



Continuing Medical Education
in General Practice
from the Goodfellow Unit

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Journal Review Service

*Continuing Medical Education
in General Practice from the Goodfellow Unit*

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Acupuncture

27-270 The efficacy of acupuncture in the treatment of temporomandibular joint myofascial pain: A randomised controlled trial

Smith P, Mosscrip D, Davies S, et al. J Dent.

March 2007. Vol.35. No.3. p.259-67.

Reviewed by Dr Alex Chan

Review: In this double (patient and assessor) blinded RCT study the investigators assessed the effect of manual versus sham (using Park Sham Device) acupuncture at ST-7 bilaterally in 27 patients with temporomandibular joint myofascial pain of more than six months duration. Six treatments (20 minutes each) were given over three weeks. Outcomes were measured three days and seven days after the last treatment. Significant

improvement was found in the real acupuncture group but not in the sham acupuncture group with regard to functional impairment, mean VAS for pain intensity, areas affected pain bilaterally, maximum inter-incisor opening, and maximum pain-free opening.

Comment: All the patients believed they were treated with real acupuncture. Further evaluation of the Park Sham Device in a bigger group of participants will be worthwhile.

27-271 Do the neural correlates of acupuncture and placebo effects differ?

Dhond RP, Kettner N, Napadow V. Pain.

March 2007. Vol.128. No.1-2. p.8-12.

Reviewed by Dr Alex Chan

Review: A topical review of an interesting subject. It was obvious from different studies that there was an overlap of brain areas affected by real acupuncture and sham acupuncture. Certain brain areas could also be affected by expectancy of the subjects. However, signal changes in the amygdale, insula, and hypothalamus were likely to be acupuncture specific. It was postulated that repeated acupuncture treatment could have prolonged effects on specific brain areas as altered cortical somatosensory processing was found in neuropathic patients treated with long-term acupuncture treatments. Investigations to further clarify the issue were recommended.

Comment: It is interesting to note that all studies showed sham acupuncture is not inert, at least at the brain level. However, acupuncture effect can never be explained completely by examining changes in the brain alone as it is only one area of the body affected by acupuncture. As yet, there are few studies examining the local

neurological and anti-inflammatory effects of real and sham acupuncture.

27-272 Test-retest study of fMRI signal change evoked by electroacupuncture stimulation

Kong J, Gollub RL, Webb JM, et al. *NeuroImage*. 1 February 2007. Vol.34. No.3. p.1171-81.

Reviewed by Dr Alex Chan

Review: Do activation patterns in the brain evoked by electroacupuncture remain the same every time when the same acupoints are stimulated? This study attempted to answer this question by recording the fMRI signal changes in the brain of six subjects across six identical scanning sessions during which four conditions were executed sequentially: electroacupuncture to GB37, UB60, a non-acupoint and a control task of finger tapping. The activation maps evoked by electroacupuncture were similar for GB37, UB60, and the non-acupoint. For the same individual, the fMRI signal changes were also found to be significantly more variable than those for the control finger-tapping task across different sessions.

Comment: Electroacupuncture was only applied for 30 seconds to each point in this study. fMRI signal changes in the brain may only reflect the brain's response to needling and electro-stimulation to the leg. This may be the reason that there were no significant differences in the signal changes with the different locations of the point of stimulation.

27-273 The effect of electroacupuncture on spasticity of the wrist joint in chronic stroke survivors

Mukherjee M, McPeak LK, Redford JB, et al. *Arch Phys Med Rehabil*. February 2007. Vol.88. No.2. p.159-66.

Reviewed by Dr Alex Chan

Review: The effect of electroacupuncture (EA, 30 minutes, 2Hz) and strengthening exercises (30-45 minutes) on spasticity of the wrist were evaluated in seven stroke patients in this crossover study. There was no significant effect from strengthening exercises alone but significant reduction in spasticity was observed in the combined treatment group after six weeks of treatment. No immediate effect from EA alone was observed. More specifically, the reduction in spasticity was present across different joint positions and velocities of passive stretch.

Comment: The acupoints used were LI-4, LI-11, LI-10, LI-15, SI-3, TW-5. A small but detailed and meticulous study well worth reading.

27-274 Electroacupuncture improves restraint stress-induced delay of gastric emptying via central glutaminergic pathways in conscious rats

Iwa M, Nakade Y, Pappas TN, et al. *Neurosci Lett*. 15 May 2006. Vol.399. No.1-2. p.6-10.

Reviewed by Dr Alex Chan

Review: This was experimental research investigating the effect and possible mechanism of action of acupuncture on restraint stress-induced delay in gastric emptying in rats. Electroacupuncture (EA) at ST-36 significantly improved stress-induced delayed gastric emptying but the effect was prevented by pre-treatment with intracisternal injection of a glutamine receptor antagonist. The

experiment indicated that the effect of EA at ST-36 on stress related gastric emptying disturbance could be through stimulation of glutaminergic neurons in the brainstem.

Comment: Psychological stress significantly affects gastrointestinal motility, for example, in irritable bowel syndrome and dysfunctional dyspepsia. ST-36 has always been included in prescriptions for these conditions by most practitioners.

27-275 A randomised-controlled trial in Sweden of acupuncture and care interventions for the relief of inflammatory symptoms of the breast during lactation

Kvist LJ, Hall-Lord ML, Rydhstroem H, et al. *Midwifery*. June 2007. Vol.23. No.2. p.184-95.

Reviewed by Dr Alex Chan

Review: The effects of acupuncture and essential care in the management of 205 breastfeeding mothers with mastitis were compared by randomising the patients into three groups: essential care plus oxytocin nasal spray as required; essential care with acupuncture at HT-3, GB-21; essential care with acupuncture at HT-3, GB-21, and SP-6. The authors were trying to find out if SP-6, which was thought to have oxytocin-like effect, gave any additional benefits. Acupuncture was found to significantly reduce the Severity Index of erythema, breast tension and pain on days three and four compared with essential care alone, but not in reducing the duration of symptoms. Most mothers (88%) were given only one acupuncture treatment. Addition of SP6 did not make any significant difference.

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Comment: It is useful to remember that mastitis may or may not be accompanied by infection. Conservative management and close monitoring may be an option for the majority of patients. In this study population of 205, only 31 women were prescribed antibiotics.

27-276 Impact of patient expectations on outcomes in four randomized controlled trials of acupuncture in patients with chronic pain

Linde K, Witt CM, Streng A, et al. *Pain*. April 2007. Vol.128. No.3. p.264-71.

Reviewed by Dr Alex Chan

Review: In this study data from four RCTs of acupuncture (real acupuncture versus minimal acupuncture) in patients with migraine, tension-type headaches, chronic low back pain, and osteoarthritis of the knee were pooled together for statistical analysis of the influence of expectations on clinical outcome. Prior to acupuncture participants were asked how effective they consider acupuncture to be in general and what were their personal expectations from the acupuncture treatments. Then after three sessions of acupuncture, they were asked how confident they felt that their symptoms would be alleviated by the treatments. The odds ratio for response was 1.67 in favour of those who considered acupuncture to be highly effective compared to those who were sceptical. The odds ratio was 2.03 and 2.35 respectively for those who had higher expectations and confidence in better outcome from acupuncture.

Comment: Positive thinking does help!

27-277 Pain relief by applying transcutaneous electrical nerve stimulation (TENS) on acupuncture points during the first stage of labor: A randomized double-blind placebo-controlled trial

Chao A-S, Chao A, Wang T-H, et al. *Pain*. February 2007. Vol.127. No.3. p.214-20.

Reviewed by Dr Alex Chan

Review: A systematic review of eight randomised controlled trials showed

TENS only had weak analgesic effects during labour. Traditionally, for pain relief during labour two TENS electrodes were placed alongside the spine at T10 « L1 and S2 « S4. The use of TENS at the traditional acupuncture points LI-4 and SP6 bilaterally (at 100Hz with pulse frequency of 2Hz) in this study resulted in a decrease of median VAS score from 8 to 4.5 after 30 minutes of treatment. The pain relief lasted a median of 74.8 minutes with each real TENS session. Significantly, 96% of the TENS group were willing to have the same form of analgesia treatment for the next delivery comparing with only 66% of the TENS placebo group ($P < 0.001$).

Comment: Use of traditional acupuncture points LI-4 and SP-6 appeared to work well in this TENS study.

Adolescent Health

27-278 Interventions to reduce harm associated with adolescent substance use

Toumbourou JW, Stockwell T, Neighbors C, et al. *Lancet*. 21-27 April 2007. Vol.369. No.9570. p.1391-1401.

Reviewed by Dr Tony Hanne

Review: This article is part of an excellent series on adolescent health (No. 4). It was based on a wide search of the literature. There are really no surprises. Alcohol is by far the largest cause of accidental death in the 15-29 age group in developed countries. Cigarettes will cause the greatest number of deaths long-term. Other substance use is important but cause only one quarter of the deaths from alcohol. Adolescent behaviour is likely to shape ongoing adult practice. Cost and availability have a significant effect on use of alcohol and tobacco, as does limiting the places where they can be consumed. Illicit drug use is most effectively discouraged by a combination of cutting off supply and at the same time making drugs less attractive. Social circumstances have

a major effect on substance use, particularly peer pressure. Educational programmes have little effect. (To read the rest of this series see 27-279 – 27-283).

Comment: These findings should be translated into government policy in, for example, raising the drinking age again. From a general practice point of view the greatest contribution we can make is in reinforcing the resilience factors which help young people from stable homes to say no.

27-279 Global perspectives on the sexual and reproductive health of adolescents: patterns, prevention, and potential

Bearinger LH, Sieving RE, Ferguson J et al. *Lancet*. 7-13 April 2007. Vol.369. No.9568. p.1220-31.

Reviewed by Dr Tony Hanne

Review: No.2 in the Adolescent Health Series. See 27-278, 27-280, 27-281, 27-282 and 27-283.

27-280 Pubertal transitions in health

Patton GC, Viner R. *Lancet*. 24-31 March 2007. Vol.369. No.9567. p.113-9.

Reviewed by Dr Tony Hanne

Review: No.1 in the Adolescent Health Series. See 27-278, 27-279, 27-281, 27-282 and 27-283.

27-281 Mental health of young people: a global public-health challenge

Patel V, Flisher A, Hetrick S, et al. *Lancet*. 14-20 April 2007. Vol.369. No.9569. p.1302-13.

Reviewed by Dr Tony Hanne

Review: No. 3 in the Adolescent Health Series. See 27-278, 27-279, 27-280, 27-282 and 27-283.

27-282 Adolescents with a chronic condition: challenges living, challenges treating

Sawyer SM, Drew S, Yeo MS, et al. *Lancet*. 28 April-4 May 2007. Vol.369. No.9571. p.1481-9.

Reviewed by Dr Tony Hanne

Review: No.5 in the Adolescent Health Series. See 27-278, 27-279, 27-280, 27-281 and 27-283.

27-283 Youth-friendly primary-care services: how are we doing and what more needs to be done?

Tylee A, Haller DM, Graham T, et al. *Lancet*. 5-11 May 2007. Vol.369. No.9572. p.1565-73.

Reviewed by Dr Tony Hanne

Review: No.6 in the Adolescent Health Series. See 27-278, 27-279, 27-280, 27-281 and 27-282.

27-284 Instability in the diagnosis of metabolic syndrome in adolescents

Goodman E, Daniels SR, Meigs JB, et al. *Circulation*. 1 May 2007. Vol.115. No.17. p.2316-22.

Reviewed by Dr Jim Vause

Review: With the obesity epidemic, diagnosis of metabolic syndrome is moving evermore down the age spectrum towards young adults and adolescence. However the diagnostic criteria at younger ages is uncertain and risk researchers in Boston, Massachusetts analysed data from 1098 participants followed up for three years, looking at metabolic syndrome as defined using three different standards. Approximately half of adolescents with baseline metabolic syndrome lost the diagnosis at follow-up regardless of the definitions used and several new cases were identified during the study.

Comment: Because of the implication of metabolic syndrome diagnosis, there is a need to tread with caution in diagnosing this condition in adolescence.

Alcohol and Substance Abuse

27-285 Legal piperazine-containing party pills – a new trend in substance misuse

Sheridan J, Butler R, Wilkins C, et al. *Drug Alcohol Rev*. May 2007. Vol.26. No.3. p.335-43.

Reviewed by Dr Helen Moriarty

Review: A discussion paper, two NZ research teams combine to back-ground BZP and related substances as emerging drugs of abuse in New Zealand. These substances are banned in many other countries, de-

spite little evidence on addictive capability and other related harms. Marketing hype in NZ portrays these substances as a legal and safer alternative to illicit stimulant use. That NZ still regards these as legal substances is seen as an unusually liberal approach to drug abuse policy, hence the NZ government is under pressure to revise the current status of party pills. The NZ government funded several research teams, including these two, to investigate the current use and abuse in New Zealand to assist a decision about restriction of the substances. There are a number of expected scenarios that could arise in response to changes in availability of these substances, based upon prior international experience with other substances.

Comment: The paper is an interesting commentary on what and why we regard some substances as illicit drugs. Food for thought.

27-286 Circuit breakers for addiction

Foy A. *Intern Med J*. May 2007. Vol.37. No.5. p.320-5.

Reviewed by Dr Helen Moriarty

Review: An interesting article which summarises current knowledge on neurobiology of addiction in a very readable manner, then covers key substances of addiction and discusses the pharmacological rationale for treatments – both current and upcoming.

Comment: This is a good overview, but NZ readers should beware: many of the listed substances are not registered for use for these purposes in NZ and those that are registered are not subsidised so can only be prescribed here at full cost to patient.

27-287 Prevalence of methylphenidate use among Canadian children following parental divorce

Strohschein LA. *CMAJ*. 5 June 2007. Vol.176. No.12. p.1711-4.

Reviewed by Dr Jim Vause

Review: A Canadian researcher found in a study of children from 1994 and 2000, that those of di-

vorced parents had nearly twice the rate of methylphenidate use compared with those whose parents remained married during the study period (6.3% verse 3.3%). Adjustment for age of the mother and sex and age of the child resulted in methylphenidate use being significantly higher among children whose parents subsequently divorced than among those whose parents remained married (odds ratio 1.82).

Comment: Either there are very blurred margins between the psychosocial and biomedical or methylphenidate is being used for social reasons.

Cardiology

27-288 How effective are dietary interventions in lowering lipids in adults with dyslipidemia?

Buckley D, Muench J, Hamilton A. *J Fam Pract*. January 2007. Vol.56. No.1. p.46-8.

Reviewed by Dr Bruce Adlam

Review: Diets lower in fat, higher in soy protein, or higher in fibre reduce serum total cholesterol, low-density lipoprotein (LDL), and triglycerides. More restrictive low-fat diets also lower high-density lipoprotein (HDL), while soy protein increases HDL. (SOR: C based on meta-analyses of randomised controlled trials [RCTs] measuring intermediate endpoints). A 'portfolio diet' that includes cholesterol-lowering 'functional foods' can reduce total cholesterol and LDL; a Mediterranean-type diet can lower LDL (SOR: C).

Comment: We do not yet know whether these diets will also help patients live longer and more healthy lives or just improve their lipid profiles.

Cardiovascular System

27-289 Risk of myocardial infarction in patients with psoriasis

Gelfand JM, Neimann AL, Shin DB, et al. *JAMA*. 11 October 2006. Vol.296. No.14. p.1735-41.

Reviewed by Dr Raina Elley

Review: Psoriasis, particularly severe psoriasis requiring systemic therapy may be an independent risk factor for myocardial infarction (MI). In the younger age groups (e.g. 30 years), the adjusted relative risk was 1.29 (95% CI, 1.14-1.46) and 3.10 (95% CI, 1.98-4.86) for those with mild and severe psoriasis, respectively. For those in their 60s the increased risk was less: 1.08 (95% CI, 1.03-1.13) and 1.36 (95% CI, 1.13-1.64), respectively. This study was carried out using routinely collected data through primary health care practices in the UK and involved a prospective cohort of 127 139 people with mild psoriasis, 3837 with severe psoriasis and 556 995 controls.

Comment: The authors point out that T-helper cell type 1 immunological diseases, such as psoriasis, are associated with an increased incidence in MI. The hypothesis is that the associated inflammatory processes are important in the development of atherosclerosis.

27-290 Statins therapy and risks for death and hospitalization in chronic heart failure

Go AS, Lee WY, Yang J, et al. JAMA. 1 November 2006. Vol.296. No.17. p.2105-11.
Reviewed by Dr Raina Elley

Review: Statins were found to be associated with a reduced risk of hospitalisation for heart failure in those with pre-existing congestive heart failure (CHF) in this prospective cohort study of 24 598 adults with CHF followed for a median of 2.4 years. While statins have been shown previously to reduce atherosclerotic vascular events and death in people without CHF, it was unclear whether statins would have a detrimental or beneficial effect on CHF. Besides lowering LDL, statins also have a 'pleiotropic' effect by recruiting bone marrow cells in angiogenesis and improving endothelial function. They have also been shown to reduce levels of inflammatory factors, which could be beneficial in CHF. However, low levels of LDL have been associated with more adverse

events in CHF. Statins may also reduce lipoprotein binding to endotoxins, which could lead to increased proinflammatory cytokines, lowered coenzyme Q10 and selenoproteins, which may impair cardiac muscle and function, perhaps worsening CHF. However, this study suggests that, on balance, statins are beneficial to CHF.

Comment: Although this cohort study adjusted for multiple demographic and potential confounding clinical factors when comparing those who started statins with those that did not (it was not randomised), it cannot account for all possible unknown confounders. For example there may be something unknown about people who chose not to take statins compared with those that took them, that would also affect their risk of exacerbation of CHF (e.g. less likely to look after themselves in some other way that was not measured). Randomisation is the only way to achieve balance in unknown as well as known potential confounders when determining the effect of an intervention. RCT evidence of benefit would be more robust.

27-291 Non-invasive computed tomography angiography in the assessment of coronary stent patency: an Australian experience

Soon KH, Cox N, Chaitowitz I, et al. Intern Med J. June 2007. Vol.37. No.6. p.360-4.
Reviewed by Dr Helen Moriarty

Review: This describes a retrospective study over 2.5 years of stent restenosis using patients on a registry and some who participated voluntarily in a trial of CT-coronary arteriography before percutaneous angiography, when the equipment was introduced to Melbourne. Using the two (small and select) data sets the sensitivity and specificity of CT angiography was determined. Although not very sensitive, this procedure was specific, raising the possibility that the method might help as a non-invasive way to eliminate possible stenosis in patients with suggestive symptoms.

Comment: Patients do not like having angiography, and it is not without risk, so this is an interesting and encouraging finding although further studies will be needed to confirm it.

27-292 Uncommon cause of cardiac arrest in the emergency department

Clarke B, Ryan G, Fraser J, et al. Emerg Med Australas. April 2007. Vol.19. No.2. p.169-72.
Reviewed by Dr Patrick McHugh

Review: A case presentation of a patient presenting to an Emergency Department with vomiting, shortness of breath, tachycardia, hypertension, abdominal cramping and subsequent cardiac arrest later attributed to a pheochromocytoma is described.

27-293 Acute coronary syndromes without ST segment elevation

Peters RJG, Mehta S, Yusuf S. BMJ. 16 June 2007. Vol.334. No.7606. p.1265-9.
Reviewed by Dr Len Brake

Review: This is a clinical review and is a no-nonsense clarification of the diagnosis and management of coronary syndromes. A reminder that a careful focused history is the most important diagnostic tool. Normal ECG and cardiac marker findings do not rule out acute coronary syndrome. Classifications are made on the S-T status on admission cardiograms. Long-term treatment includes prevention of recurrent ischaemia with aspirin indefinitely, clopidogrel nine to 12 months, and B-blockers. Secondly the underlying pathological processes are tackled, statins, ACE inhibitors, control diabetes, cessation of smoking, correction of body-weight and increased exercise.

Comment: So nothing really new, but a readable update for the GP. Recommended.

27-294 Optimal treatment of obesity-related hypertension: the Hypertension-Obesity-Sibutramine (HOS) study

Scholze J, Grimm E, Herrmann D, et al. Circulation. 17 April 2007. Vol.115. No.15. p.1991-8.
Reviewed by Dr Jim Vause

Review: The anti-obesity agent sibutramine is being researched for its potential benefits for hypertension control in obese patients as part of its weight reduction effects. This RCT added the drug to antihypertensive regimes in obese hypertensives. Sibutramine treatment resulted in a significantly greater decrease in body weight, body mass index, and waist circumference and a significant increase in diastolic blood pressure during 24-hour blood pressure monitoring compared with placebo treatment. Patients on metoprolol/hydrochlorothiazide group had significantly less weight loss and reduction in visceral obesity when compared with angiotensin-converting enzyme inhibitors and calcium channel blockers.

Comment: Interesting the difference between the different antihypertensive regimes, but as far as treatment for obesity, the long-term benefits – especially following cessation of sibutramine – are lacking.

27-295 Are there big differences among beta-blockers in treating essential hypertension?

Sontheimer D, Hitchcock K, Saseen J. *J Fam Pract.* April 2007. Vol.56. No.4. p.312-4.

Reviewed by Dr Bruce Adlam

Review: Yes, a number of beta-blockers are effective in lowering blood pressure (strength of recommendation (SOR: A)). Cardioselective beta-blockers do not alter lung function studies for patients with chronic obstructive pulmonary disease (COPD) or reversible airway disease (SOR: A). Propranolol and timolol have greater risks of causing fatigue as a side effect (SOR: A). Recent meta-analyses have stirred debate on the effectiveness of the agents in preventing adverse outcomes. The level of evidence has reached the point where the practice of using beta-blockers as monotherapy should be questioned (SOR: C, expert opinion). The debate over whether one beta-blocker is better or worse may be irrelevant when beta-blockers are used with another antihypertensive.

The debate is based on results from meta-analyses that suggest beta-blockers, especially atenolol, may not be as cardioprotective as other antihypertensives. This has been confirmed by a 2007 Cochrane analysis. Despite a half-life of only six to seven hours, atenolol is nearly always dosed once daily, while carvedilol and metoprolol have half-lives of six to 10 and three to seven hours respectively, and are dosed at least twice daily. It is possible that the controversy with beta-blockers arises because atenolol should really be a twice-daily drug.

Comment: Useful article with evidence to support some useful one liners (a) Beta-blockers reduced major cardiovascular outcomes in younger – but not older – patients, (b) A more recent systematic review found beta-blockers to be inferior to calcium channel blockers and renin-angiotensin system inhibitors, (c) Beta-blockers had similar outcomes as diuretics but were less well tolerated than diuretics, (d) The European Society of Cardiology recommends beta-blockers as the first choice for antihypertensive therapy, alone or in combination, for patients with previous myocardial infarction, ischaemic heart disease, arrhythmias or heart failure, asymptomatic left ventricular dysfunction, diabetes, or high risk of coronary disease, based on the efficacy of these drugs in these patient populations.

27-296 In the absence of heart disease, smaller benefits from statins

J Fam Pract. March 2007. Vol.56. No.3. p.174.

Reviewed by Dr Bruce Adlam

Review: In patients without pre-existing heart disease, statin treatment of elevated low-density lipoprotein (LDL) cholesterol will decrease their risk of a first major coronary event and, to a lesser extent, a first cerebrovascular event. Overall mortality and mortality related to heart disease will not be affected by treatment. (Original article reviewed: *Arch Intern Med* 2006; 166: 2307-2313)

Comment: This meta-analysis combined the results of seven studies involving almost 43 000 patients. Patients in the studies were between 55 and 74 years of age; the majority were male. The mean LDL cholesterol level was reduced an average of 26% during the study. The likelihood of a major coronary event significantly decreased with statin therapy over an average 4.3 years of treatment (number needed to treat=73; 95% confidence interval [CI], 56-104). Major cerebrovascular events also decreased, with one fewer event for every 281 patients treated (95% CI, 157-1309).

Cerebrovascular System

27-297 Major hemorrhage and tolerability of Warfarin in the first year of therapy among elderly patients with atrial fibrillation

Hylek EM, Evans-Molina C, Shea C, et al. *Circulation.* 29 May 2007. Vol.115. No.21. p.2689-96.

Reviewed by Dr Jim Vause

Review: The warfarin prescribing epidemic is based upon finely balanced appraisal of the harms/benefit ratio, with risk analysis tools being available for conditions such as atrial fibrillation. Unfortunately, especially in patients =80 years of age, the rate of haemorrhage may not reflect real-world practice. Researchers in the USA found that the rates of haemorrhage derived from younger noninception cohorts underestimate the bleeding that occurs in practice in the elderly. In addition the cessation rate was high with 26% of >80-year-olds stopping warfarin within the first year of use. This finding coupled with the short-term tolerability of warfarin likely contributes to its underutilisation. Stroke prevention among elderly patients with atrial fibrillation remains a challenging and pressing health concern.

Comment: Discontinuation was highest in those with the most potential to benefit, but they also had the highest risk of haemorrhage. You take your pick.

27-298 ABCD score predicts 30-day stroke risk for patients with TIA

J Fam Pract. March 2007. Vol.56. No.3. p.185.

Reviewed by Dr Bruce Adlam

Review: The ABCD score, determined by using clinical factors previously tested on other populations, appears to reliably predict the risk of stroke in the 30 days following hospitalization for transient ischaemic attack (TIA). It may not have the same validity for patients who are not admitted to the hospital. To determine the ABCD (for Age, Blood pressure, Clinical factors, and Duration) score, points are given as follows: age =60 years (1 point); systolic blood pressure >140 mm Hg or diastolic blood pressure =90 mm Hg (1 point); unilateral weakness (2 points), speech disturbance without weakness (1 point); and a duration of symptoms =60 minutes (2 points), 10 to 59 minutes (1 point), <10 minutes (0 points). The ABCD score was highly correlated with the risk of stroke. A score of 5 or more correlated with a stroke predictive value of approximately 20% to 30% at seven and 30 days. The article contains a useful table giving predictive value of risk of stroke. (Original article reviewed: Stroke 2006; 37: 2892-2897)

Comment: The ABCD model was developed in an outpatient setting to predict risk for all TIA patients. This study only addresses its application to hospitalised patients.

Dermatology**27-299 Cutaneous melanoma: detecting it earlier, weighing management options**

Lane JE, Dalton RR, Sanguenza OP. J Fam Pract. January 2007. Vol.56. No.1. p.18-28.

Reviewed by Dr Bruce Adlam

Review: Practice recommendations: (1) Arrange a biopsy of any pigmented lesion that changes significantly on serial examinations; (2) Full-thickness excisional biopsy is preferred, for large lesions, incisional or punch biopsy at the deepest point of the tumor may be an option; (3)

For thin lesions, a surgical margin encompassing 1cm normal skin is recommended. The ABCDEs of visual assessment (asymmetry, border irregularity, color variegation, and lesion diameter >6 mm, evolution).

Comment: Excellent article with good colour pictures.

27-300 Rosacea: 6 effective treatments

J Fam Pract. February 2007. Vol.56. No.2. p.96.

Reviewed by Dr Bruce Adlam

Review: Effective treatments include: topical metronidazole, benzoyl peroxide 5%/erythromycin 3% gel, benzoyl peroxide 5%/clindamycin 1% gel, benzoyl peroxide alone, azelaic acid, sodium sulfacetamide 10%/sulfur 5%. Oral tetracycline was significantly better than placebo by physician assessment, but not by patient assessment. (LOE: 1a). (Original article reviewed: J Am Acad Dermatol 2007; 56: 107-115.)

Comment: There was no significant difference in efficacy between topical metronidazole and azelaic acid or between topical metronidazole and oral tetracycline.

27-301 Warts: does the duct tape theory stick?

J Fam Pract. February 2007. Vol.56. No.2. p.97.

Reviewed by Dr Bruce Adlam

Review: This underpowered study (103 children aged four to 12 years) found duct tape no more effective than corn pads. (LOE: 2b). (Original article reviewed: Arch Pediatr Adolesc Med 2006; 160: 1121-1125)

Comment: If it wasn't chance, one would need to treat 10 children with duct tape for six weeks to remove one wart. In 81%, the duct tape would not stick; 32% used extra fixative. A small, flawed study (Arch Pediatr Adol Med 2002; 156:975-977) found duct tape as effective as cryotherapy.

Diabetes**27-302 Effect of youth-onset type 2 diabetes mellitus on incidence of end-stage renal disease and****mortality in young and middle-aged Pima Indians**

Pavkov ME, Bennett PH, Knowler WC, et al. JAMA. 26 July 2006. Vol.296. No.4. p.421-6.

Reviewed by Dr Raina Elley

Review: Early onset of Type 2 diabetes (under 20 years of age) was associated with an increased risk of end stage renal disease (ESRD) (dialysis due to diabetic nephropathy) and mortality during middle age when compared with those that developed diabetes between 20 and 55 years of age. The incidence of ESRD and mortality increased with age and duration of diabetes but duration of diabetes had the larger influence. This was a cohort study of more than 30 years' duration and included 1856 Pima Indians with diabetes.

Comment: With the increase in early onset Type 2 diabetes in New Zealand, particularly among Pacific peoples and Maori, these results have relevance for New Zealand. Addressing the problem of childhood obesity, the pre-cursor of diabetes, should be a priority in these populations – if we only knew what to do.

27-303 Angiotensin blockade for diabetes: monitor microalbuminuria?

Muench J, Blenning C, Judkins DZ. J Fam Pract. February 2007. Vol.56. No.2. p.145-6.

Reviewed by Dr Bruce Adlam

Review: No studies address whether continued screening for microalbuminuria once a patient is taking an angiotensin-converting enzyme (ACE) inhibitor or angiotensin-2 receptor blocker (ARB) improves outcomes. Indirect evidence and expert opinion suggest that it may be beneficial to continue microalbuminuria surveillance to assess response to therapy and monitor disease progression (strength of recommendation: C, based on expert opinion).

Diagnosis**27-304 Practicality, safety and accuracy of computed tomography coronary angiography in the**

evaluation of low TIMI-risk score chest pain patients: a pilot study

Soon KH, Kelly A-M, Cox N, et al. *Emerg Med Australas*. April 2007. Vol.19. No.2. p.129-35.

Reviewed by Dr Patrick McHugh

Review: This pilot study assessed the practicality, safety and accuracy of performing CT coronary angiography (CT-CA) for patients with low risk scores (<3) on the thrombolysis in myocardial infarction (TIMI) score system. CT-CA images the coronary arteries following administration of contrast media after the heart rate has been slowed using oral metoprolol or calcium channel blockers. The majority of acute chest pain patient with low TIMI risk scores were successfully scanned with no adverse events identified. However the place of CT-CA in diagnostic workup for chest pain remains to be defined.

27-305 Scoring system for CAP predicts severe disease

J Fam Pract. February 2007. Vol.56. No.2. p.92.

Reviewed by Dr Bruce Adlam

Review: The researchers evaluated 1776 consecutive patients diagnosed with community-acquired pneumonia in a single emergency department to develop a clinical prediction rule that will identify patients in whom severe disease will develop (septic shock, severe sepsis, or disease requiring mechanical ventilation). The prediction model utilised risk factors of pH, systolic BP, respiratory rate, PaO₂, blood urea, mental status, age and x-ray findings. (Original article reviewed: *Am J Respir Crit Care Med* 2006; 174: 1249-1256)

Comment: Of more use to those running emergency departments and intensive care units but could be of use to PHOs exploring hospital at home programmes.

Education**27-306 Modernising medical careers, medical training application service, and the postgraduate medical education and Training****Board: time for the emperors to don their clothes**

Brown M, Boon N, Brooks N, et al. *Lancet*. 24-30 March 2007. Vol.369. No.9566. p.967-8.

Reviewed by Dr Tony Hanne

Review: Twenty-nine UK medical students wrote a passionate plea for their government to stop interference in their training by bureaucrats who do not understand and are not part of their future profession. This followed a protest march in London by 12000 doctors and medical students. The heart of their discontent is a system where managers have taken over from allowing the profession to govern its own affairs.

Comment: While the UK situation is in many ways different to that in NZ, we too have a system in which management is dominant and undemocratic, and where the voices of experienced doctors are unheard. The medical exodus is not primarily about money.

27-307 Do doctors have a future?

Horton R, Gilmore I, Dickson N, et al. *Lancet*. 28 April-4 May 2007. Vol.369. No.9571. p.1405-6.

Reviewed by Dr Tony Hanne

Review: This editorial comment was provoked by a study of medical professionalism led by the Royal College of Physicians in 2005 and the ongoing discussion it has stimulated. It is agreed that doctors are committed to six values – integrity, compassion, altruism, continuous improvement, excellence and working in partnership as part of a wider team. The subsequent two years have drawn out three concerns on the part of doctors. Firstly they are not optimistic about their future and they want to debate the reasons openly and energetically. Secondly they feel dangerously disengaged and alienated. Thirdly they want to work towards solutions in a cross-disciplinary way that will allow new leaders to emerge and shape their future.

Comment: It appeared that doctors have less confidence in the future of the profession than the public have

in them. There is a deep unease at losing control of our destiny but at the same time an unshaken conviction about who we want to be.

Emergency Medicine**27-308 Emergency department personal protective equipment requirements following out-of-hospital chemical biological or radiological events in Australasia**

Sansom GW. *Emerg Med Australas*. April 2007. Vol.19. No.2. p.86-95.

Reviewed by Dr Patrick McHugh

Review: A review article looking at potential chemical, biological or radiological (CBR) events and what personal protective equipment should be used. Current evidence suggests that initial receiving staff will be adequately protected from all known CBR inhalational threats by wearing a properly fitted P2 (N95) mask or its equivalent. Protection from serious contact injury is offered by wearing double gloves, disposable fluid-repellent coveralls or gown, eye protection, surgical mask and ideally a cap and shoe covers in conjunction with universal precautions and procedures.

27-309 Laryngeal dyskinesia: an under-recognized condition

Lawrence SG. *Emerg Med Australas*. April 2007. Vol.19. No.2. p.96-104.

Reviewed by Dr Patrick McHugh

Review: A review article of laryngeal dyskinesia; a respiratory condition characterised by abnormal vocal cord adduction and airflow limitation at the level of the larynx in the absence of evidence of local organic disease. Typically presents as wheeze, stridor or apparent upper airway obstruction. Diagnosis is often delayed and associated with unnecessary treatments. There are multiple diagnostic features on history and examination with flexible nasendoscopy of the vocal cords used to confirm the diagnosis. Short and long-term treatment options are discussed. An awareness of the condition and a

high index of suspicion are necessary to minimise the high morbidity and cost of unnecessary treatments.

Comment: A useful review article regarding an under-recognised cause of respiratory presentations to primary care.

27-310 Outcomes in patients with an emergency department diagnosis of fever of unknown origin

Ingarfield SL, Celenza A, Jacobs IG, et al. *Emerg Med Australas*. April 2007. Vol.19. No.2. p.105-112.

Reviewed by Dr Patrick McHugh

Review: A retrospective analysis of patient medical records for adults and children presenting to the Emergency Department with fever of unknown origin (FUO). FUO accounted for a lower proportion of ED attendances in adults although adults with FUO were more likely to be admitted, have longer stays and positive blood cultures.

27-311 Emergency department staff can effectively resuscitate in level C personal protective equipment

Udayasiri R, Knott J, Taylor DM, et al. *Emerg Med Australas*. April 2007. Vol.19. No.2. p.113-21.

Reviewed by Dr Patrick McHugh

Review: ED staff are expected to perform resuscitation of trauma victims of chemical, biological or radiological incidents whilst wearing level C personal protective equipment (PPE). ED staff were able to perform resuscitation procedures in PPE without adverse physiological effects or impact on performance. Subjective concerns regarding task performance were not backed up objectively suggesting appropriate training and feedback might reduce negative impressions associated with the use of PPE.

27-312 'Out of hours' non-contrast head CT scan interpretation by senior emergency department medical staff

Khoo NC, Duffy M. *Emerg Med Australas*. April 2007. Vol.19. No.2. p.122-8.

Reviewed by Dr Patrick McHugh

Review: Senior Emergency Department medical staff were assessed for their accuracy of interpreting 'out of hours' non-contrast head CT scans (NCHCT) and found to be correct only two-thirds of the time. Further study to assess the safety of such practice was advised.

27-313 Effect of a holiday service reduction period on a hospital's emergency department access block

Thomas J, Cheng N. *Emerg Med Australas*. April 2007. Vol.19. No.2. p.136-42.

Reviewed by Dr Patrick McHugh

Review: A retrospective observational study in a tertiary paediatric hospital, with high levels of access block, looking at access block during holiday periods. Only mild improvements in the block were found during holiday periods when elective surgery was curtailed as there was also associated reduction in hospital bed capacity.

27-314 Accuracy of electrocardiogram interpretation improves with emergency medicine training

Hoyle RJ, Walker KJ, Thomson G, et al. *Emerg Med Australas*. April 2007. Vol.19. No.2. p.143-50.

Reviewed by Dr Patrick McHugh

Review: A prospective cross-sectional double-blinded study of emergency medicine trainees to assess whether ECG interpretation accuracy improves with advancing years of emergency medicine training. ECG interpretation accuracy improved with advancing years of training although there was a worrying low level of accuracy for some critical ECG diagnoses even in advanced trainees (see also 27-315).

27-315 Level of practice for ECG interpretation skills should be 'expert'

Hazell W. *Emerg Med Australas*. April 2007. Vol.19. No.2. p.81-5.

Reviewed by Dr Patrick McHugh

Review: This editorial covers issues raised in the above article (see 27-314) whilst also reviewing performance of emergency medicine fellowship examinees in exam questions involving ECG interpretation.

27-316 Rural hospital generalist and emergency medicine training in Papua New Guinea

Symmons D, Curry C. *Emerg Med Australas*. April 2007. Vol.19. No.2. p.151-4.

Reviewed by Dr Patrick McHugh

Review: A commentary on the role of the hospital generalist in rural Papua New Guinea and the contribution of emergency medicine training to that practice.

27-317 Managing cardiovascular collapse in severe flecainide overdose without recourse to extracorporeal therapy

Devin R, Garrett P, Anstey C. *Emerg Med Australas*. April 2007. Vol.19. No.2. p.155-9.

Reviewed by Dr Patrick McHugh

Review: Flecainide overdose is associated with rapid development of cardiovascular collapse, coma and a high mortality necessitating invasive treatments such as cardiopulmonary bypass or extracorporeal therapies. This case history describes a patient with major toxicity and high serum levels successfully managed using hypertonic sodium bicarbonate in the absence of the availability of extracorporeal therapies.

27-318 Could bystander first-aid prevent trauma deaths at the scene of injury

Ashour A, Cameron P, Bernard S, et al. *Emerg Med Australas*. April 2007. Vol.19. No.2. p.163-8.

Reviewed by Dr Patrick McHugh

Review: A review of deaths from pre-hospital traumatic cardiac arrest in Victoria Australia found that potentially five (4.5%) were preventable - (three deaths from airway obstruction and two deaths from excessive bleeding).

Comment: Increased bystander awareness for first-aid at the scene following major trauma was advocated.

27-319 Treatment of anaphylaxis in adults: results of a survey of doctors at Dunedin Hospital, New Zealand

Thain S, Rubythorn J. *N Z Med J*. 13 April 2007. Vol.120. No.1252. p.1-8.

Reviewed by Dr Jim Vause

Review: In a survey of 91 hospital acute care doctors of various grades in Dunedin, researchers found that although 92% would use adrenaline as first-line treatment in a patient with anaphylaxis, only 20% knew the correct dose and route of administration of adrenalin for the treatment of anaphylaxis according to the New Zealand Resuscitation Council (NZRC) or local hospital formulary guidelines.

Comment: Do you know the correct dose and route for adrenalin in anaphylaxis?

Genetics

27-320 Mapping the cancer genome

Collins FS, Barker AD. *Sci Am.* March 2007. Vol.296. No.3. p.32-9.

Reviewed by Dr Ron Vautier

Review: Recently commenced, 'The Cancer Genome Atlas' project is an initiative aiming to eventually identify all of the genetic alterations in the 200 or so different forms of cancer. So far about 350 cancer-related genes have been discovered, with thousands more anticipated. The pay-off will be better understanding of the disease, and more precisely targeted therapies.

Comment: If nothing else, this article provides an insight into the multifarious complexity of cancer.

Gynaecology

27-321 What evaluation is best for an isolated, enlarged cervical lymph node?

Marjorie K, Lerberg G, Stiles M, et al. *J Fam Pract.* February 2007. Vol.56. No.2. p.147-8.

Reviewed by Dr Bruce Adlam

Review: Antibiotics and reassessment in one to two weeks for patients with inflammatory symptoms (i.e. fever, pain, erythema, and recent infection) is the expert opinion recommendation. If lymph node enlargement persists despite antibiotics, check for TB and arrange CXR. For patients without initial inflammatory symptoms, biopsy

is recommended if the lymph node enlargement persists beyond four to six weeks, continues to enlarge, or is >3cm (SOR: C, expert opinion). Biopsy is also indicated if there is a supra-clavicular lymph node or concomitant constitutional symptoms (weight loss or night sweats) (SOR: B, case series). Fine-needle aspiration is a minimally invasive method for obtaining a tissue sample, but excisional biopsy can provide a definitive diagnosis (SOR: B, case series).

27-322 Which tests are the most useful for diagnosing PID?

Blennig CE, Muench J, Judkins DZ. *J Fam Pract.* March 2007. Vol.56. No.3. p.216-20.

Reviewed by Dr Bruce Adlam

Review: Systematic reviews don't show consistent results. No single test has adequate sensitivity and specificity to reliably identify pelvic inflammatory disease (PID) and thus help to spare women serious sequelae, including infertility (strength of recommendation [SOR]: B, based on systematic reviews of cohort studies and individual cohort studies). Women presenting with acute pelvic pain need thorough evaluation to rule out ectopic pregnancy, cystitis, pyelonephritis, appendicitis, and ovarian torsion. In my experience, a likely history of a sexually transmitted disease along with adnexal pain or cervical motion tenderness on examination is the most helpful in diagnosing PID. Adnexal pain >1 week, an elevated white blood cell (WBC) count, erythrocyte sedimentation rate (ESR), or C-reactive protein (CRP) may help support the diagnosis. PID often becomes a diagnosis of exclusion if human chorionic gonadotropin (hCG), urine evaluation, and pelvic ultrasound are negative.

Immunology and Allergy

27-323 New predictors of disease

Notkins AL. *Sci Am.* March 2007. Vol.296. No.3. p.54-61.

Reviewed by Dr Ron Vautier

Review: In a number of autoimmune disorders, including type 1 diabetes, Addison's disease, coeliac disease, multiple sclerosis, rheumatoid arthritis, and SLE, autoantibodies sometimes appear in the blood a number of years before the disease becomes manifest. Hence screening for these antibodies could predict who is at risk, and perhaps indicate disease progression and severity. A lot of study is still required to measure the probabilistic significance of their presence, and several practical and ethical problems merit consideration

Comment: It appears likely to be 10 or 20 years before such tests become part of routine general practice, but even at this stage the prospects appear fascinating.

Law and Medicine

27-324 Medical aspects of fitness to drive. What do public hospital doctors know and think?

Shanahan EM, Sladek RM, Phillips P. *Intern Med J.* June 2007. Vol.37. No.6. p.372-6.

Reviewed by Dr Helen Moriarty

Review: A topic of interest here in NZ as well as overseas. As a patient advised to stop driving on medical grounds could face significant hardship, it is especially important to ensure that such advice is correct. Australian doctors (in public hospitals) were not strong on this knowledge, and uncomfortable making such decisions.

Comment: In NZ GPs can be placed in similar circumstances, and the decision can prove to be adversarial. Despite national NZ guidelines on fitness to drive, these decisions are often not black and white, and both interpretation of the guidelines and medicolegal responsibility for a decision made in either direction falls on the medical practitioner.

Neurology

27-325 Opinions, attitudes and practices of Australian neurologists with regard to epilepsy and driving

Beran RG, Ainley LA, Beran ME. Intern Med J. April 2007. Vol.37. No.4. p.251-7.

Reviewed by Dr Helen Moriarty

Review: All guidelines for fitness to drive have been controversial. The Epilepsy Society of Australia rejected the guidelines regarding driving after a fit diagnosis. Neurologists who assess fitness to drive were surveyed on opinions and compliance with guidelines. Neurologists advocated shorter seizure-free periods before driving again than the guidelines. Major departures from guidelines occur with commercial drivers. Only one state mandates reporting of drivers with epilepsy, but neurologists do not support this, preferring voluntary self reporting or warnings placed on driver licences.

Comment: It would be interesting to explore such issues here in New Zealand, as anecdote indicates considerable confusion over the indications for driving restrictions following epileptiform fits.

27-326 Eyes open, brain shut

Laureys S. Sci Am. May 2007. Vol.296. No.5. p.66-71.

Reviewed by Dr Ron Vautier

Review: Consciousness is here considered to have two components – wakefulness and awareness. Patients in the vegetative state have, at times, near normal levels of wakefulness, but apparently little or no awareness of their environment. Neuroimaging via functional MRI and PET scans identifies areas of the brain that appear to be particularly important for awareness, and these respond differently to external stimuli in patients with the vegetative and minimally conscious states.

Comment: Practical application in terms of diagnosis and prognosis after brain injury appears to be still very limited, but this article can be recommended to anyone with an interest in brain function.

27-327 Skin biopsy: a new tool for diagnosing peripheral neuropathy

Lauria G, Lombardi R. BMJ. 2 June 2007. Vol.334. No.7604. p.1159-62.

Reviewed by Dr Len Brake

Review: Skin biopsy with the usual ‘disposable’ (wink, wink, nudge, nudge) skin biopsy punch is easy and painless. It provides pathological information which cannot be followed by the prick test or conduction tests. Follow-up biopsies are easily done as a monitor of neuropathy progression or efficacy of treatment. The illustrations show the obvious difference in the enervation of sweat glands in a normal person and the diabetic.

Comment: There could definitely be a place in the chronic care armamentarium for this procedure – well within the primary care field.

27-328 Temporal relationship between cigarette smoking and risk of Parkinson disease

Thacker EL, O'Reilly EJ, Weisskopf MG, et al. Neurology. 6 March 2007. Vol.68. No.10. p.764-8.

Reviewed by Dr Jim Vause

Review: In a study of 79 977 women and 63 348 men participating in the Cancer Prevention Study II Nutrition Cohort, researchers found former smokers had a relative risk (RR) of 0.78 and current smokers had an RR of 0.27 of developing Parkinson's disease. The more years smoked, the more cigarettes per day, an older age at quitting smoking, and fewer years since quitting smoking all resulted in a lower PD risk. Gender made no difference.

Comment: Obviously this points to the need for further research into the cause of this obvious biological effect.

27-329 Predicting a successful treatment in posterior canal benign paroxysmal positional vertigo

Oh HJ, Kim JS, Han BI, et al. Neurology. 10 April 2007. Vol.68. No.15. p.1219-22.

Reviewed by Dr Jim Vause

Review: Epley's manoeuvre is a handy if somewhat inconsistent treatment for benign paroxysmal positional vertigo. Korean researchers studied 126 patients with this condition looking for prognostic signs that might indicate potential success of the treat-

ment. They found that all 99 patients who had orthotropic nystagmus (torsional upbeat nystagmus which was in the same direction as the manoeuvre) had resolution of BPPV after the first or second trial of the Epley manoeuvre. In contrast, 12 of the 15 patients with reversed nystagmus and eight of the 12 patients without nystagmus failed to resolve.

Comment: An impressive manoeuvre when it works, this will help increase the likelihood of a positive outcome.

Obstetrics

27-330 Management of hypothyroidism during pregnancy

Bungard TJ, Hurlburt M. CMAJ. 10 April 2007. Vol.176. No.8. p.1077-8.

Reviewed by Dr Jim Vause

Review: This is a presentation of a case study of a 33-year-old woman who had received a diagnosis of primary hypothyroidism when she was 23 years of age and had been stable on levothyroxine since then. The presentation discussed the impact of pregnancy and vitamin supplementation on the management of hypothyroidism.

Comment: A nice little review of this problem to remind us of a potential problem in antenatal care.

Oncology

27-331 Ovarian cancer and hormone replacement therapy in the Million Women Study

Million Women Study Collaborators. Lancet. 19-25 May 2007. Vol.369. No.9574. p.1703-10.

Reviewed by Dr Tony Hanne

Review: Further analysis of this landmark study has focused on ovarian cancer which is the fourth commonest cause of cancer death in UK women. The results show an increased risk of disease and mortality of about 1.20 for HRT users compared with never users. This effect is regardless of the type or dose of HRT. The longer the use, the greater the risk.

Those who stopped using HRT returned to the same level of risk as never users. Interestingly the risk was a little lower in those who had had a hysterectomy. Commentary attached. **Comment:** When added to the previous evidence of risk of cancer of the breast or endometrium the total increased risk from HRT is about 63%. The message is clear, but the effective alternatives are not.

27-332 Chromosomal chaos and cancer

Duesberg P. *Sci Am.* May 2007. Vol.296. No.5. p.34-41.

Reviewed by Dr Ron Vautier

Review: According to 'conventional wisdom' it is mutations in regulatory genes that upset the normal controls on cells and their proliferation. However, it is also well established that cancer cells show gross changes to whole chromosomes. The author argues that these chromosomal mutations, which unbalance thousands of genes en masse, trigger instability that leads to further chromosome disruption, thus accounting for properties of malignant cells that cannot be explained by the activity of specific genes.

Comment: There appear to be persuasive arguments to support this view that this aneuploidy is fundamental to carcinogenesis. From it we might derive better strategies for prevention, early detection and treatment. Read this article if you wish to better understand the biology of cancer.

Ophthalmology

27-333 The movies in our eyes

Werblin F, Roska B. *Sci Am.* April 2007. Vol.296. No.4. p.54-61.

Reviewed by Dr Ron Vautier

Review: Recent electrophysiological studies recording the activity of retinal ganglion cells demonstrate that a great deal of signal processing occurs at this level. There are 12 different types of ganglion cells, distinguished from one another by how

they are connected to the other cell types of the retina (rods and cones, amacrine and bipolar cells), and each type contributes its own 'movie' to the signal that the optic nerve carries to various brain regions for interpretation.

Comment: This article provides little or nothing of any use to clinical practice, but for those with curiosity about how humans function it offers some fascinating new insights.

Orthopaedics

27-334 Surgery versus prolonged conservative treatment for Sciatica

Peul WC, van Houwelingen HC, van den Hout WB, et al. *N Engl J Med.* 31 May 2007. Vol.356. No.22. p.2245-56.

Reviewed by Dr Philip Adamson

Review: This was an RCT of 283 patients who were included at six to 12 weeks after the onset of severe radicular leg pain. It found that early surgical treatment (average of 2.2 weeks from randomisation) with microdiscectomy resulted in earlier resolution of leg pain and a faster rate of perceived recovery than those who were managed with a conservative approach. There was, however, no difference in disability scores or perceived recovery (95% in both groups) at one year. Despite aiming for medical therapy, 39% of the control group subsequently also received surgical intervention at a mean of 18.7 weeks.

Comment: Sciatica related to prolapsed lumbar discs is a common problem in general practice. Decisions about whether to recommend surgical or conservative management are challenging and are often dependent on patient preference more than scientific evidence. This article adds to the medical literature by demonstrating that delayed surgical intervention is unlikely to have serious long-term negative consequences and supports the view that regardless of treatment strategy the majority of patients will achieve symptomatic resolution.

27-335 Tennis elbow: injections, PT, or wait-and-see?

J Fam Pract. February 2007. Vol.56. No.2. p.98.

Reviewed by Dr Bruce Adlam

Review: In this small study of 198 subjects for an average of 22 weeks, at six weeks, steroid injection had better results than physical therapy or wait-and-see. At one year, physical therapy resulted in better function and greater improvement than corticosteroid injection, primarily because of frequent recurrences after the injection. (LOE: 1b). (Original article reviewed: *BMJ* 2006; 333: 939.)

Comment: 72% of patients receiving injections reported recurrences.

27-336 Acetaminophen is as good as celecoxib for degenerative joint disease

J Fam Pract. March 2007. Vol.56. No.3. p.181.

Reviewed by Dr Bruce Adlam

Review: In this short-term study emphasising individual response, acetaminophen and celecoxib are virtually indistinguishable in improving pain, stiffness, and function in patients with clinically diagnosed degenerative joint disease. Since acetaminophen is less expensive and has fewer safety concerns, it should be the drug of first choice. (Original article reviewed: *Rheumatology* 2007; 46: 135-140.)

Paediatrics

27-337 Clinical criteria predict serious head injury risk in kids

J Fam Pract. January 2007. Vol.56. No.1. p.16-7.

Reviewed by Dr Bruce Adlam

Review: Clinical factors can accurately predict which children don't have serious intracranial pathology after head injury. (LOE=3b). The clinical prediction rule (summarised below) was highly sensitive (98%; 95% confidence interval [CI], 96-100) and also had decent specificity (87%; 95% CI, 86-87). The positive likelihood ratio of 7.5 (95% CI, 6.9-7.7) and negative likelihood ratio of 0.02

(95% CI, 0-0.05) suggests this rule is best at ruling out serious intracranial injury. This prediction rule needs to be validated. The clinical decision rule is as follows: A CT scan is required if any of the following criteria are present:

History:

- Witnessed loss of consciousness of >5 minutes duration
- History of amnesia (either antegrade or retrograde) of >5 minutes duration
- Abnormal drowsiness
- More than three discrete episodes of vomiting after head injury
- Suspicion of nonaccidental injury
- Seizure after head injury in a patient who has no history of epilepsy.

Examination:

- Glasgow Coma Score <14, or <15 if younger than one year
- Suspicion of penetrating or depressed skull injury or tense fontanelle
- Signs of a basal skull fracture (blood or cerebrospinal fluid from ear or nose, panda eyes, Battle's sign, haemotympanum, facial crepitus, or serious facial injury)
- Focal neurologic deficit
- Presence of bruise, swelling or laceration >5 cm if younger than one year.

Mechanism:

- High-speed road traffic accident either as pedestrian, cyclist, or occupant (defined as accident with speed above 40 miles per hour)
- Fall of more than 3m in height
- High-speed injury from a projectile or an object.

If none of the above variables are present, the patient is at low risk of intracranial pathology. (Original article reviewed: Dunning J, Daly JP, Lomas JP, et al, Arch Dis Child 2006; 91:885-891.)

Pain Management

27-338 Opiates for acute abdominal pain do not increase errors

J Fam Pract. January 2007. Vol.56. No.1. p.10.

Reviewed by Dr Bruce Adlam

Review: In this systematic review, opiate analgesia for adults and children presenting with acute abdominal pain may alter the physical examination, but does not increase the risk of management errors. Since most patients prefer pain control, it makes sense to abandon the outdated and incorrect practice of withholding opiate analgesia from patients with acute abdominal pain. (LOE=1a) (Original article: JAMA 2006; 296:1764-1774.)

Public Health

27-339 Respiratory symptoms, pulmonary function, and markers of inflammation among bar workers before and after a legislative ban on smoking in public places

Menzies D, Nair A, Williamson PA, et al.

JAMA. 11 October 2006. Vol.296. No.14.

p.1742-8.

Reviewed by Dr Raina Elley

Review: Even in the first two months following the introduction of smoke-free legislation for confined public places (e.g. bars), workers in bars had improved respiratory function in Scotland. Significant improvements were seen in respiratory symptoms, FEV1, serum cotinine, and WCC among workers tested. The authors also found lower measures of inflammation (e.g. exhaled nitric oxide) and improved quality of life in asthmatic bar workers.

Comment: With our own recent legislative changes, this is good news (See also 27-345).

Respiratory System

27-340 Randomised study of three non-surgical treatments in mild to moderate obstructive sleep apnoea

Lam B, Sam K, Mok W Y, et al. Thorax. April

2007. Vol.62. No.4. p.354-9.

Reviewed by Dr Jim Vause

Review: There are many non-surgical treatment modalities for mild to moderate obstructive sleep apnoea, continuous positive airways pressure (CPAP) and oral appliances being common. Hong Kong researchers found that CPAP was significantly better than an oral appliance for relief from sleepiness, and both were better than conservative measures for improving bodily pain and physical function. Blood pressure was also lowered by CPAP and appliances. They also noted that weight loss, if achieved, resulted in an improvement in sleep parameters, but weight control alone was not uniformly effective.

Comment: They didn't comment about the long-term tolerance of the interventions.

Rheumatic Diseases

27-341 Septic arthritis in patients with pre-existing inflammatory arthritis

Kherani RB, Shojania K. CMAJ. 22 May

2007. Vol.176. No.11. p.1605-8.

Reviewed by Dr Jim Vause

Review: Septic arthritis is a condition that can lead to significant adverse outcomes and when such an infection occurs in a patient with pre-existing arthritis, identification of the infection can be difficult. In addition, many disease modifying drugs used for RA can lead to reduced host immunity to infection. This case study highlights the diagnostic problems and outlines the issues to be considered.

Comment: Another good CMAJ case study.

Screening

27-342 Approaches to screening for intimate partner violence in health care settings: A randomized trial

MacMillan HL, Wathen CN, Jamieson E, et al.

JAMA. 2 August 2006. Vol.296. No.5. p.530-6.

Reviewed by Dr Raina Elley

Review: Women preferred self-completed screening questionnaires to face-to-face or computer-based screening for identifying intimate partner violence (IPV). The Partner Violence Screen (PVS) and Women Abuse Screening Tool (WAST) showed similar validity when compared with the gold standard Composite Abuse Scale (CAS) (sensitivities: 49% and 47% respectively, and specificities: 94% and 96% respectively). This was a cluster randomised controlled trial comparing self-administered written screening with face-to-face and computer screening among 2602 18–64-year-old women presenting to two ED clinics, two family practices and two women's health in Canada. Prevalence varied from 4.1% to 17.7% depending on which screening method and instrument were used and which health care setting the screening took place.

Comment: In New Zealand we have the recently validated CHAT tool for use in primary health care, which includes two screening questions to identify abuse. It is also self-administered and has high levels of acceptability. (The CHAT also screens for multiple lifestyle risk factors in primary health care, which is a bonus).

Sexually Transmitted Diseases

27-343 Short-course therapy for recurrent genital herpes and herpes labialis

Spruance S, Aoki FY, Tying S, et al. *J Fam Pract.* January 2007. Vol.56. No.1. p.30-6.

Reviewed by Dr Bruce Adlam

Review: This pharmaceutical company-funded study came up with the following recommendations: (1) Consider giving patients an oral antiviral medication to self-administer when HSV prodromal symptoms occur. This is based on the brief period of viral replication and the rapid evolution of lesions, the therapeutic window for treating HSV outbreaks with antiviral drugs is both early and

short, making it problematic to effectively treat HSV recurrences; (2) Patient-initiated, short-course, high-dose oral antiviral treatment of recurrent HSV outbreaks may be as effective as the traditional, longer-course regimens.

Comment: Hit early, hit hard appears to be the current approach with one to three day courses of valciclovir therapy. This paper does not discuss suppressive therapy which may be indicated for frequent or severe recurrences (six or more per year) in immunocompetent persons, for immunocompromised patients, or as an adjunctive measure to reduce genital herpes transmission.

27-344 Who should get the HPV vaccine?

Pichichero ME. *J Fam Pract.* March 2007. Vol.56. No.3. p.197-202.

Reviewed by Dr Bruce Adlam

Review: Consider recommending HPV vaccine for 11- and 12-year-old girls in your practice, before sexual activity puts them at risk of viral infection (A). The FDA in the US has approved the HPV vaccine for women up to 26 years of age. If women older than 26 years ask to be vaccinated, make sure they understand it is an off-label use for them (A). Presexual adolescent girls and sexually active women can now lower their lifetime risk of cervical cancer, thanks to a newly available quadrivalent vaccine (Gardasil) directed at human papillomavirus (HPV). HPV infection is highly prevalent in sexually active men and the efficacy of vaccinating boys against HPV infection is currently being explored however, one model has suggested that vaccinating adolescent males with a bivalent HPV vaccine would only slightly reduce the incidence of cervical cancer cases beyond that achieved by vaccination of adolescent girls.

Comment: Sustained efficacy of the HPV vaccine for up to 4.5 years has been documented, but boosters may be needed. Quite a good MSD funded

study which also describes how HPV causes cervical cancer and how the vaccine prevents it.

Smoking

27-345 Banning smoking in public places: Time to clear the air

Eisner MD. *JAMA.* 11 October 2006.

Vol.296. No.14. p.1778-9.

Reviewed by Dr Raina Elley

Review: Editorial (see also 27-339).

Sports and Sports Medicine

27-346 Pancreatic injuries in under-age Australian rules footballers

Burton P, Fenton E. *Emerg Med Australas.*

April 2007. Vol.19. No.2. p.160-2.

Reviewed by Dr Patrick McHugh

Review: Whilst pancreatic injuries are a rare outcome of blunt injury in children, three cases of such are described in 15/16-year-old males playing Aussie rules.

27-347 Effect of nationwide injury prevention programme on serious spinal injuries in New Zealand rugby union: ecological study

Quarrie KL, Gianotti SM, Hopkins WG, et al. *BMJ.* 2 June 2007. Vol.334. No.7604.

p.1150-3.

Reviewed by Dr Len Brake

Review: In 2001 the RugbySmart injury prevention program started. This study shows that this programme has coincided with a reduction in the number of spinal injuries (19 were expected between 2001 and 2005 compared with eight reported). Furthermore only one such injury occurred in a scrum against nine predicted. Of course the study is a 'count before and count after' job but it is not likely that an RCT will ever be possible. Interestingly seven of the eight reported spinal injuries occurred in the tackle, associated almost certainly with the now fashionable high impact, 'ball and all' chest-high tackle.

Comment: How many people will want to watch or actually play a totally risk-free game is another matter. Rugby Union 'caught on' as a more exciting game and 'more exciting' means 'more risk'.

Therapeutics

27-348 Atypical antipsychotics minimally effective in Alzheimer's

J Fam Pract. January 2007. Vol.56. No.1. p.14.

Reviewed by Dr Bruce Adlam

Review: This RCT of 421 patients with probable Alzheimer's revealed typical antipsychotics are minimally, if at all, effective for patients with Alzheimer's disease, and they have significant adverse effects. They should not be routinely used for the treatment of psychosis, agitation, or aggression in these patients. (LOE=1b) (Original article reviewed: N Engl J Med 2006; 355:1525-1538.)

Virus Diseases

27-349 A cure for rabies

Willoughby RE. Sci Am. April 2007. Vol.296. No.4. p.70-77.

Reviewed by Dr Ron Vautier

Review: This describes the treatment that produced the survival and recovery of an unimmunised person with rabies for the first time ever. Along with the antiviral drugs amantadine and ribavirin she received ketamine (also antiviral against rabies) and midazolam to induce coma, and later bioplerin to boost levels of neurotransmitters and nitric oxide.

Comment: The cost of this girl's treatment was around one million dollars. Regrettably, the same protocol applied in other cases has failed to effect cures, so perhaps there is not so much useful information here as first appears, but it is a very interesting story nevertheless.

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