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Short Communication

Red Meat - We Can No Longer Afford to Guess!

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On 1 October 2019, a series of six articles were released [1-6] online, prior to the hardcopy publication in the Annals of Internal Medicine. These controversial articles discuss the consumption of red meat and processed foods and their implications on heart disease and cancer.

The primary response to those articles reflected the dichotomy that currently exists in medicine and society fueled by two major opposing camps – those who believe red meat is harmful and those who believe red meat is beneficial.

How did we arrive at such a dichotomy of opinions?

The primary focus to date has been (1) retrospective studies, (2) prospective studies looking at weight loss, (3) prospective studies looking at changes in blood tests, and (4) prospective studies measuring the actual change in heart disease and cancer – of which there are only five such studies to date [7-11] - only one of which actually compared changes in the blood tests with changes in heart disease itself [9].

Retrospective studies tend to be flawed by the introduction of bias based upon what clinicians and researchers expect to see. E.g. for many years, cigarette smoking was associated with lung cancer primarily because retrospective studies showed the association – an association fueled by the way the data was collected. This association was strongly biased by lung cancer patient records including smoking data, while non-lung cancer patients frequently did not have the inclusion of such information, even if the patient was a smoker. Retrospective study analysis therefore showed what was expected. This is not to say smoking doesn't cause lung cancer, but the data is more strongly associated with bladder cancer than lung. To test if a treatment has an effect, prospective studies are required – they are not optional.

There are multiple studies showing that patients lose weight – at least initially - once placed on a diet, independent of the specifics of the diet employed [12]. However, weight loss alone does not equal improved health. Similarly, there are multiple studies showing improvement – at least initially – in blood lipids and other markers of inflammation known to cause coronary artery disease [13]. Again, however, the question isn't whether you can improve a blood test, but rather if what you are doing with the patient can reverse or at least stabilize heart disease or cancer. To that end, there are only five such studies, which looked at this [7-11] and they are not included in the Annals papers [1-6].

Thus, leaving us with the final group – those studies which actually measured changes in coronary artery disease (CAD) and cancer. The only study to quantitatively look at breast disease and diet [10] showed improvement in most, but not all women. In fact, a later paper looking at two case studies, showed improvement in one woman and increased disease in the other [14]. In these two studies [10,14] the women underwent actual measurement of breast changes [15].

Of the four-cardiology studies published to date [7-9,11], the measurement of actual CAD was obtained using semi-quantitative measurements – i.e. they are pre-FMTVDM [15]. While semi-quantitative, these studies not only established that changes in the blood tests do not correlate with changes in actual CAD – making these blood tests useless as a means of determining the actual impact of

either drug or diet treatment on actual end-organ CAD – but that further quantitative studies [15] are needed to answer the question regarding the impact of both the drugs we use to treat patients with hyperlipidemia, as well as the effect diets and lifestyle have on CAD and cancer, including the consumption of red meat and processed foods.

Given the ramifications of both CAD and cancer as the number 1 and 2 killer of people, and given the types of divisive papers currently being published [1-6], it is clear we can no longer merely guess at what we think the results should be. As Senator Bernie Sanders just reminded us, there are hundreds of thousands to millions of people whose lives depend upon our finding the answer to the question. They need us to know and not guess!

Acknowledgments

FMTVDM is issued to the first author.

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