

# Low blood pressure can also increase risk of heart attack

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In last week's annual convention of the Philippine Heart Association, several studies were discussed by local experts that can possibly change the way doctors advise their patients on their dietary preferences, and the prescription for some common medical problems like high blood pressure (BP), clogging of the heart arteries and high levels of cholesterol in the blood.



Dr. Rody Sy presented the results of the Odyssey trial, showing that a new and very potent drug for lowering cholesterol levels in the blood can also help improve survival or prolong life by reducing all deaths, as well as heart attack and stroke. The drug is indicated for high-risk patients whose blood cholesterol levels could not be adequately reduced by commonly prescribed cholesterol-lowering drugs called statins. The targeted low-density lipoprotein (LDL or bad type of cholesterol) level in the clinical trial was less than 50 mg/dl.

## Lower LDL levels

Patients frequently discontinue their cholesterol-lowering drugs when the level of LDL is already less than 100 mg/dl, but many studies now show that much lower LDL levels are more ideal in preventing serious cardiovascular complications in high-risk patients.

The new potent drug evaluated in the Odyssey trial, which belong to the PCSK-9 family of drugs, was effective in attaining the ideally low LDL level, and improving long-term outcomes. But I think there's one big fly in the ointment. It comes in injectible form that has to be given every two weeks, and the monthly cost is equivalent to about two to three months' salary of the average employee.

Dr. Tony Dans gave a more cautious perspective on interpreting the results of the controversial Pure study, which suggested that people eating a high-fat diet, including saturated fats, seem to fare better and live longer with less strokes and heart attacks than people eating a high-carbohydrate diet, which is the typical diet in developing countries like the Philippines.

A high-fat diet is associated with more affluent countries, whose people can afford and tend to eat more steaks, hamburgers and other fatty food.

The findings of the Pure study appears to be counter-intuitive and runs contrary to the diet doctors commonly recommend, namely, a low-fat, highfiber diet. In the end, Dr. Dans assured the doctors in the audience that it still makes sense to recommend a balanced diet to their patients.

Dr. John Añonuevo gave a scholarly evaluation of the Canvass trial, which may change the type of blood thinners doctor prescribe for their patients. Doctors commonly prescribe low-dose aspirin to their patients with coronary artery disease (CAD) or clogged heart arteries. As a blood thinner, aspirin works by preventing clotting of the blood inside the already partially clogged arteries of CAD patients.

**New type of blood thinner**

There's a relatively new type of blood thinner in the market called NOACs or novel anticoagulants, initially recommended to prevent strokes in patients with irregular heart rhythms called atrial fibrillation. The Canvass trial suggests that a low dose of one of these NOACs alone is just as good as low-dose aspirin, and the combination appears to be more effective.

The downside is that, although lower doses of the two blood thinners are used, the risk of bleeding, particularly in the stomach, is significantly higher. The daily cost of the NOAC is also about 80 times more than the price of low-dose aspirin.

For my part, I presented the findings of the Clarify study, which analyzed the impact of achieved BP with treatment in hypertensive patients with CAD. The study wanted to find out the ideal BP levels in hypertensive CAD patients.

I described it as a tightrope balancing act which doctors find themselves doing when treating these high-risk CAD patients with high BP. Too high BP is definitely bad, as previously known, but low normal BP, which was previously thought to be ideal, is also bad, and can lead to a paradoxical increase in the risk of heart attack, stroke and death.

This is referred to as the Jcurve phenomenon, because the pattern of cardiovascular risk when plotted against the BP is like a tilted capital J letter. The risk decreases with BP reduction from a high level, but lower beyond what appears to be an ideal range of BP, the risk starts to go up again.

So, what's the ideal range of BP for hypertensive patients with CAD or clogged arteries or patients complaining of angina (chest pains)?

Based on the Clarify study, it appears to be between 120/70 to 139/79. I described this ideal range as the BP "sweet spot."

Equal or higher than 140/90 and lower than 120/70 seem to be associated with higher cardiovascular risk.