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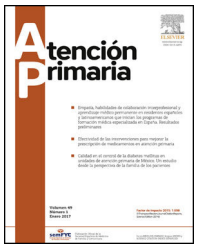

LETTER TO THE EDITOR

# Triglyceride glucose index as a predictor of cardio metabolic risk in primary care

## Índice triglicéridos glucosa como predictor de riesgo cardio metabólico en atención primaria

*Dear Editor,*

First of all, we must congratulate the authors Torres-Orozco AK, De León LG et al. for the article ''Wakabayashi & Daimon cardiometabolic index as an indicator to assess risk in adults. A systematic review'' recently published in this journal.[1]

The factors mentioned (high blood pressure, dyslipidemia, smoking, obesity, lack of physical activity) that the WHO recognizes as those that most influence the development of cardiovascular diseases (ischaemic heart disease, stroke) and metabolic disorders (diabetes mellitus, resistance to insulin) are also partly the determinants of metabolic syndrome (MetS).

Insulin resistance (IR) is among the causal hypotheses of MetS. Current evidence and literature in this regard refer to the existence of a tendency towards dysglycemia, diabetes, hypertension and dyslipidemia in a profile of patients in which obesity is also generally common, both in the form of weight gain and abdominal circumference. These patients are mostly insulin resistant.[2]

In their article, with very good judgement, they have tried to use different types of scores or formulas that generally relate the level of lipids (HDL cholesterol/triglycerides) and, where appropriate, the waist/height ratio to approximate a calculation of vascular risk using biochemical parameters and anthropometric measurements that are easily available in primary care.

It is striking to us that despite making a reference to IR, this concept and its diagnostic approach are not further developed. To make the diagnosis of IR, we have direct data such as the ''glycemic clamp,'' which is difficult to perform and has low sensitivity, or with similar sensitivity the HOMA IR index that uses the amount of insulin in basal blood as a reference, considering it an indirect form of diagnosis. In our environment we would never use these determinations as screening or as a form of cardiovascular risk assessment.

In different studies it has been seen that in healthy patients, prediabetic patients and type 2 DM, the triglyceride/glucose index (natural logarithm of the product of both divided by 2) is another indirect way of knowing the IR with a sensitivity very similar to HOMA. IR, but at a much lower and more affordable cost (we perform both determinations, glucose and triglycerides, routinely in this type of patient). In fact, they are included in the tests proposed in the PAPPS preventive activities.[3]

Another component that is part of MetS is high blood pressure. Regarding this comorbidity that defines MetS, it is not known exactly whether it precedes the rest of its components or is posterior, nor is it known how the INR is related to this entity. The triglyceride/glucose index as an indirect measure of IR is also useful to know the risk that the patient with isolated known hypertension has of developing both a MetS and the corresponding vascular and renal complications.

We want to propose in relation to your correct article and after what was previously stated that the triglyceride/glucose index is a good index of IR, it is a perfect index to approach the diagnosis of MetS and therefore it is also surely a good index of cardiovascular risk. Therefore, it could be a great comparator with its Wakabayashi & Daimon index, with the HDL cholesterol/triglycerides index, which is easy to obtain in primary care, and could even be used as a cardiovascular risk screening method. We propose new studies comparing both and their predictive capacity.

## Conflict of interest

None declared.

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