



Adolescent idiopathic scoliosis screening

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Introduction

Adolescent idiopathic scoliosis (AIS) is a three-dimensional curvature of the spine that appears after the age of 10 in otherwise healthy children and is not associated with any underlying pathology. A curve greater than 10° (Cobb angle), together with evidence of vertebral rotation, is considered clinically significant.

Screening for adolescent idiopathic scoliosis is a controversial topic and shows considerable variability in pediatric practice, both in Spain and internationally.

Its prevalence ranges from 0.35% to 13%, depending on the Cobb angle considered, as well as the age and sex of the patients.

It is estimated that only 10% of AIS cases involve progressive curves. Curves that reach 50° are the most likely to continue worsening after skeletal maturity and are usually the main indication for surgery. Curves that do not reach 30° generally do not progress.

The prevalence is similar in girls and boys for curves of approximately 10°. However, when curves greater than 30° are considered, the female-to-male ratio increases to 10:1.

AIS is an important health problem for which moderately effective conservative treatment exists. Detection outside a screening program often results in diagnosis at a more advanced stage, with a higher likelihood of requiring surgery.

Evidence appraisal

- Low-quality evidence indicates that there is insufficient proof that adolescent scoliosis screening reduces morbidity, mortality, psychological problems, or medium- to long-term pain.
- Low-quality evidence indicates that the risk of mild scoliosis progressing to severe scoliosis is not known with certainty.
- High-quality evidence indicates that the screening test (Adams Forward Bend Test) is simple but has limited accuracy when used in a screening program. Accuracy improves when a scoliometer is added.
- Moderate- to high-quality evidence indicates that brace treatment for curves greater than 20° reduces the likelihood of progression to 50° (the usual threshold for surgery).
- Low-quality evidence indicates that discontinuation of screening programs leads to later referrals, fewer brace treatments, and more surgeries.

If scoliosis screening is carried out within the framework of the child health program, by trained healthcare professionals and with the possibility of continuity of care, periodic patient follow-up, and effective communication with secondary care services (rehabilitation or orthopedic surgery), the appropriate conditions exist to perform this screening.

PrevInfad recommendation

Screening for adolescent idiopathic scoliosis is suggested, to be performed by the pediatrician using the Adams Forward Bend Test and a scoliometer, with clear follow-up and referral criteria.

WEAK RECOMMENDATION IN FAVOR

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