4–71.1)	46 (40.5–53.6)	85 (79.6–89.2)
Phalen's	47 (40.5–53.6)	17 (12.5–22.6)	92 (35.6–48.7)	87 (81.8–90.9)
Reverse Phalen's	42 (35.6–48.7)	35 (29.0–41.6)	75 (68.8–80.3)	85 (79.6–89.2)
Carpal tunnel compression	46 (39.5–52.6)	25 (19.7–31.2)	95 (91.1–97.3)	97 (93.7–98.7)

(参考文献 2 より引用)

やはり、プライマリ・ケアのセッティングでは、症状や所見を組み合わせで診断していくのが王道だと思う。

#### 参考文献

1. MacDermid JC, Wessel J. Clinical diagnosis of carpal tunnel syndrome: a systematic review. *J Hand Ther.* 2004 Apr–Jun;17(2):309–19. Review. PubMed PMID:15162113.
2. El Miedany Y, Ashour S, Youssef S, Mehanna A, Meki FA. Clinical diagnosis of carpal tunnel syndrome: old tests–new concepts. *Joint Bone Spine.* 2008 Jul;75(4):451–7. doi: 10.1016/j.jbspin.2007.09.014. Epub 2008 May 2. PubMed PMID: 18455945.