Radiologically Confirmed Fractures In A Scottish Nationwide Contemporary Cohort Of Boys With Duchenne Muscular Dystrophy

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Background

There is an increasing concern regarding fragility fractures in boys with DMD but studies of fractures in DMD using radiologically confirmed fractures in sufficiently large cohorts are limited.

Objectives

To determine the frequency of fractures in a contemporary cohort of 91 boys with DMD managed in Scotland.

Methods

Fractures were classified into the vertebral fracture (VF) and non-VF in a retrospective study of all boys currently managed in Scotland, United Kingdom. The probability of fractures was determined by Kaplan–Meier plot.

Results

| Median (Range) or N (%) | Age (years) 11.2 (2.3–18.9) | Height SDS -1.4 (-5.3, 1.4) | Weight SDS 0.0 (-5.0, 3.3) | BMI SDS 1.5 (-0.4, 3.5) | Ambulant: Non-Ambulant Cohort 46/91 (60.6%): 45/91 (49.5%) | Age at Loss of Ambulation (years) 10.4 (7.1–15.3) | Length of Non-Ambulation State (years) 2.92 (0.2–9.0) | GC Treated: GC Naïve Cohort 76/91 (83.5%): 15/91 (16.5%) | GC Start Age 5.5 (2.9–9.9) | GC Therapy Length (years) 5.1 (0–11.0) | Current GC: Previous GC cohort 59/91 (64.8%): 17/91 (18.7%) |

Table 1: Clinical Characteristic

Figures:

- Figure 1: Fracture Prevalence
- Figure 2: Fracture Sites
- Figure 3: Fracture Mechanism

Conclusion

In our cohort of boys with DMD, approximately 50% of the cohort have sustained at least one fracture. Painful vertebral fracture was observed in approximately 9% of our cohort.

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