SHARON MULVAGH: Greetings. I'm Dr. Sharon Mulvagh, the director of the Women's Heart Clinic at Mayo Clinic. And today, on theheart.org, we'll be discussing aspirin and primary prevention with my colleague, Dr. Francisco Lopez, who is the director of preventive cardiology. Welcome, Francisco.

FRANCISCO LOPEZ: Thank you.

SHARON MULVAGH: The FDA this past May, as you well know, issued a public health advisory announcing that an evidence review showed no support for the general use of aspirin for primary prevention of myocardial infarction or stroke. Coincident with that, the agency informed Bayer HealthCare that it had rejected its application to allow for the marketing of aspirin for primary prevention of heart attacks. The agency stated that the current evidence for primary prevention of heart attacks was not strong enough to outweigh the bleeding risks.

It's really great to have you here, an expert in this area, to discuss further with us your thoughts on that. What is the evidence base?

FRANCISCO LOPEZ: Well, Sharon, thank you for addressing that, because it was very interesting to see that the FDA issued that particular statement when the American Heart Association, the American College of Cardiology, and pretty much any other major medical organization has endorsed the use of aspirin for primary prevention. Now, it was unfortunate not to see the evidence that was based on. But when we review the evidence of all the clinical trials testing this question, I can see where the FDA is coming from and also why they issued these recommendations. But I think that it's an important message for clinicians that we can share.

The evidence supporting the use of aspirin for primary prevention comes primarily from three major clinical trials. But in general, there are about nine clinical trials testing that question. And the summary of the evidence is that aspirin can indeed prevent myocardial infarction, even if it seems to be modest, and it has no effect on total mortality or cardiovascular mortality.

In women, however, the benefit seems to be limited to stroke. And the risk for bleeding, particularly gastrointestinal bleeding, is also real. And it almost goes one-to-one with the number of events that it's intended to prevent, cardiovascular events. So that's why this issue is controversial, and that's why the benefit or risk is going to be a source of major discussion.

SHARON MULVAGH: It's a real conundrum. Every day we face the situation with our patients whether or not they should have aspirin. They ask us these questions. They have been quite confused by the media releases just over the last month. How do you deal with this in your office? What do you do?

There is this evidence basis, that meta-analysis that you've just referred to. There are the major trials that we have. And the bottom line is that it does seem that there is really no convincing evidence for reduction of cardiovascular death or overall death.

But certainly, the reduction of non-fatal MI is there at the expense, perhaps, of the increased risk in bleeding. But we have to individualize. And how do you do this with your patient?

FRANCISCO LOPEZ: Sure. So first of all, I try to assess the patient that certainly doesn't need aspirin. And that's generally the individual, or the person with no risk factors who has a very healthy lifestyle, and the risk for cardiovascular events is so low that aspirin is clearly not justified. I think that's the very first step that I take.

After that, after I identified a patient that might benefit, then I go over the evidence and highlight the modest but real evidence to prevent myocardial infarction. And I also go over the evidence showing that there is no major effect on mortality or cardiovascular mortality. And then I try to exercise the shared decision-making with the patients so they are part of the discussion. And if they are OK taking an aspirin every day for X number of years to get a modest benefit, and they are OK with that, I think that's a patient's decision, And I think that's fine.

I also assess the risk for gastrointestinal problems. If they have history of ulcers, particularly bleeding from the gastrointestinal tract in the last few years, I will be more resistant to start aspirin. In patients who have tolerated aspirin in the past and qualify for that, I will not stop the aspirin, of course. And it's usually a decision between the risk for bleeding and the potential benefit they might have.

SHARON MULVAGH: So if they have significant associated risk factors-- diabetes, hypertension, hyperlipidemia, obesity-- and if their overall risk score, for example, on the AHA pooled cohort score comes over a certain threshold-- 7.5%, 10%-- is that how you approach it? Do you then say, your risk is such and such, and in this situation, we know that there may be some benefit, but there also is a significant risk for bleeding?

FRANCISCO LOPEZ: I will say I base my decision, in part, using the globalist score. However, one of the issues that led the FDA issue that statement was actually the fact that there are three clinical trials, recent clinical trials, that showed no benefit in patients with diabetes and/or peripheral vascular disease. So using just single risk markers it doesn't seem to help much.

I think it's, perhaps, the patient that has several other risk factors, not just diabetes, and the one that has very minimal or very low risk for bleeding. So again, I think this issue just brought some additional discussion to the table, and we probably need more evidence to have a more conclusive and clear guidance in when and how to study aspirin.

SHARON MULVAGH: It's a very good point. And I do think there are several trials, actually, going on at the current time looking at prospective use of primary prevention with aspirin.

So if you've made the decision with your patient, that you think that the risks outweigh any risks from the risk of bleeding and so the benefit would be greater with use of aspirin, the big question is, what's the dose? The trials, they're all over the map there. So what do you recommend to your patients for primary prevention?

FRANCISCO LOPEZ: That's an excellent point, because for some reason we got fixated to the 81 milligrams even though the doses tested in clinical trials went anything from 75 milligrams to 500 milligrams a day. I go for what the minimal dose that can block the effect of the platelets. That will be at the same time, perhaps, the safest to prevent bleeding. And I go with 81 milligrams. And I don't think there is any evidence showing that higher doses are better.

So, indeed, the HOT trial used 75 milligrams a day, and that has been, perhaps, the most significant study across all patient groups that show some benefit.

SHARON MULVAGH: I think that's a really, really important thing because patients are quite confused. But it's easy to get at least the baby size. So that's the simple approach, is the baby aspirin is what you would recommend on a daily basis.

FRANCISCO LOPEZ: Yeah.

SHARON MULVAGH: If, indeed, the risk justifies it for having cardiovascular disease. And I think it's very important to emphasize again that this is for primary prevention. Those patients that already have an established diagnosis of heart disease, that's secondary prevention, and indeed they all should be on aspirin unless there's some significant contraindication. Would you agree with that?

FRANCISCO LOPEZ: Absolutely. I think that's something else that patients got to be very careful not to mix those messages and get confused. Because those who had a history of myocardial infarction, of any sort of atherosclerotic cardiovascular disease, they should definitely be on aspirin. No question about that.

SHARON MULVAGH: Exactly. And even though we think of primary prevention and secondly prevention, it's very different. There really is a continuum. And that's where the tricky part is. And that's where we need prospective trials to really sort those issues out.

FRANCISCO LOPEZ: Yeah.

SHARON MULVAGH: I think it's well worth mentioning too that cardiovascular lifestyle prevention, the standard things that we recommend with appropriate diet and physical activity, that's for free. That's no risk. And that is something that we always emphasize to our patients. And those that are confused about aspirin, you always can be very supportive and very strongly recommending the optimal lifestyle issues.

FRANCISCO LOPEZ: Yeah, absolutely. Aspirin cannot replace exercise and nutrition.

SHARON MULVAGH: Bingo. So Francisco, it's really been a pleasure to have you with us today. And thank you for sharing your insights on this pretty controversial, vexing, and confusing topic.

We thank our viewers, and we hope that you'll continue to check out our future content on the Mayo Clinic's page at theheart.org on Medscape. Thank you.