THE BRIGHTON CRITERIA FAIL TO CAPTURE THE
CLINICAL CHARACTERISTICS OF BENIGN JOINT
HYPERMOBILITY SYNDROME IN CHILDREN: DATA FROM
THE BENDY STUDY

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Background: Joint Hypermobility (JHM) is reported to occur in up to 30% of children if adult criteria are applied. Hypermobile children are commonly seen in paediatric rheumatology clinics with associated musculoskeletal pain, and parental anxiety relating to treatment options and a formal diagnosis. At present there is no validated diagnostic tool in children to determine JHM or BJHS. Adult tools such as the Beighton score are used but there is no agreed distinction of abnormality at different ages. The revised Brighton criteria 1998 are validated in adults for the diagnosis of BJHS but their relevance in paediatrics is unknown. As part of a randomized controlled trial looking at a therapeutic intervention in children with hypermobility and pain, we looked to determine whether the Brighton criteria are an adequate tool for classifying children as having BJHS.

Methods: Children aged 5–16 years old were recruited from secondary paediatric care. They were assessed to be hypermobile with musculoskeletal pain by a paediatric rheumatologist. Two paediatric physiotherapists determined the children’s Beighton score, level of pain using the Faces visual analogue scale, and sites of pain. Parents were questioned to elicit family history of BJHS and the presence of Brighton minor criteria.

Results: A total of 120 children were included. Only 34 children (28.3%) were classified as having BJHS using the Brighton criteria. Of these 58.8% were female. Of the 34, 28 (82.4%) met both major criteria. The other 6 met classification due to one major criteria (Beighton >4) with 2 minor criteria (2 (5.8%) due to arthralgia and skin extensibility, 1 (2.9%) due to arthralgia and dislocations, 1(2.9%) due to skin extensibility and eye signs (myopia), 1 (2.9%) due to skin extensibility and dislocations and 1 (2.9%) due to arthralgia, skin extensibility and multiple dislocations). Of the children meeting criteria for BJHS, 12 (33.3%) had a family history. A further 6 cases of BJHS could be classified by the Brighton criteria if their family history was confirmed. The commonest site of reported pain was in the muscles of the legs (27.5%). 64 (53.3%) children met at least one minor criteria however of these, 28 (43.4%) scored for arthralgia in 1–3 joints.

Conclusion: We have shown that most children presenting with hypermobility and pain cannot be formally classified as BJHS according to current adult criteria. The majority of children do not have a family history of hypermobility suggesting non-hereditary causation. The minor criteria of the Brighton classification have limited relevance to children and they do not include the commonest site of reported pain. A validated paediatric clinical assessment tool is required to determine paediatric hypermobility and to predict those who will develop pain and associated problems.

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