

Assessment of therapeutics response for the use of splint for position upper limb of duchenne muscular dystrophy

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Introduction: Duchenne muscular dystrophy (DMD) is the most common progressive disorder of skeletal muscles, including many contractures and deformities. The literature cites that upper limb (UL) begin to be compromised between 8 and 12 years, and may be related to the loss of the ability for walk, and overload these structures in the independent locomotion in a wheelchair. Meanwhile does not have a consensus about indication and effectiveness of the splint for UL use, it's thought that the appropriate prescription could be an adjunct to rehabilitation, preventing contractures and the progression of deformities already established. This should be important, because with the natural evolution of disease, the functional capacity dependents on some degree of distal action, for use a motorized wheelchair or/and using technological resources to makes possible the inclusion and participation in society. **Objective:** Test the effectiveness of the use of the splint position for wrist, fingers and thumb in patients with DMD. **METHOD** 25 patients with DMD had use a splint in one of UL, for 24 months. The criterion of choice was the UL that has more restrictions of range of motion. It was measure the passive extension and flexion of the both wrist, test of muscle strength, CHAQ, and the time that the splint had been used. For evaluation the hand that used splint (HS), the values of strength, extension and flexion were corrected by the hand that didn't used splint (HNS), using the ratio of the measures ($R = HS / HNS$), in time 0, 12 and 24 months. It also compared the patients that really used the splint (PUS) ($n = 14$) and the patients who didn't used (PNUS) ($n = 11$; use $<2h/day$). **RESULTS** There aren't differences between the UL of PUS and PNUS. The extension of the wrist didn't change in PUS and PNUS. When compared the ratio of extension versus the ratio of flexion on 24 months in PUS, there were different but not in PUNS **CONCLUSION** This study suggests the use of goniometer should be revised to make the assessment more sensitive to verify the real effectiveness of the use of splint in patients with DMD.