Never let the facts spoil a good story: a challenging case history

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While the practitioner strives to maintain patient motivation and compliance in the face of polypharmacy, patients are bombarded periodically by negative material in the popular media.

Case scenario

Mr WG is a 68-year-old man who maintained good cardiovascular health until about 18 months ago when he developed an acute coronary syndrome. Following coronary angiography, two vessels were stented and he has made a good clinical recovery, free of any cardiac symptoms.

Mr WG is an ex-smoker (who quit a 30-year 25 cigarettes a day habit about 10 years ago), nondiabetic, normotensive and not overweight, and has no family history of premature cardiovascular disease. He has experienced several attacks of gout over the years and is taking allopurinol. A panel of blood tests had been performed six weeks before his acute event with the following results:

- *cholesterol 4.3 mmol/L*
- *triglycerides 1.6 mmol/L (desirable <1.5 mmol/L)*
- *HDL cholesterol 1.1 mmol/L (desirable >1.0 mmol/L)*
- *LDL cholesterol 2.5 mmol/L (desirable <2.0 mmol/L)*
- *glucose 5.0 mmol/L (desirable <5.5 mmol/L)*
- *creatinine 83 µmol/L (desirable <110 µmol/L)*
- *urate 0.39 mmol/L (desirable <0.47 mmol/L)*
- *electrolytes and liver enzymes were within normal limits.*

How should his risk factor profile be interpreted?

This man is representative of many patients presenting with acute coronary artery disease. He is between 60 and 70 years of age, is an ex-smoker, has a moderate elevation in LDL cholesterol level and has a past history of gout. He is at high risk of a future cardiovascular event. He needs to receive all the standard drugs given to a revascularised patient.

Case scenario continued

Mr WG is discharged from hospital on aspirin, clopidogrel, ramipril, metoprolol, allopurinol and atorvastatin. At his follow-up appointment he expresses annoyance at the need for an asymptomatic person to be taking six different drugs costing him almost $200 a month. His doctor spends a lot of time encouraging him to persist with treatment.

In February 2012, Mr WG wakes up to an alarming story on the front page of the newspaper with the headline 'Miracle drugs put thousands at risk!' His take on the story is that ongoing statin therapy may lead to either dementia or diabetes or both.

He stops taking his atorvastatin therapy and calls his GP for further advice. The GP, who has not seen the story or the background material, is somewhat non-plussed and offers reassurance, but to little avail. He arranges to see Mr WG the next

Key points

- **Some patients with an acute coronary syndrome are transformed from good health, on little or no medication, to a situation of ongoing polypharmacy.**
- **Patients often resent this situation on the grounds of convenience and financial burden.**
- **The popular media regularly publish unbalanced and hysterical stories in relation to medical matters, making the situation even more difficult for both the patient and doctor.**
- **Practitioners have the difficult task of keeping one step ahead of what patients may see in the popular media.**

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day after he has obtained further advice from a consultant (this author, who had never seen Mr WG).

Consultant response

The background material, a drug safety report from the US Food and Drug Administration (FDA), discussed a few issues, but in particular an increased risk of new diabetes or cognitive impairment. In the interests of honest communication it is necessary to reproduce the relevant words: 'Information about the potential for generally non-serious and reversible cognitive side effects (memory loss, confusion, etc) and reports of increased blood sugar and glycosylated haemoglobin (HbA_{1c}) levels has been added to the statin labels. FDA continues to believe that the cardiovascular benefits of statins outweigh these small increased risks.'

These are correct statements based on scientific evidence and give a fair perspective. Although the newspaper story also quoted Australian experts who tried to calm troubled waters by correctly stating that we should reserve statins for higher-risk patients, any patient using a statin would have perceived only two alarming messages: he or she might develop diabetes; and he or she might develop dementia.

The popular media love medical stories because they rate well. Regrettably, many such media reports are sensational and fail to give a balanced perspective. The headline writers have a particular agenda – they wish to be controversial and to improve ratings.

What are the underlying facts in this matter?

In regard to cognitive impairment, I believe that the FDA press release says it all: the risks are low and the problem is essentially reversible upon drug cessation. This is not a new issue and our job is to be aware and to monitor our patients.

The diabetes issue is more complex. We have been aware for some years that statin trials show an increased risk of new type 2 diabetes, although this has not been a universal finding. The increase in relative risk of developing diabetes has been found to be as much as 26% (in the JUPITER study).[1] This is perceived as a shocking statistic, until one realises that we are confusing relative with absolute risk increase. In this study with 8900 patients in each arm, the absolute rate of newly reported diabetes was 2.4% in those patients on placebo versus 3.0% in those on rosuvastatin, a mere 0.6 percentage point increase in absolute risk.

In a meta-analysis of 13 statin trials involving 91,000 patients, the relative risk of developing diabetes was increased by a significant 9% over four years.[2] The absolute rate of newly reported diabetes was 4.5% in those patients on placebo or no treatment versus 4.89% in those on a statin.[2] This analysis indicated that 255 patients would need to be treated for four years to produce one new case of diabetes. (Other studies indicate that the number needed to treat to prevent a future cardiovascular event was well below 50, but this figure was dependent on the background cardiovascular risk of patients so treated.)

What advice should we give to patients?

Through all the noise and hysteria there is a danger of missing the correct message. Although statins have a definite but low risk of important side effects and patients do deserve careful monitoring, we possess ample evidence of significant cardiovascular benefit when patients at higher risk are treated with statins. On the other hand, I believe that patients with modest cholesterol problems but still at low cardiovascular risk (i.e. carrying no other major risk factors) should not be given statins, relying instead on diet and lifestyle modifications.

Case scenario continued

Although Mr WG seems to have only a modest cholesterol problem, he is at very high risk of experiencing a future coronary event. He needs to continue taking the statin.

The original dose of atorvastatin given to Mr WG was 80 mg/day, in line with clinical trial data. His LDL cholesterol level was averaging at about 1.2 mmol/L on this treatment. Although not strictly supported by trial evidence, his GP convinces Mr WG to resume atorvastatin at 20 mg/day and he will probably still maintain an LDL cholesterol level well below 2.0 mmol/L on this treatment.

Implications

This scenario demonstrates some issues of polypharmacy, a common problem in this situation. Maybe the 'polypill' will help in the future. While the practitioner strives to maintain patient motivation and compliance, our patients are periodically bombarded by negative material in the popular media. At least in Australia we are spared the additional problem of direct promotion of drugs to patients by the pharmaceutical industry. **CT**

References

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