


The Gensini Score System is a Useful Tool in Assessing the Burden and Severity of Coronary Artery Atherosclerotic Lesions [Letter]

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Dear editor

I read with great interest the valuable article published in your journal titled

The Severity of Gensini Score and Its Relationship with Coronary Artery Disease Risk Factors in Patients Who Had Angiography at the Largest PCI Center in Somalia.¹

The authors conducted a retrospective observational study and investigated the clinical and angiographic characteristics of Somalian patients who underwent angiography. The authors used Gensini score system to determine the severity of the coronary lesions. In the mentioned article,¹ the authors only reported the severity points and segmental multiplication factor in the context of Gensini score assessment.

The Gensini score system is a useful tool in assessing the burden and severity of coronary artery atherosclerotic lesions. In this system, three main parameters need to be evaluated for each coronary lesion; severity score, segment multiplication factor and collateral correction factor.² Severity scores are as; 1 score for 1–25% stenosis, 2 score for 26–50% stenosis, 4 score for 51–75% stenosis, 8 score for 76–90% stenosis, 16 score for 91–99% stenosis, and 32 score for total (100%) occlusion. Segmental multiplication factors are as; 0.5 for posterior-lateral (PL) branch of right coronary artery (RCA) and 2nd diagonal, 1 for proximal, mid and distal RCA, posterior descending artery (PDA), left anterior descending artery (LAD) distal, 1st diagonal and obtuse marginal (OM) in case of both right and left coronary dominance and mid and distal circumference artery (Cx) (only in right dominance), 1.5 for LAD mid, 2.5 for LAD proximal in both dominance status and Cx proximal (only right dominance), 3.5 for Cx proximal (only left dominance) and 5 for left main coronary artery (LMCA). Collateral flow is adjusted in case of a total (100%) and subtotal (99%) occlusion when there is a collateral connection. The adjustment is reduced by the extent of disease in the donor artery. Respectively, 12, 8, 4, 2 and 1 are subtracted from 32 in cases of donor arteries with 25%, 50%, 75%, 90% and 99% stenosis. The final Gensini score is the sum of all three parameters.

For example, if the Gensini score is calculated for a coronary bed with completely occluded Cx-proximal receiving collateral flow from the LAD, 30% stenosis of the proximal RCA and 50% stenosis of the LAD mid and right coronary dominance (Table 1).

As shown, if collateral correction is not taken into account in the Gensini scoring system, the severity of total occlusions receiving collateral flow is incorrectly calculated (overestimated).

In conclusion, the Gensini score system is a meaningful scoring system that reflects the complexity of coronary atherosclerotic lesions.

Table 1 Gensini Score Calculations

Coronary segment	Severity score	Collateral adjustment	Severity score after collateral adjustment	Multiplying factor	Sum of scores	
Cx prox %100	32	-8	24	2.5	60	65
RCA proximal %30	2	0	2	1	2	
LAD mid %50	2	0	2	1.5	3	

Disclosure

The author reports no conflict of interest in this communication.

References

1. Aksu F, Ahmed SA. Gensini score's severity and its relationship with risk factors for coronary artery disease among patients who underwent angiography in Somalia's largest PCI centre. *Int J Gen Med.* 2024;17:187–192. PMID: 38268859; PMCID: PMC10807280. doi:10.2147/IJGM.S384626
2. Rampidis GP, Benetos G, Benz DC, Giannopoulos AA, Buechel RR. A guide for Gensini score calculation. *Atherosclerosis.* 2019;287:181–183. Epub 2019 May 10. PMID: 31104809. doi:10.1016/j.atherosclerosis.2019.05.012

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