

Are cardiac patients in Saudi Arabia provided adequate instructions when they should not drive?

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Background

The driving of vehicles is considered an important mode of transportation, public and private, worldwide. In order to drive safely, drivers should have average motor, visual, and cognitive functions.

Objectives

Driving capability can be significantly affected by different health disorders; cardiovascular diseases (CVDs) should be considered when assessing patients for medical fitness to drive (MFTD). The aim of this study was to evaluate the awareness of Saudi patients about driving recommendations and to assess the incidence of motor vehicle accidents (MVAs) among cardiac patients.

Methods

We conducted a cross-sectional survey-based study. Male patients diagnosed with CVDs and who were visiting outpatient departments were invited to complete a questionnaire regarding their awareness of driving recommendations. Patients' demographics, clinical diagnosis, echocardiography parameters, and time-to-CVD diagnosis were all obtained from the patients' medical records. Women were excluded because it was illegal for women to drive in Saudi Arabia during the study period.

Results

In total, 800 men were included, with a mean age of 54 ± 12 years. Driving counseling had been provided to 241 participants (30%). Of these, 207 (25%) were advised not to drive for a period of between one week and six months. Five percent of the patients had a history of MVAs during the follow-up period of 6.2 ± 4 years. We found that the presence of a dyspnea ≥ 2 , according to the New York Heart Association (NYHA), and a history of loss of consciousness (syncope/pre-syncope) were significantly associated with accidents (46% vs. 20%, $P < 0.0001$ and 41% vs. 10%, $P < 0.0001$, respectively) as shown in fig 1.

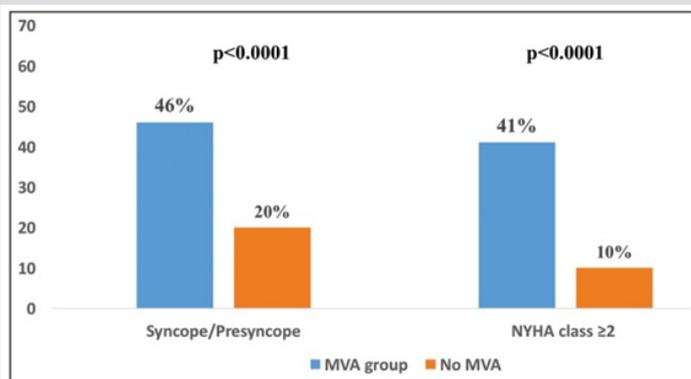
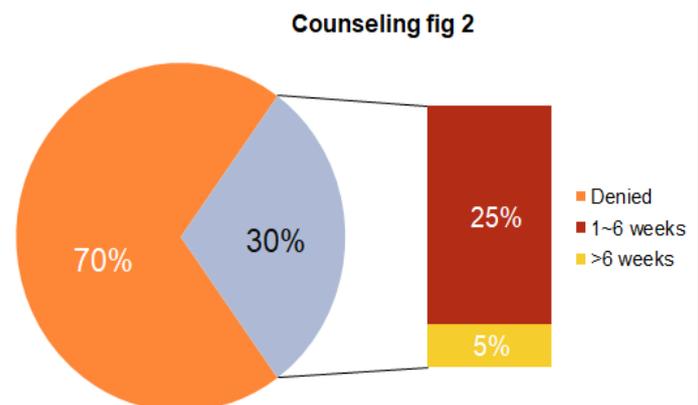


Fig 1-Comparison between patients with and without motor vehicle accident (MVA) regarding symptoms preceding the accident



Discussion

In this study, we investigated the degree of awareness of MFTD recommendations in patients with CVDs and how often they were counseled in this regard by cardiologists; we found that 70% of patients denied being asked about MFTD during hospitalization and/or outpatient clinic follow-ups. Furthermore, we found that MVAs were significantly more common in patients who had dyspnea NYHA class ≥ 2 or a prior history of syncope. Our 2019 survey of cardiologists' awareness of the international driving guidelines showed that 70% were aware of them; however, in this study, only 30% (fig 2) of the patients were counseled by their cardiologists about MFTD. This contradiction reflects an insufficiency in patient-physician communications and a low level of discussion regarding MFTD. Thus, further efforts should be undertaken to transmit physicians' knowledge and information to patients through efficient discussion about MFTD, risks, and driving cessation periods; in this regards, we suggest providing a checklist of discharge recommendations that includes counseling about driving, cessation periods, and the need for any further testing before providing patients with permission to drive. Our study is important in that it targeted road users, investigating their perception about the effect of their CVDs on performing safe vehicle driving; in addition, it highlights the importance of the formulation and implementing of strict guidelines about MFTD in Saudi Arabia through collaboration between the Ministry of Health, the Saudi Commission for Health Specialties, the Saudi Heart Association, and the national traffic authorities.

How to improve ?

Our study has some limitations: it is a single center analysis, only patients engaging in follow-ups at a cardiology clinic were included while no other medical specialties (such as neurology or endocrinology) were included, it only included men, and MVAs in our study may not be fully represented because accidents that resulted in death or serious damage would not be reported due to missed clinic follow-ups.

Conclusions

Patient-physician discussion about MFTD was only performed with 30% of the patients with CVDs in Saudi Arabia. Dyspnea NYHA class ≥ 2 or a prior history of syncope were significantly associated with the incidence of MVAs.

Legislation and clinical implementation of MFTD guidelines is warranted in Saudi Arabia.

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