

The cardiometabolic risk: a new concept for old diseases

Consideration

Among the most important risk factors for cardiometabolic disease, hypertension, hypercholesterolaemia and diabetes mellitus play a main role; these chronic diseases are involved in creating huge health expenditure, with respect to both clinical-instrumental analysis and from a pharmacological point of view. An earlier stage of these diseases is the pre-risk (Fig. 1), a condition that, if not properly recognized and treated, can progress to the documented risk. We will talk about pre-hypertension, hypercholesterolaemia in primary prevention and dysglycaemia.

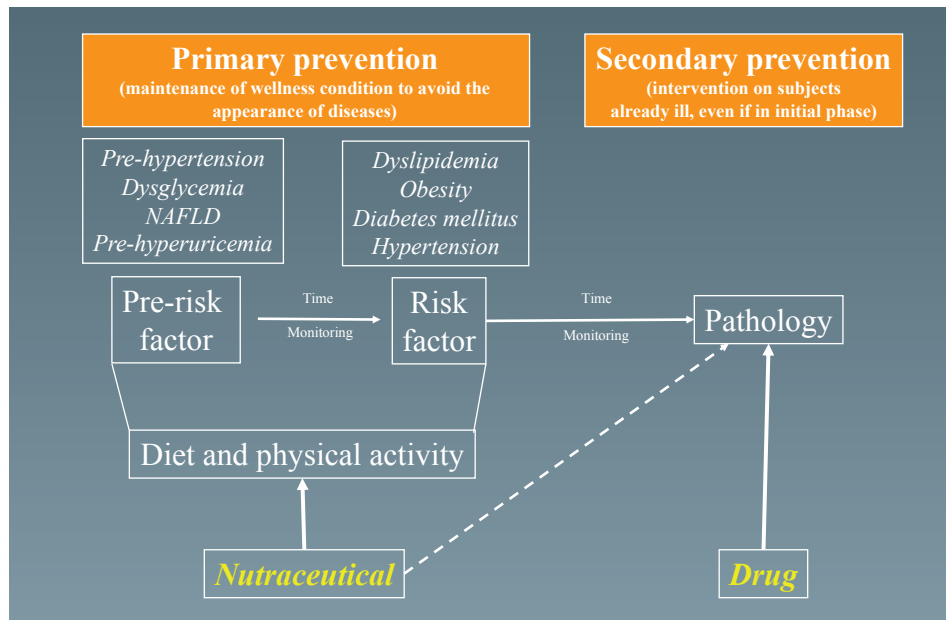


Figure 1 Prevention and cardiometabolic risk. NAFLD = non-alcoholic fatty liver disease

Pre-hypertension is defined by a normal-high pressure (systolic blood pressure values between 130–139 mmHg and/or diastolic blood pressure between 85–89 mmHg)^[1]. By hypercholesterolaemia in primary prevention, we mean total cholesterol values between 200 and 249 mg/dl and LDL cholesterol less than 115 mg/dl^[2]; by dysglycaemia, we mean an asymptomatic condition characterized by glycaemic values between 100

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and 125 mg/dl, below the threshold necessary to formulate the diagnosis of diabetes (≥ 126 mg/dl in two different fasting venous measurements)^[3].

A further consideration can be made for some situations such as non-alcoholic fatty liver disease (NAFLD)^[4] or for pre-hyperuricaemia^[5]. NAFLD is often considered within the context of the metabolic syndrome^[6] and the measures aimed at improving the metabolic status also involve the reduction of transaminases and the improvement of the hepatic ultrasound appearance. However, this should not make us forget that NAFLD is a risk factor for the evolution of non-alcoholic steatohepatitis (NASH) and in chronic liver diseases. Pre-hyperuricaemia (uricaemia between 6 and 7 mg/dl) is a condition that puts the patient at risk for a cardiovascular event^[7], even though uricaemia is still below the value that would require drug treatment (Fig. 1).

Prevention of these diseases is mainly based on proper nutrition and lifestyle.

From the data collected by the Osservatorio dell'Istituto Superiore di Sanità, however, it emerges that only a section of the adult population adheres to nutritional guidelines, in terms of consuming the recommended portions of fruit and vegetables and in moderating the consumption of specific foods and beverages (sweet and alcoholic).

There are even fewer Italians who regularly practice physical activity.

Analysis

The cardiometabolic nutraceutical in primary prevention must be placed temporally after the prescription of diet and physical ac-

tivity (lifestyle) changes, when the correction of lifestyle is insufficient due to poor compliance or ineffectiveness. We should wait at least 3–6 months before declaring changes in the patient's lifestyle a failure.

The nutraceutical prescription does not mean 'excessive medicalization', but it corresponds to the need to give a concrete answer to the pathology that we will call 'pre-risk factor' in the initial phase. For example, for the pathology 'diabetes mellitus', the pre-risk factor is 'dysglycaemia'. To treat the pre-risk factor effectively (and therefore, prevent it), we need to treat patients with behavioural therapies (an appropriate diet with respect to quality and quantity and regular physical activity, that is, 30–40 minutes, at least 3 or 4 times a week) and with the appropriate nutraceutical.

Treating patients with a nutraceutical means preventing the mechanism underlying the pathology from making its 'normal' course which would otherwise result in the 'overt pathology' (Fig. 2).

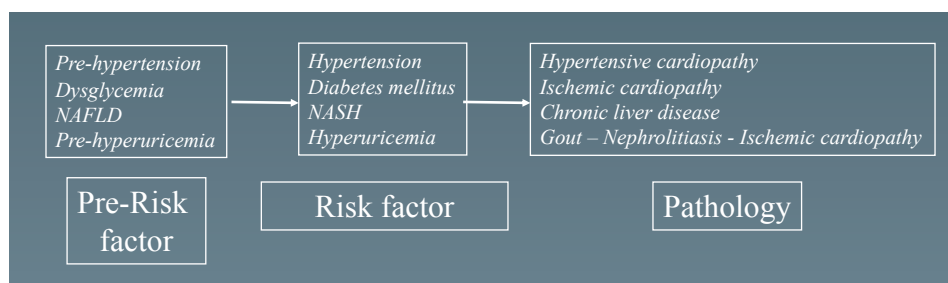


Figure 2 Example of disease progression. NAFLD = non-alcoholic fatty liver disease; NASH = non-alcoholic steatohepatitis

The pathology can then manifest itself with various complications and can lead to possible hospitalization. The attempt to block the pathology (or to procrastinate as much as possible) can save the national healthcare system large sums of public money.

In fact, if the motivated prescription of the nutraceutical is paid by the user with the diagnosed pre-risk factor, this can be balanced by the fact that these costs are not sustained by

the healthcare system and this money can be assigned elsewhere (for example, for financing research for new drugs, or to manage any hospitalization for disease complications) (Table 1).

Nutraceuticals:

- To verify efficacy and safety through clinical trials
- Possible savings for the healthcare system

When:

- In primary prevention
- In addition to pharmacological treatment, in secondary prevention

Who:

- To subjects who could benefit (considering clinical trials data)
- The prescription should be carried out by a physician

Table 1 Conclusions: nutraceuticals, when and who?

The point is, therefore, a weighted and responsible prescription of the nutraceutical with quality products, which have also been certified by clinical trials.

This is also not to trivialize the prescription which cannot be left to chance.

If it is true that (for example) the greatest number of cardiovascular events, in an absolute sense, occurs not in subjects at high risk, whose frequency in the population is low, but in subjects with low-intermediate risk, because there are so many more individuals within this group compared to the former, this makes it clear how important it is to advise responsibly and how more health professionals should come into play (widening the base of potential prescribers, because the base of low-intermediate-risk patients is very wide).

Therefore, although an extended and shared prescription in primary prevention may seem more expensive, it can reduce future costs (Table 2).

- *Systematically* suggest behavioural therapy
- *Correctly* identify the condition for which we consider a nutraceutical appropriate
- *Consciously* prescribe for that condition
- *Unequivocally* consider only nutraceuticals supported by scientific evidence
- *Clearly* explain to the patient the therapy suggested
- *Periodically* monitor therapy compliance

Treating the pre-risk factor soon and effectively means saving money later

Table 2 The patient, the nutraceutical, the physician: the proposal for a perfect triangle

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