2019 articles which may change your practice

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2019 articles which may change your practice Faculty/Presenter Disclosure

- Faculty: Christopher Patterson
- Relationships with financial sponsors:

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Patents: Nil

Other: Hamilton Health Sciences, Niagara Health System

Potential for conflict(s) of interest:

Dr. Patterson has no real or potential conflict(s) of interest relevant to this presentation

2019 articles

Objectives

- Examine new evidence on the care of frail older adults in Long Term Care
- Recognize the relevance of the research to one's Long Term Care practice
- Identify effective, targeted interventions from each article that could change one's practice

To prepare, I perused contents of JAMDA, Age and Ageing, J Am Geriatr Society, Ann Intern Med, CMAJ and personal alert services

2019 articles

- Would CBD help my mother's dementia?
- He hasn't been the same since his hip replacement...
- Dual antiplatelet drugs: how long after CVE?
- Can we reduce the risk of catheter associated infection?
- Gabapentinoids for LBP: good or bad..
- Trazodone is safe, right?
- Save that leg!
- Latest from Canadian Consensus Conference on Dementia
- Can hearing aids prevent dementia?

Would CBD help dementia?

Agitation and aggression common in AD

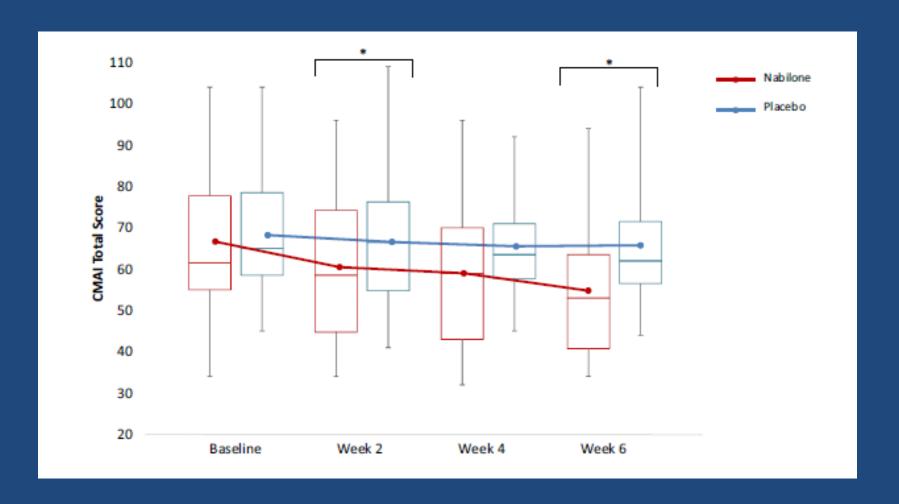
Management

- 1. non pharmacological
- 2. antidepressants
- 3. antipsychotics
- Endocannabinoid receptors widespread in CNS
- Small trials and case reports have suggested that cannabinoids may reduce agitation in AD

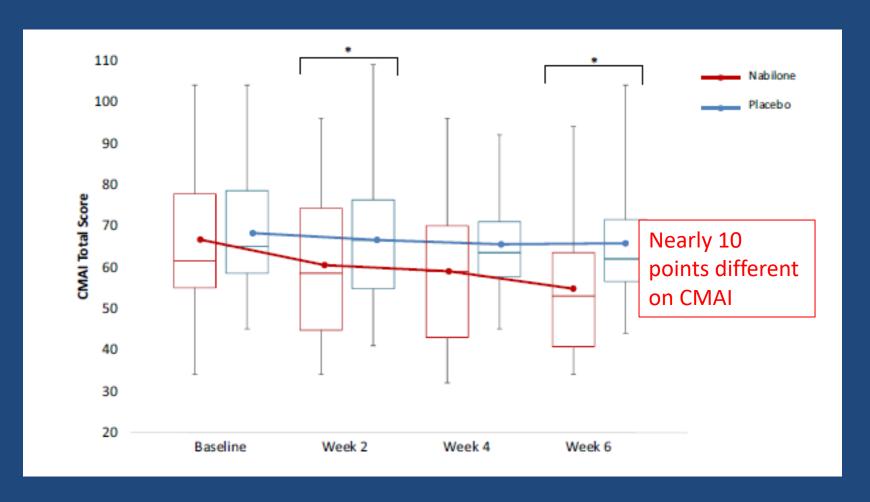
Nabilone for agitation in AD

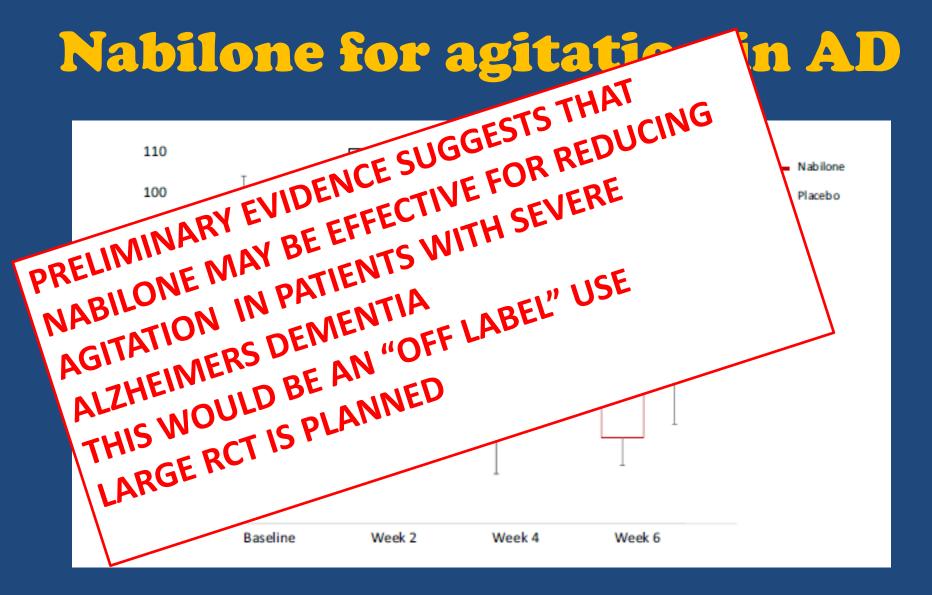
RCT double blind crossover-6 weeks	
Number of participants	39
Age (years)	87 ± 10
Male %	77
Inpatient %	72
Medications %	Cholinesterase inhibitors 53, memantine 29, antidepressant 87, atypical antipsychotic 45
sMMSE score	6.5 ± 6.8
CMAI	67.9 ± 17.6
NPI total	34.3 ± 15.8
NPI agitation/aggression	7.1± 3.3

Nabilone for agitation in AD



Nabilone for agitation in AD





He hasn't been the same since his hip replacement

- In older people, postoperative delirium is very common
- We frequently encounter the "never the same" scenario...
- Estimated risk of diagnosed postoperative stroke 0.14-0.7%¹
- High risk surgery (cardiac, vascular) 2.2-5.2%²
 - 1. Lancet 2019; 6736(19): 31795
 - 2. Wong GY et al Anesthesiology 2000; 92: 425

Non cardiac surgery in people over 65 years of age

N (19 sites in 9 countries)	1114
Mean age	73 ± 6
Female %	44
Hypertension %	64
DM %	27
CAD %	15
Stroke %	5
TIA %	4
PVD %	4
Type of surgery %	Ortho 41, uro/gyne 24, general 23

The NeuroVISION Investigators Lancet 2019; 6736(19): 31795

Perioperative covert strokes 7% (95% CI: 1-9) of people ≥ 65 undergoing non cardiac surgery

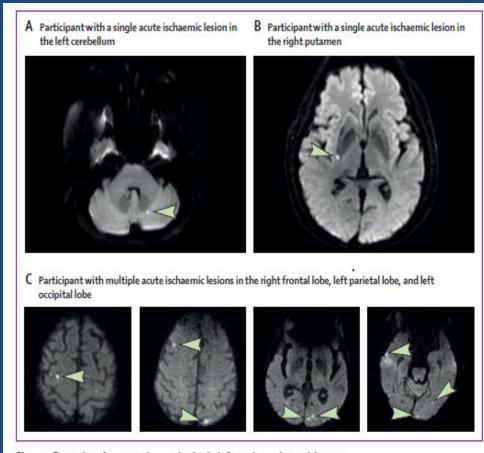


Figure 1: Examples of acute perioperative brain infarcts in study participants Examples are shown on diffusion-weighted imaging sequences.

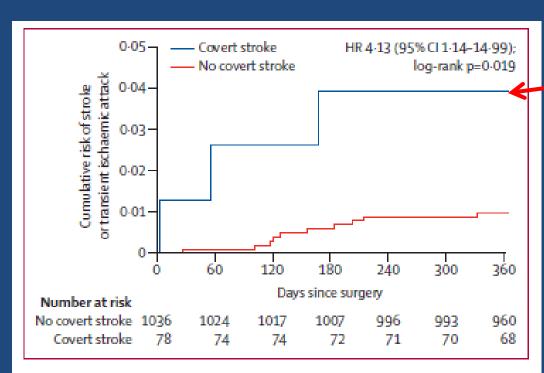


Figure 2: Kaplan-Meier estimates of the composite outcome of overt stroke and transient ischaemic attack at 1 year HR=hazard ratio. Stroke and TIA in people who experienced a perioperative covert stroke

	Covert stroke	No covert stroke	Hazard ratio
Delirium in first 3 days%	10	5	2.24 (1.06-4.730
Stroke at 1 year%	3	1	3.92 (0.82-18.870)
Stroke or TIA at one year%	4	1	4.13 (1.14-14.95)
Cognitive decline at 1 year (≥ 2 points on MoCA)	42	29	1.98 (1.22-3.20)

The NeuroVISION Investigators Lancet 2019; 6736(19): 31795

For our older patients going for noncardiac surgery We can estimate a risk of covert stroke < 10%

Doubles the risk of postoperative delirium Doubles the risk of cognitive decline at one year But a covert stroke:

Quadruples the risk of Stroke or TIA

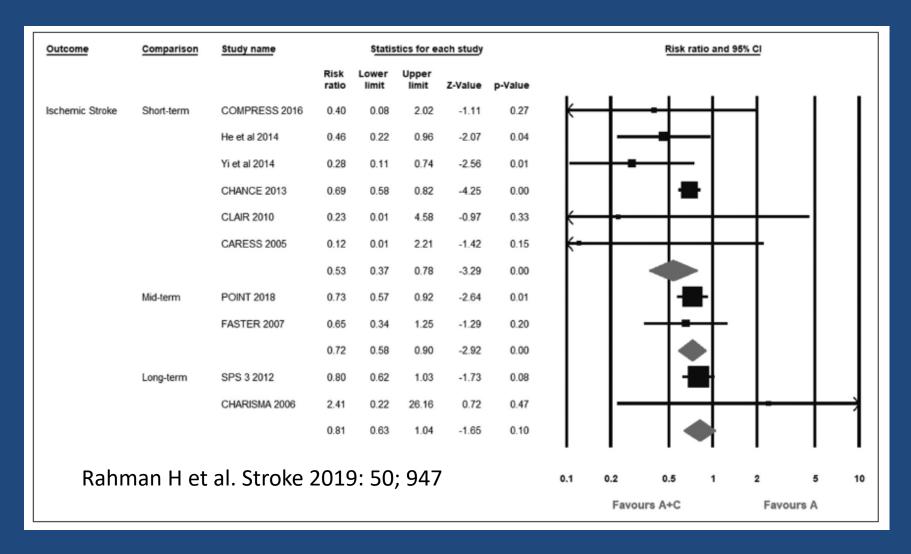
vision investigators Lancet 2019; 6736(19): 31795

Dual antiplatelet therapy after thrombotic CVE

- ASA reduces risk of recurrent CVA and TIA if started soon after event
- ASA plus clopidogrel further reduces risk of recurrent CVE
- Dual antiplatelet therapy increases risk of bleeding so....
- What is the optimal balance of benefit and risk?
- SER and meta analysis of 10 RCTS, comparing short,
 medium and long term DAPT on benefits and risks

Rahman H et al. Stroke 2019: 50; 947

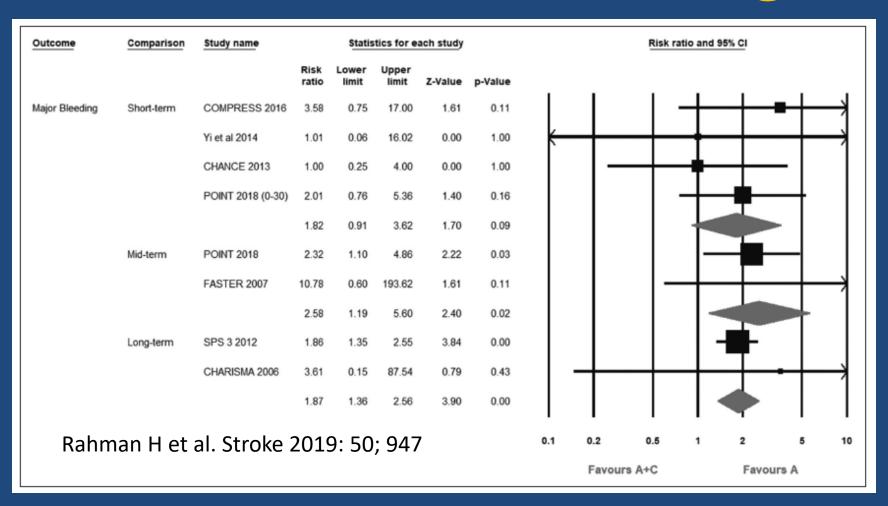
ASA plus clopidogrel in CVE Benefits: reduced recurrent CVE



ASA plus clopidogrel in CVE Benefits: reduced recurrent CVE

utcome	Comparison	Study name	Statistics for each study Risk ratio and 95% CI										
			Risk ratio	Lower limit	Upper limit	Z-Value	p-Value					_	
chemic Stroke	Short-term	COMPRESS 2016	0.40	0.08	2.02	-1.11	0.27	\leftarrow	┿	\vdash	\vdash	1	1
		He et al 2014	0.46	0.22	0.96	-2.07	0.04		1	•	ł		ı
	,	Yi et al 2014	0.28	0.11	0.74	-2.56	0.01		┿	+			ı
	(CHANCE 2013	0.69	0.58	0.82	-4.25	0.00			-			l
		RR	95	5% CI		р		(-					
1 mc	onth	0.53	0	37-0	.78	0.00			_		L		
3 mc	onths	0.72	0.	58-0	.90	0.00)			+			
28-4	2 months	0.81	0.	63-1	.04	0.10				•			

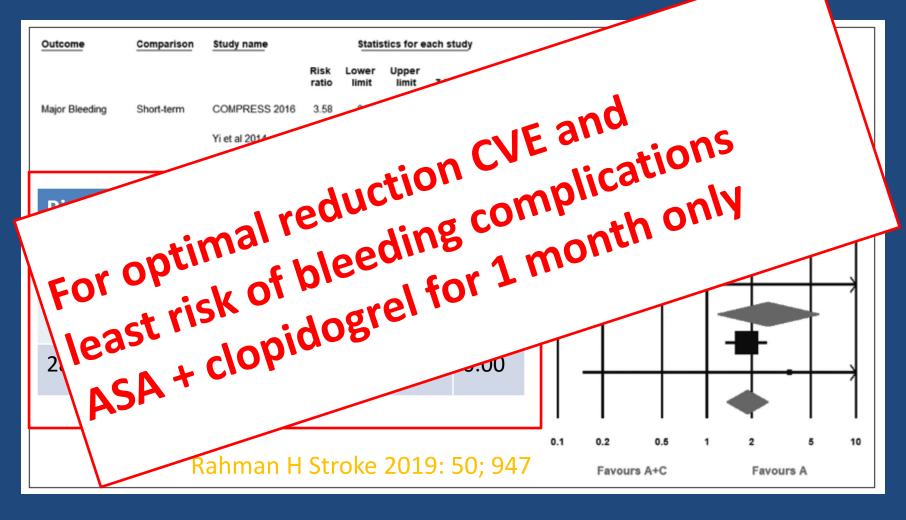
ASA plus clopidogrel in CVE Risks: increased bleeding



ASA plus clopidogrel in CVE Risks: increased bleeding

Outcome	Comparison	Study name		Statis	itics for e	ach study				Risk	ratio and	1 95% CI			
			Risk ratio	Lower limit	Upper limit	Z-Value	p-Value								
Major Bleeding	Short-term	COMPRESS 2016	3.58	0.75	17.00	1.61	0.11				+	+	-	\vdash	\Rightarrow
		Yi et al 2014	1.01	0.06	16.02	0.00	1.00	(+	\dashv	+	\dashv		\vdash	\dashv
		CHANCE 2013	1.00	0.25	4.00	0.00	1.00		-	\dashv	-+	\dashv	_		
		POINT 2018 (0-30)	2.01	0.76	5.36	1.40	0.16	-			+	-		†	
Risk	of bleeding	ng RR		959	% CI		р				-	7	<u> </u>	-	
1 mc	onth	1.82) -	0.9	1-3.6	52	0.16			-	1	4	<u> </u>	-	7
3 mc	onths	2.58	}	2.5	8-5.6	50	0.02		\bot	\perp	4	7	_		\rightarrow
28-4	2 months	1.87	•	1.3	6-2.5	56	0.00	0.1	0.2	0.5	1	2		5	10
										ırs A+C			ours A		

ASA plus clopidogrel in CVE Risks: increased bleeding



Can we reduce the risk of catheter associated infections?

"Good quality evidence from one network metaanalysis and one systematic review suggested that there was no statistically significant difference between various topical cleansing agents, ranging from soap and water to chlorhexidine, used prior to urinary catheter insertion in the rate of catheterassociated urinary tract infections".

Clark M, Wright M-D. Antisepsis for urinary catheter insertion: a review of clinical effectiveness and guidelines. Ottawa: Canadian Agency for Drugs and Technologies in Health (CADTH); 2019 Jan

Can we reduce the risk of catheter associated infections?

- 3 hospitals in Australia N=1642
- Men and women, not in/out or suprapubic
- Stepped wedge design (control → intervention)
- Control period: meatal cleansing with normal saline
- 2889 catheter days: 13 UTIs, 29 asymptomatic bact.
- Intervention period with chlorhexidine 0.1%
- 2338 catheter days: 4 UTIs, 16 asymtomatic bact.

Can we reduce the risk of catheter associated infections?

Per 100 catheter days	Saline 0.9%	Chlorhexidine 1%	RR	95%
UTI	0.45	0.17	0.26	0.08-0.86
Asymptomatic bacteria	1.0	0.68	0.06	0.01-0.32

Caveats:

- Not a randomized controlled trial, not blinded
- Urine sent for culture when infection suspected (rigorous criteria)
- Urine cultures not sent at prespecified times

Can we reduce the risk of catheter associated info

Per 100 catheter days	Saline 0.9%	SUES
UTI	0.45 METHOLITAL IS	
Asymptomatic bacteria	WEDIRONNIE	ISING

Cal DESPITE FLANLINGO • NO POTENTIAL TUIS TR

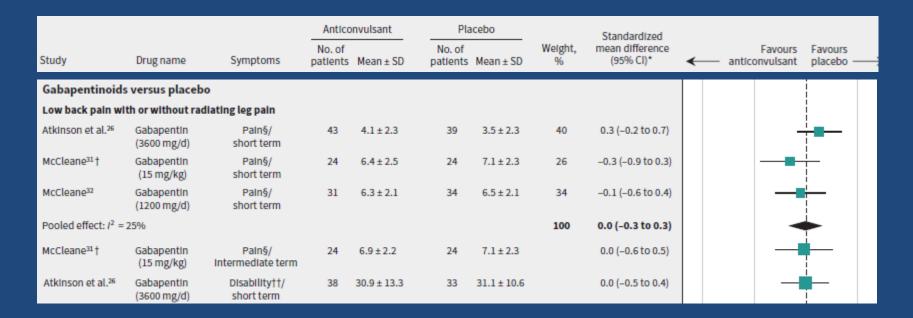
- (appro SUGGEST THAT MEATAL CLEANSING CATHETER • Urine MAY REDUCE RISK OF CATHETER ASSOCIATED INFECTIONS ction suspected
 - sent at prespecified times

Fasugba O et al. Lancet Infect Dis 2019; 19: 611

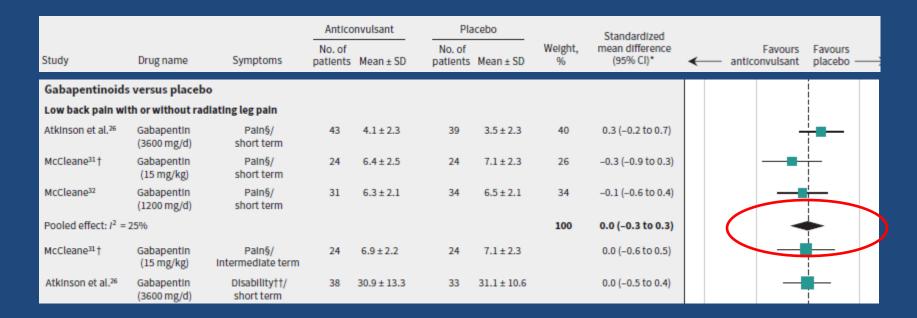
- Low back pain is extremely common 90%, most common cause of disability
- 5-10% sciatica: gabapentinoids valuable in neuropathic pain (e.g. diabetic neuropathy)
- Treatment with gabapentinoids included in national guidelines for low back pain (e.g. Institute of Health Economics Alberta)

- Only one RCT showed benefit in short term pain: gabapentin 3600 mg daily
- Small trial 23 participants received active treatment, 20 received placebo¹
- Recent SER and meta analysis
- 9 randomized controlled trials
- 859 participants
- Gabapentin (GP) and pregabalin (PG)

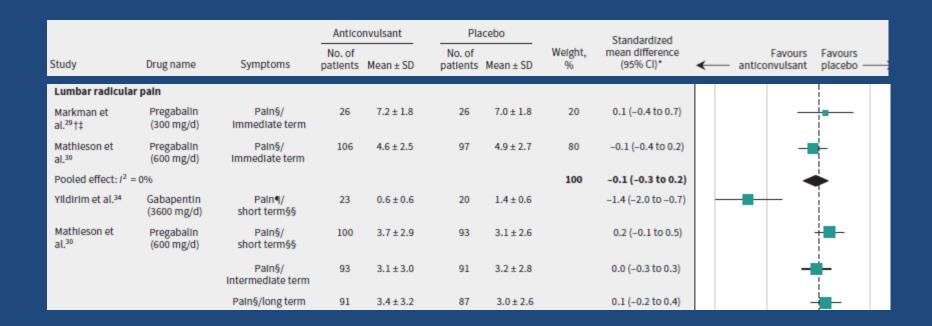
SER and Meta analysis of 9 RCTs N = 859 GP in LBP \pm radiation to legs short term pain



SER and Meta analysis of 9 RCTs N = 859 GP in LBP \pm radiation to legs short term pain



GP or PG in LBP radiating to legs: short, medium and long term pain



GP or PG in LBP radiating to legs: short, medium and long term pain

Study	Drug name	Symptoms	No. of	nvulsant Mean ± SD	No. of	cebo Mean ± SD	Weight,	Standardized mean difference (95% CI)*	Favours Favours anticonvulsant placebo	
Lumbar radicular	r paln									
Markman et al. ²⁹ †‡	Pregabalin (300 mg/d)	Pain§/ Immediate term	26	7.2 ± 1.8	26	7.0 ± 1.8	20	0.1 (-0.4 to 0.7)		
Mathleson et al. ³⁰	Pregabalin (600 mg/d)	Pain§/ Immediate term	106	4.6 ± 2.5	97	4.9 ± 2.7	80	-0.1 (-0.4 to 0.2)		
Pooled effect: I2 =	: 0%						100	-0.1 (-0.3 to 0.2))
Yildirim et al. ³⁴	Gabapentin (3600 mg/d)	Pain¶/ short term§§	23	0.6 ± 0.6	20	1.4 ± 0.6		-1.4 (-2.0 to -0.7)		
Mathleson et al. ³⁰	Pregabalin (600 mg/d)	Pain§/ short term§§	100	3.7 ± 2.9	93	3.1 ± 2.6		0.2 (-0.1 to 0.5)		
		Pain§/ Intermediate term	93	3.1 ± 3.0	91	3.2 ± 2.8		0.0 (-0.3 to 0.3)		
		Pain§/long term	91	3.4 ± 3.2	87	3.0 ± 2.6		0.1 (-0.2 to 0.4)	<u> </u>	

Pregabalin and disability

Study	Drug name	Symptoms	No. of	nvulsant Mean ± SD	No. of	cebo Mean ± SD	Weight, %	Standardized mean difference (95% CI)*	← antico	Favours Favours onvulsant placebo ————————————————————————————————————
Markman et al. ²⁹ †‡	Pregabalin (300 mg/d)	Disability††/ Immediate term	26	37.8 ± 14.1	26	36.5 ± 14.1	21	0.1 (-0.5 to 0.6)		
Mathleson et al. ³⁰	Pregabalin (600 mg/d)	Disability‡‡/ Immediate term	101	11.7 ± 6.0	96	12.5 ± 6.3	79	-0.1 (-0.4 to 0.1)		-
Pooled effect: 12	= 0%						100	-0.1 (-0.3 to 0.2)		-
Mathleson et al. ³⁰	Pregabalin (600 mg/d)	Disability‡‡/ short term	93	9.1 ± 7.4	89	8.5 ± 7.1		0.1 (-0.2 to 0.4)		-
		Disability‡‡/ Intermediate term	85	7.4 ± 7.4	87	8.8 ± 7.5		-0.2 (-0.5 to 0.1)		
		Disability‡‡/ long term	83	8.2 ± 7.6	79	7.4 ± 7.2		0.1 (-0.2 to 0.4)		-

Pregabalin and disability

Study	Drug name	Symptoms	No. of	nvulsant Mean ± SD	No. of	cebo Mean ± SD	Weight, %	Standardized mean difference (95% CI)*	Favours Favours — anticonvulsant placebo ——
Markman et al. ²⁹ †‡	Pregabalin (300 mg/d)	Disability††/ Immediate term	26	37.8 ± 14.1	26	36.5 ± 14.1	21	0.1 (-0.5 to 0.6)	
Mathleson et al. ³⁰	Pregabalin (600 mg/d)	Disability‡‡/ Immediate term	101	11.7 ± 6.0	96	12.5 ± 6.3	79	-0.1 (-0.4 to 0.1)	
Pooled effect:	I ² = 0%						100	-0.1 (-0.3 to 0.2)	
Mathleson et al. ³⁰	Pregabalin (600 mg/d)	Disability‡‡/ short term	93	9.1 ± 7.4	89	8.5 ± 7.1		0.1 (-0.2 to 0.4)	
		Disability‡‡/ Intermediate term	85	7.4 ± 7.4	87	8.8 ± 7.5		-0.2 (-0.5 to 0.1)	
		Disability‡‡/ long term	83	8.2 ± 7.6	79	7.4 ± 7.2		0.1 (-0.2 to 0.4)	

- Adverse effects of gabapentin and pregabalin
- Renally excreted, t½ greatly increased in renal impairment (and thus many older people)
- Edema common up to 8% GP, 12% PG
- Somnolence up to 20% GP, 35% PG
- Both on Beers list (use with caution or not at all)

- Adverse effects of gabapentin and present valin
- Renally excreted, t½ greatly without impairment
 Edema corrected, t¾ greatly without impairment
- RADIATION TO LEGS
- GABAPENTIN AND PREGABALIN ARE NOT ASSOCIATED WITH IMPROVENENT IN PAIN OR DISABILITY

Trazodone, safe right?

- With the (appropriate) trend to prescribing fewer antipsychotic drugs to older people, especially in long term care...
- Trazodone is being prescribed more frequently
- Is low dose trazodone safer than low dose antipsychotics?

Trazodone, safe right?

- Source information collected from linked health administration at ICES including Inter RAI data
- Long Term Care residents, Ontario aged ≥ 66 yrs
- December 1st 2009 to December 31st 2015
- 6588 prescribed trazodone
- 2875 quetiapine, olanzapine or risperidone
- Primary outcome: composite of fall or major osteoporotic fracture within 90 days of prescription

Watt J et al. CMAJ 2018; 190: E1376

Trazodone, safe right?

Events per 100 person years

Outcome	Trazodone	Atypical antipsychotics	Risk difference 95% CI
Falls or major OP fracture	23	25	-0.5 (-1.5 to +0.5)
Falls	22	24	-0.3 (-1.4 to +0.7)
Major OP fracture	8	7	0.1 (-0.5 to +0.7)
Hip fracture	5	5	-0.06 (-0.5 to +0.4)
All cause mortality	60	77	-4.3 (-6.0 to -2.6)

Watt J et al. CMAJ 2018; 190: E1376

Trazodone, safe right?

Events per 100 person years

Falls or major OP fracture Falls Major OP fracture Hip fracture All cause Compared trazodore	Trazodone	Atypical	otics, and
Falls or major OP fracture	23	lantiper fall	15 0
Falls	atypics	risks for	······································
Major OP fracture	vith amilar	0	to +0.7)
Hip fracture moared	has sir.	ause mo	-0.06 (-0.5 to +0.4)
All cause Commodone	cox 3	II car	-4.3 (-6.0 to -2.6)
trazou fractures But Iow	er risk for		

Watt J et al. CMAJ 2018; 190: E1376

 COMPASS study, a large multicentre RCT of patients with CAD and PAD. This study concerns PAD

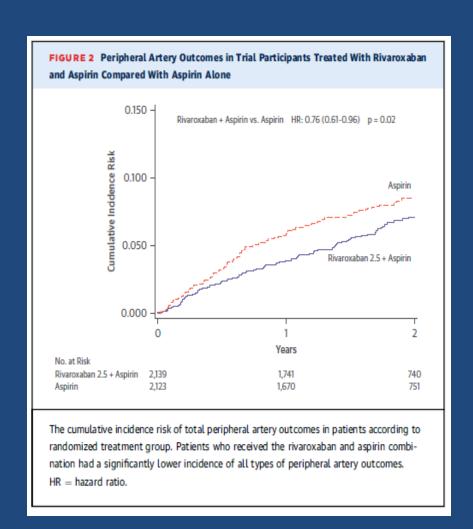
Comparing 3 regimens:

- ASA alone plus rivaroxaban placebo
- ASA plus rivaroxaban 2.5 mg bid
- Rivaroxaban plus ASA placebo

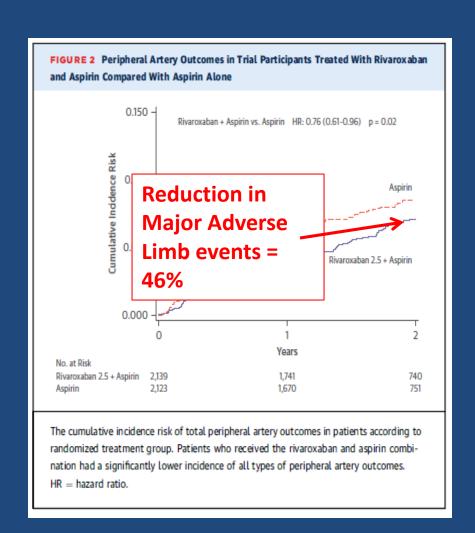
Outcomes:

- Major Adverse Cardiovascular Events (MACE)-cardiac death, MI, stroke
- Major Adverse Limb Events (MALE)-acute or chronic ischemia, angioplasty ± stent, surgery or amputation

- COMPASS study
- N=6,391
- Mean age 67 ± 8.5
- HTN 79%
- CAD 65%
- Smoker 75%
- DM 45%
- Previous vascular surgery or angioplasty 32%



- COMPASS study
- N=6,391
- Mean age 67 ± 8.5
- HTN 79%
- CAD 65%
- Smoker 75%
- DM 45%
- Previous vascular surgery or angioplasty 32%



COMPASS Study ASA vs ASA plus rivaroxaban 2.5 mg bid

Outcome	HR	95% CI
Major Adverse Limb Event (MALE)	0.57	0.37 - 0.88
Total vascular amputation	0.42	0.21 - 0.85
Major vascular amputation	0.33	0.12 - 0.92
Major bleeding	1.61	1.09 – 2.36

Anand S J Am Coll Cardiol 2018; 71(20):230

Total In people with significant peripheral Main ASA plus low dose rivaroxaban reduces risk of Major Adverse Limb Major arterial disease Low dose rivaroxaban not yet available Events by 45% Major b in Canada.

5th Canadian Consensus Conference on the Diagnosis and Treatment of Dementia

Deprescription of anti dementia drugs

- After 12 months of use if there has been clinically meaningful worsening of dementia as reflected in changes in cognition, functioning, or global assessment over the past 6 months in the absence of other medical conditions
- If there has been no meaningful benefit (improvement, stabilization, decreased rate of decline)
- Severe/end stage dementia
- Intolerable side effects

5th CCC on the Diagnosis and Treatment of Dementia

Deprescription of anti dementia drugs (2)

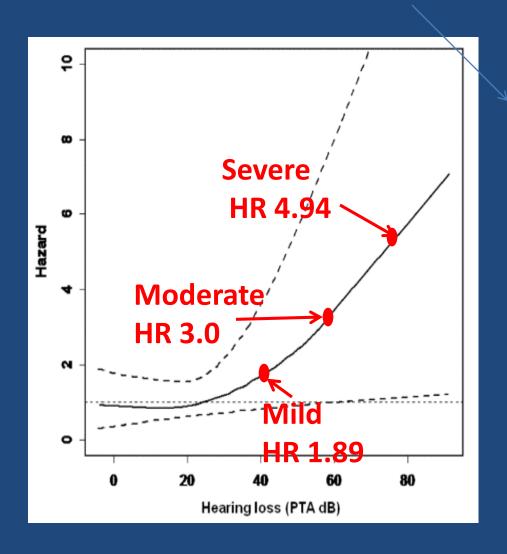
- Poor adherence which precludes safe ongoing use
- CHEI should not be discontinued in individuals who have clinically meaningful psychotic symptoms, agitation or aggression, unless these symptomsa ppear to have worsened by initiation or increase in the dose of CHEI

5th CC on the Diagnosis and **Treatment of Dementia**

- Individuals who have had a clinically meaningful reduction in neuropsychiatric toms(e.g. should ive gnitive
 - memantine should uals with mild

Can hearing aids prevent dementia?

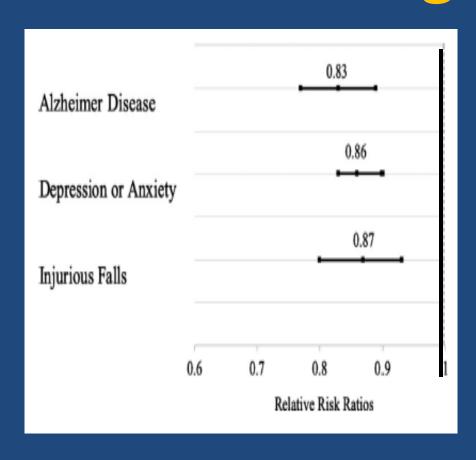
Hearing loss is a risk factor for dementia 11.9 years later (BLSA) No long term RCTs of hearing aids Short term trials demonstrate cognitive improvement



Use of hearing aids delay diagnosis

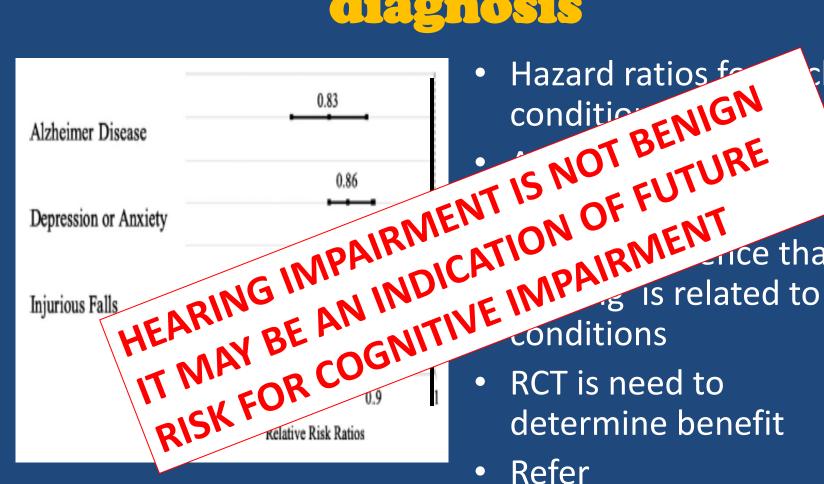
- National Longitudinal claims data (US)
- Based on national private insurance database
- age 66 with no dementia, depression or injurious falls at baseline (2008-2013)
- 14,862 hearing aid users, 100,000 non users
- Follow up 3 years reduced risk of being diagnosed with dementia or Alzheimer's disease, depression anxiety, injurious falls

Use of hearing aids delay diagnosis



- Hazard ratios for each condition
- Association does not imply causation
- Adds to evidence that hearing is related to conditions
- RCT is need to determine benefit
- Refer

Use of hearing aids delay diagnosis



Did I address...

- Would CBD help my mother's dementia? Maybe
- He hasn't been the same since his hip replacement... 7%
- Dual antiplatelet drugs: how long after CVE? < 1 month
- Can we reduce the risk of catheter associated infection?
 Chlorhexidine 1% for cleansing, perhaps
- Gabapentinoids for LBP: good or bad.. Mostly not helpful
- Trazodone is safe, right? Same falls and fractures, mortality
- Save that leg! ASA + low dose rivaroxaban in PAD
- Latest from Canadian Consensus Conference on Dementia
 When to deprescribe Cholinesterase inhibitors
- Can hearing aids prevent dementia? May delay diagnosis...

2019 articles

Please remember to complete your evaluations.

Evaluations can be found on the Mobile App.

Thank you.