Aspirin in Primary Prevention

Post launch of the Inceptum programme we have received a number of questions regarding the Aspirin indicator and target recommended by the Cardiovascular Disease SLAT. While evidence is still evolving in this area we thought it would be helpful to present a plain language summary.

The extract below from a New Zealand review (Selak et al) is the most helpful and accords with our national experts current views that aspirin should be offered to those who have a 5 year CVD Risk >15%, at least for people up to age 79 as more caution may be required in elderly and others with high risk of bleeding. This conclusion was reached from New Zealand real-life data

“The recent ATT Collaboration meta-analysis has raised doubts about the relative safety of aspirin in primary prevention of CVD. However, modelling by risk category and age group suggests that current guidelines are justified in recommending aspirin for primary prevention of CVD in those with five-year CVD risk ≥15% up to the age of 80 years. For men 70-79, consider lipid and blood pressure-lowering therapies first then reassess whether aspirin adds additional net benefit.”

This is consistent with the latest advice from USA and United Kingdom but not consistent with the Australian guidelines which do not routinely recommend the use of aspirin even in those with high risk. The American and UK advice states that Aspirin is indicated in people above 50 years with a ten year cardiovascular risk ≥20% (equates to a >10%, 5 year risk in our lingo!). However recommends aspirin for younger ages when there are other risk factors – essentially this equates to a person’s absolute 5 year CVR being ≥15%.

Obviously one needs to use clinical judgement and as always weigh the pros and cons for the individual patient when applying guideline advice. However, given experts such as Prof Norman Sharpe, Prof Rod Jackson and Dr Gerry Devlin all concord that this is current best practice we are confident that the target, 70% of people with CVR ≥15% should be on aspirin, is justified.

This indicator excludes people where it is contraindicated (because they are on warfarin, have a high risk of bleeding or intolerance). Therefore 70% should not be difficult to achieve in this context, nor put people at risk. Furthermore it will only apply and be measured for eligible people up to age 75 years so the elderly (who have a higher bleeding risk) are excluded. Also note that for this indicator we are measuring the latest risk recorded so that if you lower the risk below 15% by use of statins or antihypertensives then aspirin will not be necessary nor counted.

Attached is a Medicines Information Bulletin from one of the leading Clinical Pharmacy academics which summarises the evidence and comes to the same conclusion (Bryant).

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1 Selak, V; Elley, CR; Wells, LSM; Rodgers, A; Sharpe, N: Journal of Primary Health Care 2(2):92-99; 2010
4 http://cks.nhs.uk/antiplatelet_treatment rtf
6 Bryant, L; East Health Trust PHO Medicine Information Bulletin: Aspirin - yes, no or maybe? 18(4), Feb 2012
Medicines Information Bulletin


Key points
- Aspirin for cardiovascular secondary prevention ….. YES
- Aspirin for cardiovascular primary prevention ….. NO – unless the CVD risk is greater than 15%
- Aspirin for cancer prevention …. Probably not (yet)

Aspirin in primary prevention for cardiovascular disease
- There have been four meta-analyses,1-4 involving nine randomised controlled trials,5-13 of the potential benefits of aspirin in primary prevention.
- The meta-analyses have had some variation but are consistent in their conclusions.
- There is no significant difference between aspirin and no aspirin for all cause mortality, cardiovascular mortality or all cause stroke.
- Any benefit for reduced risk of myocardial infarction (MI) is marginal, primarily due to reduced risk of non-fatal MI.
- The number needed to treat per year to prevent one MI is 500 to 1400.2,3,4
- The number needed to harm per year from a major bleed is 300 to 3000.2,3
- Most of the trials had participants who were at higher risk of a cardiovascular event e.g. Across the trials 11 to 32% were smokers, and five of the trials used concomitant medicines therapy
- For people with a cardiovascular risk more than 15%, consider blood pressure lowering medicines and / or a statin first.
- If the cardiovascular risk remains over 15%, consider adding low dose aspirin.

So, should all people with diabetes be on aspirin?
- There have been five primary prevention meta-analyses of aspirin for people with diabetes but no other cardiovascular disease, involving seven randomised controlled trials.6,8,11,12,14-16
- There was no significant difference in the aspirin versus no aspirin groups for all cause mortality, cardiovascular mortality, MI, cardiovascular events or stroke.
- As for primary prevention in people without diabetes, calculate the cardiovascular risk and treat people with a risk greater than 15%, taking into account the risk lowering effects of blood pressure lowering medicines and statin.

So what about the proposed reduction in cancer risk
- A recent meta-analysis of aspirin prophylaxis in people without prior cardiovascular disease found no reduction in cardiovascular or cancer mortality with the use of aspirin.
- There may be a place for ‘at risk’ people e.g. with a history of adenomas or colorectal cancer.

References

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The information contained within this bulletin is to be used in conjunction with the diagnostic and clinical skills of the general practitioner. The information in this bulletin is compiled from a number of sources. While the clinical advisory pharmacist group has taken all possible care in compiling the information contained herein, general practitioners are responsible for checking the use of information before prescribing.