

Idiopathic Scoliosis in relation to the findings reported in Fulford and Brown 1976

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Within our field of work the seminal paper from which many concepts and resultant therapeutic interventions derive is "Position as a cause of deformity in children with Cerebral Palsy, GE Fulford JK Brown Develop. Med. Child Neurol. 1976, 18, 305 – 314" in which the authors state "It is suggested that the 'squint' baby syndrome and the 'windswept child' syndrome in children with Cerebral Palsy are stages of the same syndrome and that in both the deformities are caused by the effect of gravity on an immobile growing child rather than spasticity or muscle imbalance".

Key findings of the paper that are of interest in relation to idiopathic scoliosis:

1. "It is generally accepted that position in the postnatal period can be a cause of deformity in the normal baby. Paine (1961) suggested that plagiocephaly was caused by postnatal head posture and Hay (1971) found that plagiocephaly was present in 10% of normal babies "
2. 20 children referred to as 'squint' children without Cerebral Palsy were studied. Signs of 'squint' baby syndrome included: plagiocephaly, revealed as the dominant feature, alongside varying frequency of bat ear, facial asymmetry, asymmetrical neck rotation, thoracic asymmetry, spinal asymmetry and asymmetrical hips.
3. Fulford and Brown acknowledged that once a child starts to walk the signs reduce (Robson 1968) however, "Only one of the 20 children had lost all signs of positional moulding at the time of review." (average 16 months)
4. "Because we have found the same deformities in the 'squint' normal babies and the 'windswept' cerebral palsied children, we think that they are both part of the same syndrome and only differ in degree."
5. "The lateral asymmetry of the chest at first causes a rigid segment in the thoracic spine, but later, commonly during adolescence, it can appear clinically as a rapidly-increasing and severe scoliosis."
6. "Once the asymmetry has developed it is self-perpetuating as long as the child is in the horizontal position".
7. "it is yet to be established whether there is a connection between the plagiocephaly which occurs in idiopathic scoliosis and the 'squint' baby syndrome."

We would argue that it is not reasonable to expect that 100% of babies who develop 'squint' baby syndrome will recover to absolute symmetry or that the plagiocephaly seen in idiopathic scoliosis is always part of a completely separate mechanism. We propose that in some children a self-perpetuating asymmetric lying posture may be unremarked or even discounted as irrelevant whilst they are considered to be developing normally. It may be that, in time, the positional moulding caused by this posture becomes so obvious that a scoliosis is eventually diagnosed and considered by some to be a new condition within the child, although distortion may have been present throughout.

Since 1976 and publication of this paper therapeutic intervention in the lying posture has been developing with increasing success. This progress culminated in publication of a detailed understanding of the biomechanics of chest distortion (Hill and Goldsmith, 2010) and Government guidance on postural care stating that “The Goldsmith Indices of Body Symmetry provide a systematic, objective approach that gives clarity as to what is actually happening in terms of body shape” (2018). The main benefactors of this progress have been children and adults with Cerebral Palsy. It seems appropriate to consider whether this success can be replicated with individuals who have idiopathic scoliosis given the obvious parallels as described above.

References:

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