# Aspirin and diabetes: prescribing attitudes reflect clinical uncertainties

R Raghavan, *et al.* Attitudes to aspirin use in diabetes in clinical practice: a survey of health care professionals from primary and secondary care settings in the UK. Pages xxx–xxx.

Only a few years ago low-dose daily aspirin was regarded by the popular press as a 'wonder drug', prolonging life at least for the over-50s by combating heart disease, strokes and certain cancers as well as reducing risk, among others, of cognitive decline, cataracts and gall stones, all of which occur more commonly with diabetes. The benefit of aspirin in secondary prevention of coronary heart disease (CHD) is deemed unequivocal. Furthermore, still within recent years, expert consensus reports, including those from the American Diabetes Association, have suggested that there was also 'substantial evidence' (albeit based on older trials – the US Physicians Health Study, for example, reported 39% relative risk reduction for men with diabetes) for low-dose aspirin usage in the primary prevention of CHD in people with diabetes who have additional cardiovascular system (CVS) risk factors such as hypertension, smoking, dyslipidaemia and albuminuria.

Diabetes itself can be associated with significant haemobiological disturbance, including increased platelet adhesiveness and aggregation, arguably of contribution to the atherogenic process and other diabetic angiopathies. Whether platelet dysfunction is a direct consequence of hyperglycaemia or secondary to vascular disease has been debated, but *in vitro* studies demonstrate a powerful and sustained effect of aspirin in reversing these disturbed platelet parameters, in part by blocking synthesis of thromboxane, a potent vasoconstrictor that is increased in diabetes.

When a treatment hypothesis is proposed it is more easily understood if there is an intrinsic logic to the recommendation. Thus the use of aspirin in patients with established CHD can be accepted without much difficulty but, in contrast, it does seem counter-intuitive that aspirin may not be of benefit in primary prevention. Given the changing consensus guidance, based on more recent trial evidence, systematic review and risk–benefit analysis, it is still not surprising that the clinical prescriber retains significant uncertainties concerning the considered correct, but probably more importantly the most appropriate, management in respect of aspirin usage in diabetes. In reality, as more frequently expressed these days, guidelines should not necessarily be seen as 'a one size fits all' strategy set against the merits of determining optimal individualised care.

Raghavan and colleagues report in this issue of *Practical Diabetes* the results of their survey of attitudes of health care professionals to the use of aspirin in diabetes for the prevention of CHD. Although it is evident that most health care professionals would no longer routinely prescribe aspirin in this context, at least half still have uncertainties as to best practice and many support the concept of individually determined need by regarding specific CVS risk factors as a positive indication for prescribing low-dose aspirin. The authors review the latest evidence base for low-dose aspirin in primary prevention and, indeed, trial data become increasingly more difficult to interpret as further confounding factors, such as increasing use of statins, complicate the overall picture. Furthermore, uncertainties concerning the appropriate dose of aspirin and the possibility of increased aspirin resistance in diabetes add yet more confusion to the dilemma. The survey identifies interesting differences in attitudes between health care professionals and between primary and secondary care settings, specialist doctors on the whole continuing to prescribe selectively for specific situations such as microalbuminuria.

Diabetes has many examples of clinical practice changing with time in the light of new research review, and sometimes 'what goes around, comes around'. It will be interesting to learn in due course of the ASCEND trial results, which include a treatment group with low-dose aspirin. Meanwhile, the potential benefit of aspirin in cancer prevention – yet to be established but with its own developing evidence base, and of relevance to diabetes particularly associated with obesity – adds but another reason not to dismiss aspirin as part of the extensive therapeutic armamentarium that so characterises the current treatment of diabetes.

**Professor Ken Shaw,** Editor-in-Chief,
*Practical Diabetes*