Cardiovascular journals

AMERICAN JOURNAL OF CARDIOLOGY

Tadalafil does not increase cardiovascular adverse effects

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓✓

1 Most men who have erectile dysfunction have underlying vascular disease. The aim of this study was to discover if the incidence of cardiovascular treatment-emergent adverse events increased when people with erectile dysfunction took tadalafil.

2 A retrospective analysis was performed of 36 clinical trials involving 14534 men receiving tadalafil for the treatment of erectile dysfunction (12487 received active drug, equivalent to 5771 patient years of exposure and 2047 received placebo, equivalent to 460 patient years of exposure).

3 A serious cardiovascular treatment-emergent adverse event was defined as myocardial infarction, cardiovascular death or cerebrovascular death.

4 Active tadalafil was used in doses of 2–50 mg 'as needed', 'three-times a-week' or 'once-a-day'.

5 Co-morbities at baseline included hypertension (31%), diabetes (21%), hyperlipidaemia (17%) and coronary artery disease (5%).

6 The incidence rate of serious cardiovascular treatment-emergent adverse events was 0.40 per 100 patient years in people receiving tadalafil and 0.43 per 100 patient years in people receiving placebo.

7 The risk of serious cardiovascular treatment-emergent adverse events was not increased in people taking tadalafil for erectile dysfunction.

Kloner RA, Jackson G, Hutter AM et al (2006) Cardiovascular safety update of tadalafil: retrospective analysis of data from placebo-controlled and open-label clinical trials of tadalafil with as needed, three times-per-week or once-a-day dosing. *American Journal of Cardiology* **97**: 1778–84

Risk of serious cardiovascular treatment-emergent adverse events not increased with tadalafil

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It is important to update the cardiovascular safety profile of medications used to treat erectile dysfunction, as many patients will have concomitant vascular disease. This study represents a retrospective analysis, evaluating serious cardiovascular treatment-emergent adverse events in 36 clinical trials of tadalafil.

Adverse events were defined as myocardial infarction, cardiovascular death or cerebrovascular death. Of 12487 patients treated in 36 trials with erectile dysfunction, there were 5771 patient years of exposure. Co-morbidities at baseline included hypertension, diabetes, hyperlipidaemia and coronary artery disease.

In the trials, the rate of serious adverse events was 0.40 per 100 patient years in the tadalafil-treated patients compared with 0.43 per 100 patient years in the placebo-treated patients. The incidence of serious adverse events therefore was comparable among men with erectile dysfunction taking tadalafil 'as needed', 'three-times-a-week', or 'once-a-day', and these rates were comparable with those in placebo treated patients. Thus tadalafil, as with other phosphodiesterase-5 inhibitors, was not associated with an increased risk of serious cardiovascular adverse events.

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Treatment of combined high cholesterol and BP is sub-optimal

Readability	✓✓✓
Applicability to practice	✓✓✓
WOW! factor	✓✓✓

1 Prevalence and treatment of combined hypertension and hypercholesterolaemia was investigated.

2 The incidence of combined disease was 18% (in >20 year olds).

3 Only 29% of people with combined disease were receiving treatment.

4 The authors concluded that treatment and control of combined hypertension and hypercholesterolaemia is sub-optimal.

Wong ND, Lopez V, Tang S, Williams GR (2006) Prevalence, treatment, and control of combined hypertension and hypercholesterolemia in the United States. *American Journal of Cardiology* **98**: 204–8

AMERICAN JOURNAL OF CARDIOLOGY

Better outcome with glycaemic control in cardiac care

Readability	✓✓✓
Applicability to practice	✓✓✓
WOW! factor	✓✓✓

1 Previously less attention has been directed towards high blood glucose levels as a predictor of poor outcomes in patients in cardiac critical care.

2 Intravenous insulin infusion is the treatment of choice for people in cardiac critical care units.

3 Insulin infusions should be maintained for at least 3 days following cardiac surgery.

4 The review concludes that implementing measures to achieve glycaemic control in acute cardiac care hospital settings can significantly reduce morbidity and mortality.

Furnary AP, Braithwaite SS (2006) Effects of outcome on in-hospital transition from intravenous insulin infusion to subcutaneous therapy. *American Journal of Cardiology* **98**: 557–64

'A more aggressive and directed targeting of lipid-lowering medication is required to improve treatment of elevated cholesterol.'

AMERICAN JOURNAL OF CARDIOLOGY

More aggresive and directed lipid treatment required

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓✓

1 This paper reports on lipid goal attainment and lipid-lowering medication use among people in the Veterans Affairs Diabetes Trial. Goals for lipid levels in patients with diabetes have been set by the American Diabetes Association. The aim of this study was to discover adherence to these goals.

2 Baseline data were evaluated for 1742 participants in the Veterans Affairs Diabetes Trial.

3 The proportion of participants reaching the American Diabetes Association goals (LDL cholesterol <100 mg/dl [2.6 mmol/l]; triglyceride <150 mg/dl [1.7 mmol/l]; HDL cholesterol > 40 mg/dl [1.0 mmol/l] in men or >50 mg/dl [1.3 mmol/l] in women) was calculated.

4 At baseline, 44 % of participants met the LDL cholesterol goal, 58 % met the triglyceride goal and 16 % met the HDL cholesterol goal.

5 Only 6 % of participants met all three goals. Two-thirds of the participants were already using a lipid-lowering therapy, with 58 % taking a statin.

6 Participants in the Veterans Affairs Diabetes Trial demonstrated a greater adherence to the American Diabetes Association cholesterol goals than other diabetic populations studied recently.

7 However, the authors recommend that a more aggressive and directed targeting of lipid-lowering medication is required to improve treatment of elevated cholesterol.

Meyers CD, McCarren M, Wong ND et al (2006) Baseline achievement of lipid goals and usage of lipid medications in patients with diabetes mellitus (from the Veteran Affairs Diabetes Trial). *American Journal of Cardiology* **98**: 63–5

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High blood glucose is predictor of mortality in acute coronary syndrome

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓✓

1 Current data suggest that high glucose levels in association with acute coronary syndrome are linked with increases in hospital mortality.

2 The relationship was investigated between random glucose level and long-term mortality in 9020 participants with acute coronary syndrome enrolled in the Orbofiban in Patients with Unstable coronary Syndromes-Thrombolysis In Myocardial Infarction (OPUS-TIMI) study.

3 After multi-variate adjustment for co-morbidity, a significant relationship between glucose levels and 10-month mortality was observed.

4 The hazard ratio for quartile 4 versus quartile 1 glucose levels for 10-month mortality was 1.70 (95 % confidence interval 1.16–2.50; P=0.006)

5 The results demonstrate that high blood glucose during acute coronary syndrome is an independent predictor of long-term mortality.

6 The authors conclude that glucose levels during acute coronary syndromes may be an important addition to the risk stratification of patients and therefore an important target for therapy.

Bhadriraju S, Ray KK, DeFranco AC et al (2006) Association between blood glucose and long-term mortality in patients with acute coronary syndromes in the OPUS-TIMI 16 trial. *American Journal of Cardiology* **97**: 1573–7

'Serum cholesterol and family history of stroke or of coronary disease were not independent prognostic factors [for stroke].'

STROKE

Long-term risk factors for stroke in men identified in 28-year trial

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓✓

1 Previous studies have identified risk factors for stroke with a follow-up of 10 years. The goal of this study was to estimate the predictive value over a 28-year follow-up of various risk factors of stroke present in men.

2 A cohort of middle-aged men (n=7457) between the ages of 47 and 55 were recruited for this study in Goteborg, Sweden. The baseline year for the study was 1970. Results were presented for the full 28 years and for three different time periods: 0 to 15 years; 16 to 21 years and 22 to 28 years.

3 Hypertension, diabetes and age were found to remain important risk factors for stroke over 28 years and for the three time periods.

4 High body mass index and taking medication for hypertension at baseline emerged as risk factors for stroke in the second and third decades.

5 Other risk factors were independently associated with outcome over the full period and in the first two periods of follow-up: previous transient ischaemic attack, atrial fibrillation, psychological stress, smoking and a history of chest pain.

6 Serum cholesterol and family history of stroke or of coronary disease were not independent prognostic factors.

Harmsen P, Lappas, G, Rosengren A, Wilhelmsen L (2006) Long-term risk factors for stroke. Twenty-eight years of follow-up of 7457 middle-aged men in Goteborg, Sweden. *Stroke* **37**: 1663–7

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eGFR increases with long-term treatment with rosuvastatin

Readability	✓✓✓
Applicability to practice	✓✓✓
WOW! factor	✓✓✓

1 The object of this study was to define the effect of short-term treatment with rosuvastatin on the estimated glomerular filtration rate (eGFR).

2 Thirteen trials from the database of controlled clinical trials in the rosuvastatin clinical development programme were selected.

3 Participants (n=3956) were selected based on a serum creatinine measurement at 6 or 8 weeks after initiation of rosuvastatin and randomisation and maintenance through to 6 or 8 weeks of a dose of rosuvastatin of between 5 mg and 40 mg.

4 eGFR increased significantly for each dose of rosuvastatin and for all doses combined compared with baseline (0.9–3.2 ml/min/1.73 m^2).

5 The increase in eGFR in rosuvastatin-treated patients was consistent across all major demographic and clinical subgroups of interest, including patients with baseline proteinuria, baseline eGFR <60 ml/min/1.73 m^2 and in patients with hypertension or diabetes or both.

6 The results were consistent with previous studies showing that there is an upward trend in eGFR with long-term (≥96 weeks) treatment with rosuvastatin. The results also support the hypothesis that statins may have a pleiotropic mechanism of action that includes beneficial renal effects.

Vidt DG, Harris S, McTaggart F et al (2006) Effects of short-term rosuvastatin treatment on estimated glomerular filtration rate. *American Journal of Cardiology* **97**: 1602–6

CIRCULATION

Association between adiponectin and CHD is moderate

Readability	✓✓✓
Applicability to practice	✓✓✓
WOW! factor	✓✓✓

1 A strong association has been shown between circulating concentrations of adiponectin and risk of type 2 diabetes. The aim of this trial was to establish if there is any link between circulating concentrations of adiponectin and coronary heart disease (CHD).

2 Data were generated from a cohort of 7735 men randomly selected to take part in the British Regional Heart Study.

3 Baseline adiponectin levels were measured for 589 men with fatal CHD or non-fatal myocardial infarction and 1231 controls.

4 Baseline adiponectin concentrations correlated (P<0.0001) positively with HDL cholesterol and inversely with C-reactive protein and body mass index.

5 There was no significant difference between median adiponectin levels at baseline of those with CHD and controls (10.2 µg/ml versus 10.8 µg/ml; P=0.5).

6 The odds ratio for CHD was 0.89 (95% confidence interval 0.67–1.18) for men in the top third of adiponectin concentrations compared with those in the bottom third of adiponectin concentrations.

7 The authors found that any association between CHD and adiponectin is comparatively moderate and further investigation is required.

Sattar N, Wannamethee G, Sarwar N et al (2006) Adiponectin and coronary heart disease. A prospective study and meta-analysis. *Circulation* **114**: 623–9