

Effect of Steroids in Duchenne Cardiomyopathy Depends on Comedication and Comorbidity

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LETTER TO THE EDITOR

In a recent article, Barber et al. studied 462 patients with Duchenne Muscular Dystrophy (DMD) under steroid treatment [1]. The authors concluded that steroids in DMD patients may delay the onset of cardiomyopathy [1]. We have the following comments and concerns.

During recent years it has been shown that prophylactic treatment of DMD patients with Angiotensin-Converting Enzyme Inhibitors (ACEI), Angiotensin-II Receptor Blockers (ARB), Beta-Blockers (BB), and aldosterone-antagonists may delay onset of cardiomyopathy, may slow the progression of cardiomyopathy, and reduce the severity of cardiomyopathy [2]. Though not systematically investigated, steroids plus ACEI or BB may have an additive effect, why the outcome of DMD patients may depend not only on prophylactic steroids but also on the combined treatment with ACEI or BB. How many of the included patients additionally received ACEI or BB? Was the outcome of those under combined prophylactic treatment different compared to those solely under steroids?

Typical side effects of steroid treatment include delay of puberty, decrease of vertebral bone mass, increase of vertebral fragility, weight gain, cataract formation, or steroid-induced growth failure [3,4,5,6,7]. Did the authors observe differences in the frequency of side effects between those taking prednisone, prednisolone, or deflazacort? Steroids may also have a beneficial effect on arrhythmias. Did those under steroids experience more rarely Sudden Cardiac Death (SCD) than those without?

A rare phenotypic cardiac manifestation in dystrophinopathies is Left Ventricular Hypertrabeculation (LVHT), also known as noncompaction [8,9]. LVHT is associated with an increased risk of heart failure, arrhythmias and possibly cardio-embolic events [10], why DMD-patients with LVHT may carry a particular risk to develop heart failure or die from SCD. How many of the 462 DMD patients presented with LVHT? Did they have a worse outcome compared to those who did not have LVHT?

Overall, it is eligible to address these points, which might have influenced the results before final conclusions about the effect of steroids on cardiomyopathy in DMD are drawn.

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