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OVER PRESCRIPTION OF ASPIRIN

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Aspirin came and conquered the world of cardiology in a few years.[1,2] No other drug can boast of the enthusiasm that has been shown by cardiologists in adopting a new medicine. Though it was well known to cardiologists for its role in treating acute rheumatic fever but now it seems to have transcended all boundaries and is being prescribed to all patients under the care of cardiologists. As in older days when Digoxin became the 'mark of identification' of all patients with suspicion of a cardiac disorder, similarly Aspirin is being prescribed by cardiologists and more so by physicians and general practitioners to patients with a possibility of having an illness that may even be remotely related to heart. The drug is being used even in patients afflicted with congenital and rheumatic heart diseases with no evidence based indication of Aspirin. The drug is being prescribed to children and old patients without evaluating the real need.

No doubt Aspirin is a wonderful discovery and if it was to be discovered today it would have carried a high price tag. The initial use of the drug was confined to its anti-inflammatory properties. Six decades ago the possibility of its role as an antithrombotic agent was reconnoitered but it waited for half a century to be established in acute coronary syndrome and secondary prevention of cardiovascular and cerebrovascular events.[1-4] Its role in primary prevention has still to be established as risk benefit ratio has to be weighed in every case.[5] Its possible role in prevention of colorectal cancer and other cancers has been received with enthusiasm but need more evidence.[6,7]

There are a few reports highlighting the underuse and premature discontinuation of Aspirin in developed and developing countries. This is common among eligible patients who are at higher risk and are supposed to derive benefit from Aspirin. It was observed that increased cardiovascular risk profile only partially influenced aspirin management. It was suggested that more efforts be made to improve appropriate Aspirin use in patients with evidence based indications.[8,9]

It has to be appreciated that Aspirin is not entirely free of side effects. There is considerable risk for harm and GI upset and bleeding are on top of the list, followed by risk of bleeding from other reasons. Aspirin through its ability to block prostaglandins may damage gastrointestinal mucosa. Erosions may be trivial but they may later progress to ulcers which may bleed or perforate and may cause death. [10] During 14 years of follow-up, 707 men reported an episode of major gastrointestinal bleeding over 377,231 person-years. Compared to men who denied any aspirin use, multivariate RRs of upper gastrointestinal bleeding were

1.05 (95% CI 0.71–1.52) for men who used 0.5–1.5 standard tablets/week, 1.31 (95% CI 0.88–1.95) for 2–5 aspirin/week, 1.63 (95% CI, 1.15–2.32) for 6–14 aspirin/week and 2.40 (95% CI, 1.10–5.22) for >14 aspirin/week ($p<0.001$). Regular aspirin use increases the risk of gastrointestinal bleeding, especially from the upper tract. However, risk of bleeding appears to be more strongly related to dose than to duration of use. Risk of bleeding should be minimized by using the lowest effective dose among short-term and long-term aspirin users.[11] It has been shown that among individuals who had peptic ulcer bleeding, continuous low-dose aspirin use increased the risk of recurrent bleeding but resulted in lower overall cardiovascular and cerebrovascular mortality rates.[12]

But there are serious issues with over prescription of the drug world over. A study conducted in Italy noted with concern that, as many as 12% and 18% of patients who had a cardiovascular and/or coronary risk <1.0 event/100 patients/year according to the European and the Italian charts, respectively, were receiving Aspirin. They were defined as being treated inappropriately. Patients with and without inappropriate treatment were similar with respect to smoking habits, family history and body max index. However, inappropriately treated patients had significantly lower levels of blood pressure and total cholesterol, and were more likely to be female, younger and non-diabetic than patients.[13]

Another study population-based study on 5725 adults aged 35–75 without cardiovascular disease was conducted in Switzerland in 2003–2006. Patients were evaluated for regular aspirin use for cardiovascular prevention according to 10-year CHD risk and other cardiovascular risk factors.2.6% in persons with risk < 6% (low risk) to 9% in those with risk 6–20% (intermediate risk, $p = 0.001$), but no adults with risk $\geqslant$ 20% used aspirin. Participants with cardiovascular risk factors were more likely to use aspirin. However, 1.9% adults with risk < 6% and no diabetes used aspirin. It was observed that using a population perspective, a more appropriate aspirin use would reduce up to 2,348/24,310 CHD deaths expected over 10 years in Switzerland, and avoid about 700 gastrointestinal bleedings and hemorrhagic strokes among those not eligible.Individuals at intermediate CHD risk and diabetics are more likely to take aspirin, but there are significant opportunities for improvement. The underuse of aspirin for those at risk coexists with an overuse among those at low risk which may cause GI bleeding and strokes.[14]

Aspirin is like any other drug and it has to be used like a medicine.[15] It has evidence based indications and the use should be confined to them. Gastro intestinal symptoms and haemorrhage is a real threat and claims a big toll. The drug should be prescribed in acute coronary syndrome, secondary prevention after a cardiovascular event but in the setting of primary prevention the use should be limited to those who are at high risk.

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