

Response to comments on M. Iqbal et al (J Pak Med Assoc 2021 January (1-A): 98-100)

## Assessment of risk factor profile in young patients undergoing elective coronary artery bypass grafting surgery in Armed Forces Institute of Cardiology/National Institute of Heart Disease, a tertiary care cardiac facility

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Dear Sir, Thank you for your response and intriguing comments on our article.

We conducted this study on a large group of individuals under 50 years of age, who underwent elective coronary artery bypass grafting in a tertiary care cardiac facility in Rawalpindi, Pakistan. The risk factors we studied included a mix of modifiable and non-modifiable factors. These included hypertension, diabetes, serum cholesterol, family history of coronary artery disease, smoking and obesity. In our study, there was a high prevalence of hypertension and obesity among this age group.

### 1. Hypertension

We defined hypertension according to WHO criteria as BP > 140/90 mmHg. BP was measured in the sitting position with a correctly sized cuff for each individual patient. In future studies, to further enhance the findings of a study, 24-hr ambulatory BP measurement can be used as part of the risk assessment tool.

### 2. Obesity

We defined overweight and obesity according to the BMI categories in south Asian populations. BMI values were categorized into normal (18.0-22.9 kg/m<sup>2</sup>), overweight (23-24.9 kg/m<sup>2</sup>) and obese (>25 kg/m<sup>2</sup>).<sup>1</sup> These cut off point were established by WHO specifically for the south Asian population to determine obesity and overweight individuals as the Asian populations have different

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associations between BMI, percentage of body fat, and health risks than do European populations. Thus, to clarify, we have not used the standard cut off points which have been validated in the European population. However, to further enhance our findings, in future waist circumference should also be included in the risk assessment tool.

### 3. Biomarkers

Information on family history of coronary artery disease was gathered. However, most of the population who were undergoing this surgery belong to the underdeveloped and underserved part of Pakistan which is why gathering information on the family history of hypercholesterolaemia is such a difficult task. This is because it is usually underdiagnosed and even if diagnosed, most families/patients are unaware. However, creating awareness regarding this risk factor is important and should be made a priority to ensure that it is not missed and can be studied in future studies.

Thank you again for your comments. We do hope that our study will help highlight the main risk factors leading to coronary artery disease in this young cohort of patients and will help in controlling these individual risk factors with a more holistic patient approach.

### References

1. WHO. Appropriate body-mass index for Asian populations and its implications for policy and intervention strategies [Internet]. Available from: [https://www.who.int/nutrition/publications/bmi\\_asia\\_strategies.pdf](https://www.who.int/nutrition/publications/bmi_asia_strategies.pdf) [Cited December 2020].