The Prevalence of Scoliosis in Spina Bifida Subpopulations: A Systematic Review.

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Abstract

Prevalence of scoliosis within spina bifida subpopulations is important for diagnostics and therapeutic purposes. This review determined the prevalence of scoliosis within spina bifida subpopulations by means of a systematic literature review by using the following databases: Medline PubMed, Embase, Cochrane, and Pedro. All Dutch- and English-written literature using the MESH terms "spinal dysraphism," "neural tube defects," and "scoliosis" was analyzed using the exclusion criteria: animal studies, case reports, studies regarding the prevalence of spina bifida among patients with scoliosis, studies with inclusion of patients with scoliosis of less than 11 degrees without possibility to identify subgroups with scoliosis of greater than 10 degrees, studies without an own study group, articles comprising the same patient group as another article, neural tube defects besides spina bifida, and articles without specification of spina bifida subtype. It resulted in six articles, two concerning diastematomyelia (103 patients, 82 females and 21 males) and four about myelomeningocele (479 patients, 283 females and 196 males) with an overall weighted prevalence of scoliosis (20-degree Cobb angle cutoff) of 44.4% and 52.5%, respectively. It can be concluded that most studies have a lot of methodological flaws, so there is a need for further research with standardization of data collection to allow comparison of different data.

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