CONFLICTS OF INTEREST

R. Cózar León declares having received payments from Boston Scientific for giving lectures.

E. Díaz Infante declares having received payments from Boston Scientific, St Jude Medical, Medtronic, and Biotronik for giving lectures and educational presentations.

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Radiation Exposure to the Pregnant Interventional Cardiologist. Is It Really Necessary? Response

Exposición de las cardiólogas intervencionistas a radiaciones ionizantes durante el embarazo. ¿Realmente es necesario? Respuesta

To the Editor,

The issue of "exposing pregnant workers to ionizing radiation"[1] has always been controversial. The lack of knowledge and information on this topic causes many women to do what they have always seen other women do, namely, change their professional role during pregnancy, without considering whether there are any grounds for this option.

We are not advocating freedom for women to decide against departmental recommendations on radiological protection, rather we are showing that it is possible to continue working in the same professional position according to the national and international radiological protection standards. Royal Decree 783/2001,[2] which regulates health protection against ionizing radiation, established that the embryo must be protected by applying an equivalent dose limit of 2 mSv to the pregnant woman's abdominal surface. This value provides the same level of protection as in the general population (1 mSv per official year). None of the workers in our series came close to this limit.[1] According to the International Commission on Radiological Protection, "The restriction of the dose to the fetus does not mean that it is necessary for pregnant women to avoid work with radiation…completely…however…their employer should carefully review the exposure conditions…employ-employment should be of such a type that the probability of high accidental doses and high radionucleotide intakes is extremely low".[3] We all agree that the fetus must not receive ionizing radiation, but if the woman is adequately protected, the fetus will not be exposed. Of course, any method that reduces workers' exposure to ionizing radiation, such as hood-type screens or electrophysiology navigation systems, is welcome and should be incorporated into laboratories.

In all the women in our study, the female interventional cardiologists' continuing professional activity was agreed, approved, and supervised monthly by the respective radiological protection departments. That is how it can and should be done, to ensure the protection of the fetus.

Last, we are not suggesting that pregnant women be obliged to continue their professional activity in the catheterization laboratory. We simply reported that, should a woman wish to continue working in the laboratory while pregnant, for her own reasons, or because she is at a particular point in her career, she can do so knowing that she is not exposing the fetus to additional risk.

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Detection of High-sensitivity Troponin T in Patients With Cardiovascular Risk

Detección de troponina T ultrasensible en pacientes con riesgo cardiovascular

To the Editor,

We believe that the timely work of Álvarez et al.,[1] which recorded the proportion of the asymptomatic population with very high cardiovascular risk with detectable high-sensitivity cardiac troponin T, requires a number of qualifications, particularly for clinicians who are unfamiliar with the acute problems that can arise when treating these patients.

First, high-sensitivity cardiac troponin T was detected in almost all patients in their registry. However, truly high-sensitive methods should be able to detect cardiac troponin in most healthy individuals.[2] In this case, the Roche Diagnostics Cobas 6000 analyzer can detect cardiac troponin in between 40% and 50% of healthy patients.[3]

Second, the 99th percentile value is already known to identify a greater number of at-risk patients, and values even lower than the 99th percentile that are still detectable have a prognostic value for future adverse cardiac events.[4]

In addition, about 10% of patients with stable coronary artery disease have values above the 99th percentile of the reference population.[5] Even in the general population, more than 2% of individuals show high-sensitivity cardiac troponin T elevations higher than the 99th percentile.[6]

Studies of patients with chest pain suggest the value of a single determination in patients at low ischemic risk if troponin cannot be detected (< 3 ng/L).[7]

Given the importance of the 99th percentile in the treatment of these patients with cardiovascular risk, its determination should be as accurate as possible because there are also differences among the tests used and other factors are crucial, such as ethnicity and race, sex, age, and the number of study participants.[3]

There are currently no universal recommendations for how to select the reference population, which is why it is highly likely that these values are not appropriate, complicating efforts to reach consensus in decision making.

Another matter that we would like to comment on is the association with mortality in these patients. In the 1990s, it was shown that, among patients with unstable angina (negative creatine kinase MB), cardiac troponin elevation was associated with markedly higher in-hospital mortality.[8] A similar association has been shown in patients with heart failure, pulmonary hypertension, or renal failure.[9,10]

As the authors correctly conclude, high-sensitivity cardiac troponin T is detectable in almost all asymptomatic patients with cardiovascular risk, although their results cannot be generalized to high-risk populations. Unfortunately, physicians have started to doubt that the use of high-sensitivity cardiac troponin T represents a significant clinical advance[11] and worry that they perform too many tests and referrals in those patients with cardiac troponin elevation.

Thus, articles such as that by Álvarez et al. can help to optimize the handling of cardiac markers in the medical community.

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