

## **Safety of intravenous dobutamine for stress testing with echocardiographic and MIBI imaging.**

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This study examined the results of dobutamine (DOB) stress testing with evaluation of cardiac and non-cardiac side effects in 110 consecutive patients suspected of having coronary artery disease (CAD) and in 49 other ones with a history of recent or previous myocardial infarction (112 males and 47 females; mean age 57 range 41-70 years).

In all patients MIBI-SPECT and two-dimensional echocardiography (2-DE) were simultaneously performed using a DOB infusion stress at increasing doses up to 40  $\mu\text{g}/\text{kg}/\text{min}$ . DOB was administered intravenously beginning at a dose of 10  $\mu\text{g}/\text{kg}/\text{min}$  with increasing by 10  $\mu\text{g}/\text{kg}/\text{min}$  increments every 3 minutes. The ECG was continuously monitored and blood pressure was recorded at each stage. In some patients, Atropine (0,25 to 1mg) was added to increase maximal heart rate (especially in treated patients by beta blockers and/or calcium antagonists when treatment could not be stopped).

Most patients had transient minor side effects and some of them (16%) had significant side effects with DOB consisting of chest pain in 6%, hypotension in 1%, ventricular arrhythmias in 3% and tremulousness and/or headache or dyspnea in 6%. Ischemic ECG changes (significant ST segment depression) were observed in 26% of cases. Among 64 patients also undergoing cardiac catheterization, side effects were unrelated to the number of vessels with CAD. In these patients, the overall sensitivities of DOB stress MIBI-SPECT (87%) and 2-DE (81%) were both higher than that of DOB stress ECG (23%). There were no deaths, myocardial infarctions due to DOB administration.

Intravenous DOB, at increasing doses, is relatively safe, well tolerated, widely available and easily feasible as stress testing and has few serious side effects.

European Journal of Nuclear Medicine 1992 vol.19 n°8 p. 676