The authorization to drive vehicles in patients with implantable electronic devices is often a subject of debate at the moment of assessing fitness to drive. In the case of implantable cardioverter defibrillators (ICDs), the obvious concern is the possibility of syncope secondary to ICD therapy that puts the driver and others at risk.

I have found in a small personal survey that many cardiologists do not have a well-defined opinion or think that these patients should not drive vehicles because of the possibility of receiving ICD shocks while driving, resulting in an accident.

**How to Establish Risk in Drivers? Is it the same for everybody?**

Undoubtedly, there are two types of drivers: private drivers and professional or commercial drivers, with two basic differences: the time spent driving and the type of vehicle.

A private driver spends about 1 hour per day per year driving, while a professional driver spends 6 hours. Additionally, the risk of presenting syncope/precyncope causing disability during ICD therapy must be established. Data were obtained from retrospective registries, but there are no randomized prospective studies evaluating this issue. Yet, all the reports agree in showing a low rate of events and accidents in these patients.

The Canadian Cardiovascular Society introduced the “risk of harm” concept, which establishes the probability a patient with an ICD has to cause harm or injuries to others when driving. This formula has been used by many societies for the assessment of fitness to drive. Basically, the formula considers four variables: 1) the proportion of time a patient drives in a year, 2) a constant that depends on whether the vehicle is a car or a truck, 3) the probability of having syncope during driving, and 4) the probability that such an event will result in an accident.

Items 3 and 4 are the most sensitive. The calculations are made using a risk of syncope of 30% to be as realistic as possible, as current data show that this value is around 14%. The possibility of harm reported for all drivers is 2% per year. Using this formula, the annual risk of harm acceptable cut-off value is 5/100,000. Private drivers’ risk of harm is below this value and professional drivers’ risk of harm is higher.
HOW ARE DECISIONS MADE IN OTHER COUNTRY?
In the United States, Canada and Europe, private drivers, but not professional drivers, are authorized to drive. Renewal of driver’s license requires control and detection of VT/VF episodes. (8, 9)

It is evident that the number of cardioverter defibrillator devices implanted is increasing, especially in PP. Many of the patients are young adults, actively working and needing to drive a car. Collecting data on car accidents in ICD patients is not simple; however, the information available is quite conclusive about the low rate of accidents in these cases. The restriction or prohibition in these patients can affect their quality of life, already modified by the ICD implant. Therefore, it is important to consider this issue in guidelines or consensus statements to make the best decision possible.

The Argentine Society of Cardiology should make recommendations in this regard. The future consensus statement on pacemakers and cardioverter defibrillator devices elaborated by the Council on Arrhythmias of the SAC is already finished and will surely provide guidelines and recommendations to manage our patients. (10)

It is also necessary to consider that, although guidelines are very useful to provide general recommendations, given the complexity of these patients, good clinical judgment should always be present and applied to each individual case.

In summary, professional drivers with an ICD should not be qualified to drive in any case. On the contrary, private drivers in PP or SP could drive under strict and frequent controls. Patients with an ICD implanted for SP should require 6 months without shock therapy to be authorized to drive. In PP, this time should be lower (1 month) based on the low rate of events.

Conflicts of interest
None declared.

(See authors’ conflicts of interest forms on the website/Supplementary material).

REFERENCES