Letter to the Editor

Anti-Anginal Drugs And Treadmill Exercise Testing

Sir,

The diagnosis of ischaemic heart disease (IHD) and NYHA functional status is entirely clinical, based on history of symptoms i.e. angina, dyspnoea, palpitation and fatigue. The patients may be clinically diagnosed either as IHD or atypical chest pain. Resting ECG is normal in both the groups. Treadmill exercise tesintg (TMT) is a widely used noninvasive investigation to assess ischaemic response on exercise to decide further investigation and intervention in IHD group (i.e. Prognostic TMT) and for diagnosis in atypical chest pain group. Since the objectives of TMT in two groups are different, there should be some difference in preparations too. It is a common practice to discontinue anti-anginal drugs in IHD group at least 48-72 hours before TMT. Withdrawl of drugs brings about symptoms in patients of IHD who were otherwise well controlled and if rest pains occur, they become unfit for TMT, as TMT is contraindicated in these cases. Also interpretation of TMT with and without drugs will be entirely different. If a patient of IHD well controlled on drugs, shows strongly positive TMT response on drugs, it is an urgency to subject him to coronary arteriography (CART) and further interventions, if needed. If a patient shows mildly positive TMT on drugs, he should be advised to continue medical therapy and resort to change in life style pattern which helps in regression of atherosclerosis and thus will not need CART/interventions in near future. If same patient was subjected to TMT after stopping anti-anginal drugs, his TMT may be strongly positive and he may be subjected to unwarranted CART/interventions. This assumes significance because treatment of IHD is largely palliative and is to be staged from medical therapy to interventions depending upon control of symptoms and objective evidence of ischaemia.

Regarding drugs, I personally feel the Nitrates and calcium channel blockers are to be continued for TMT but beta-blockers may be discontinued because beta-blockers blunt exercise induced positive chronotropic response and if heart rate does not increase to 85% or more of target heart rate, the TMT becomes uninterpretable. In my own analysis of last 100 TMTs, we had to repeat TMT after withdrawing beta-blockers in 28 cases to achieve required heart rate.

In second group of patients ie "atypical chest pain" where diagnosis is doubtful and IHD needs to be excluded, the TMT should be conducted off all the drugs to assess ischaemic response/normal TMT and thus place them into either IHD group or myalgic chest pain.

Therefore it is felt that TMT being used both for diagnosis and prognosis, we should do TMT on drugs for prognostication and off drugs for diagnostic purposes but beta-blockers may be discontinued in IHD group. This will help in improving diagnostic accuracy in doubtful diagnosis cases and rightly guide us in undertaking CART/interventions in IHD group. This point has been debated in recent reviews[1,2] and concluded that TMT should be done on drugs for prognostication and further investigations while for diagnosis of IHD, TMT should be done off drugs.

References

1. Lim R, and Dymond DS. Should Antianginal Medication be Stopped for Exercise Testing? Lancent 1992;340:161-2.

2. Millane T, Ward D. Drugs and Exercise Testing. BMJ 1992;305-1043 (editorial).

Wg Cdr SN Sharma
Institute of Aerospace Medicine, IAF
Bangalore 560 017