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INFANTILE AND ADOLESCENT IDIOPATHIC SCOLIOSIS IN THE SAME INDIVIDUAL

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A patient with an infantile, resolving type of idiopathic scoliosis is presented. By the age of 10 years, 4 years after complete spontaneous correction, the girl had developed a structural, progressive idiopathic scoliosis to the opposite side.

Key words: scoliosis, infantile, adolescent, idiopathic

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There are great differences between the infantile and the adolescent type of idiopathic scoliosis. In the early onset group boys predominate, the curve is usually to the left, and in most cases the scoliosis resolves (James et al. 1959, Lloyd-Roberts & Pilcher 1965). A great geographical variation in incidence is found, and there are strong indications that environmental factors are acting in this type of scoliosis (Wynne-Davies 1968, 1975, James 1973). In the adolescent group five out of six cases are females, the curve is usually to the right, and it tends to progress during the entire growth period.

However, the infantile and adolescent types of idiopathic scoliosis are often found in the same family, and therefore, in spite of the differences, Wynne-Davies (1968, 1973) held the opinion that both share the same basic etiology.

Lloyd-Roberts & Pilcher (1965) stated that no fully resolved curve ever deteriorates. The purpose of the present paper is to present a patient with an infantile idiopathic scoliosis which resolved and who later on developed a curve to the opposite side. We have not come across any similar case in the medical literature.

CASE REPORT

The patient is a girl born 16 September 1959. Pregnancy and delivery were normal. A few months after birth the parents noticed a deformity of her spine. The girl was seen at our hospital for the first time when 1 year old. She presented with a *left*-sided thoracic scoliosis and a rib-hump on the same side. X-ray showed a thoracic curve measuring 32° extending from T.8 to L.1 with distinct rotation and apex at T.10–11. Compensatory curves were present above and below, and the difference in rib-angle was 17° (Figure 1 a). Examination revealed no other abnormalities. The child had not had any serious illnesses, and there was no family history of spinal deformities.

No treatment was given, but the patient was followed up at half-yearly intervals. At the age of 2 years and 6 months the curve was 33° (Figure 1 b). One year later it had decreased spontaneously to 20° (Figure 1 c), but still the patient presented with an obvious rib-hump. The curve improved further; at 4 years and 6 months it measured 12° (Figure 1 d), and at 6 the spine was straight.

The patient was still followed up at regular intervals. At 10 a slight curvature to the *right* side was found, and when 12 years old she presented with an obvious structural scoliosis

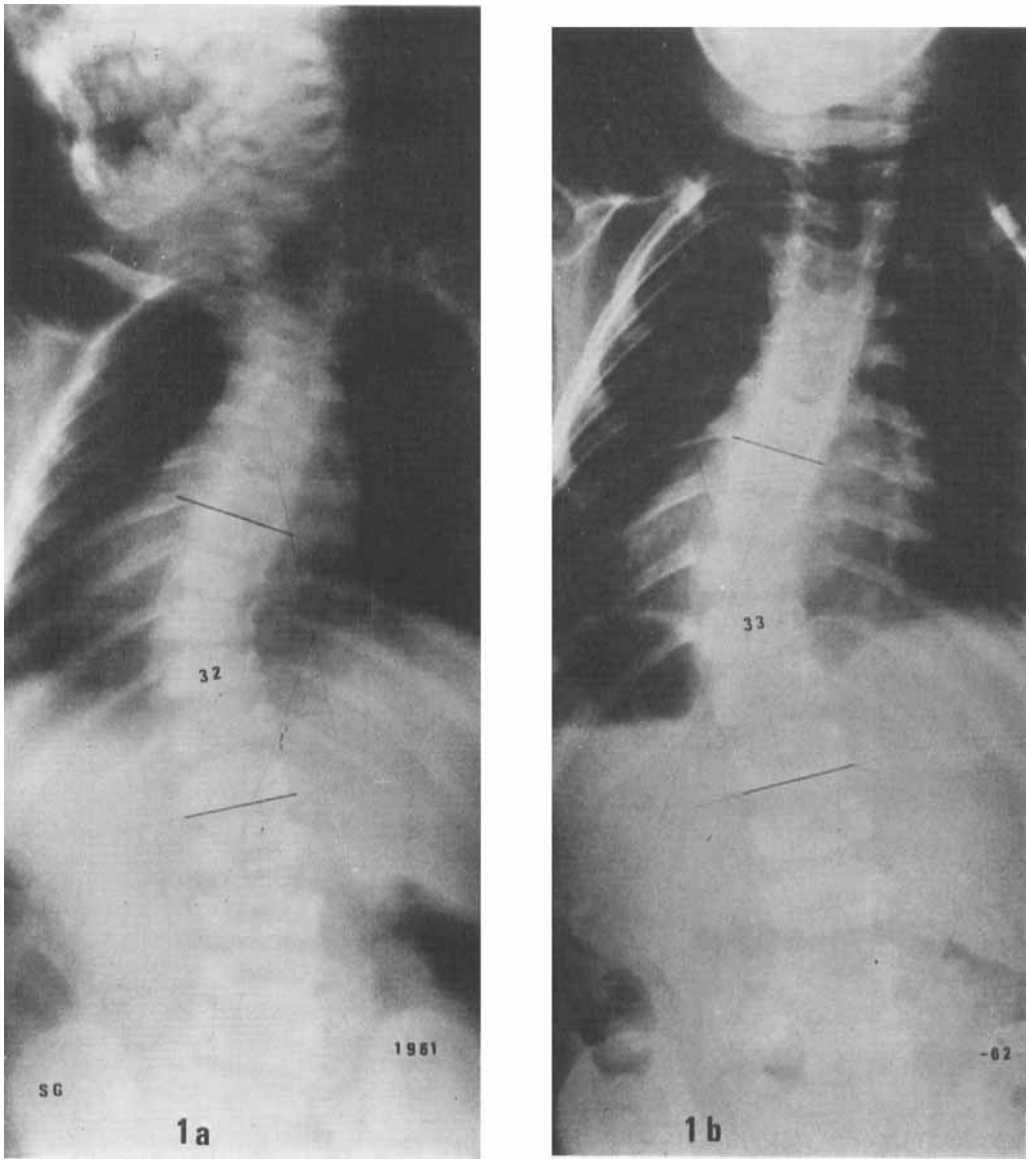
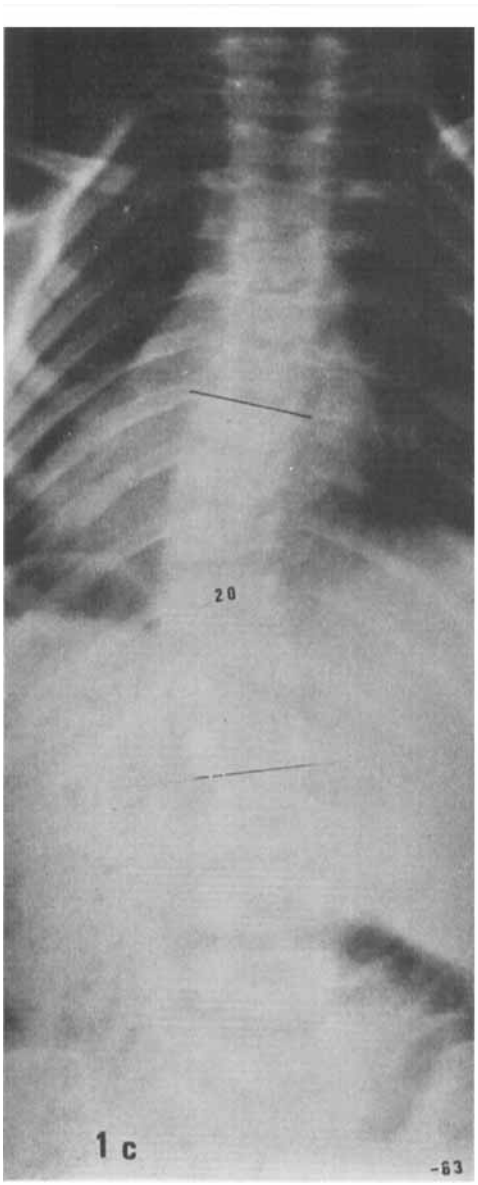


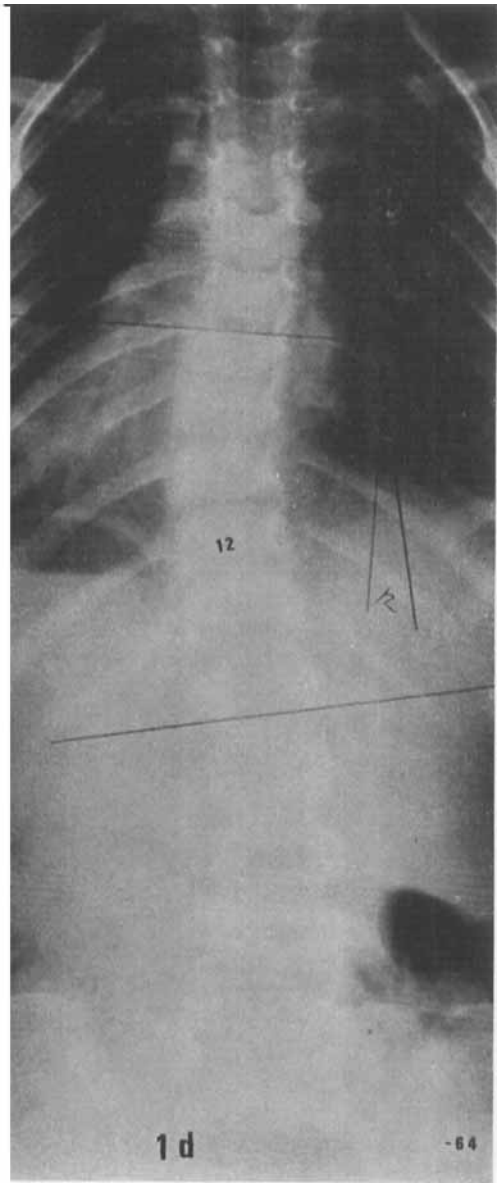
Figure 1. Left- *sided resolving type of infantile idiopathic scoliosis in a girl; at 1 year (a), at 2 years (b), at 3 years (c), and at 4 years (d) of age.*

with convexity to the right side, measuring 18°, and extending from T.6 to L.2, with apex at T.11–12 (Figure 2 a). One year later the curve had increased to 24° (Figure 2 b) and treatment with a Milwaukee brace was started. She matured at sixteen, her height was then 164 cm, and the curve 28° (Figure 2 c).

DISCUSSION

The first episode of spinal deformity of the case presented was typical for an infantile idiopathic scoliosis of the resolving type. The second curve, occurring about the age of 10, 4 years after complete recovery of the first, is a typical adolescent idiopathic scoliosis. Heredity





is not demonstrable in this case and there is no indication of environmental factors.

In Norway we have a rather low incidence of infantile idiopathic scoliosis compared with the figures from Great Britain given by Wynne-Davies (1968), Riseborough & Wynne-Davies (1973) and James (1975). In the past few years we have treated only one or two cases per year at Sophies Minde Orthopaedic Hospital, where most cases of scoliosis from all over Norway have been treated up till now. For comparison, at the same hospital, we treat about 100 new cases of juvenile and adolescent idiopathic scoliosis yearly.

If, as stated, all types of idiopathic

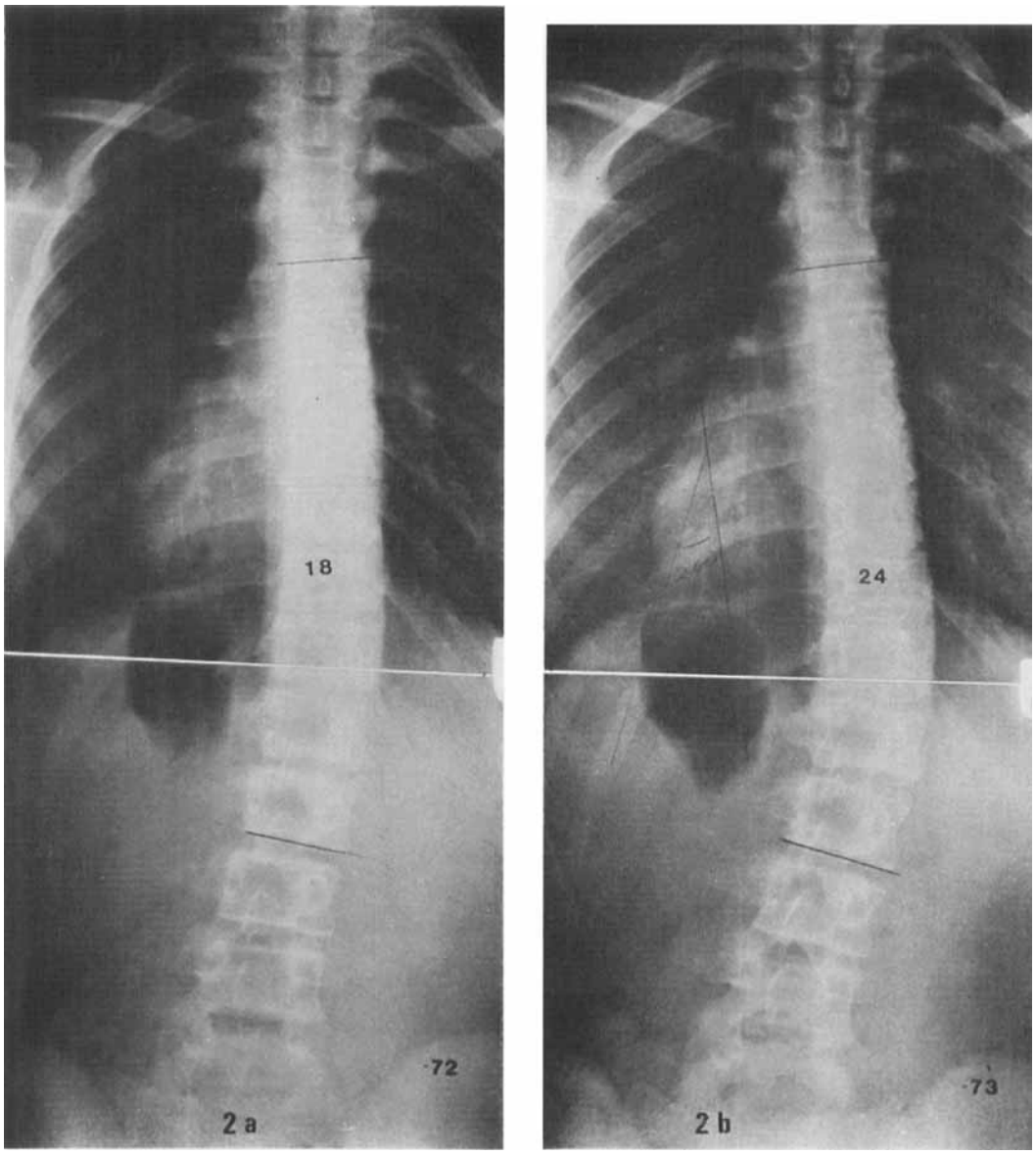
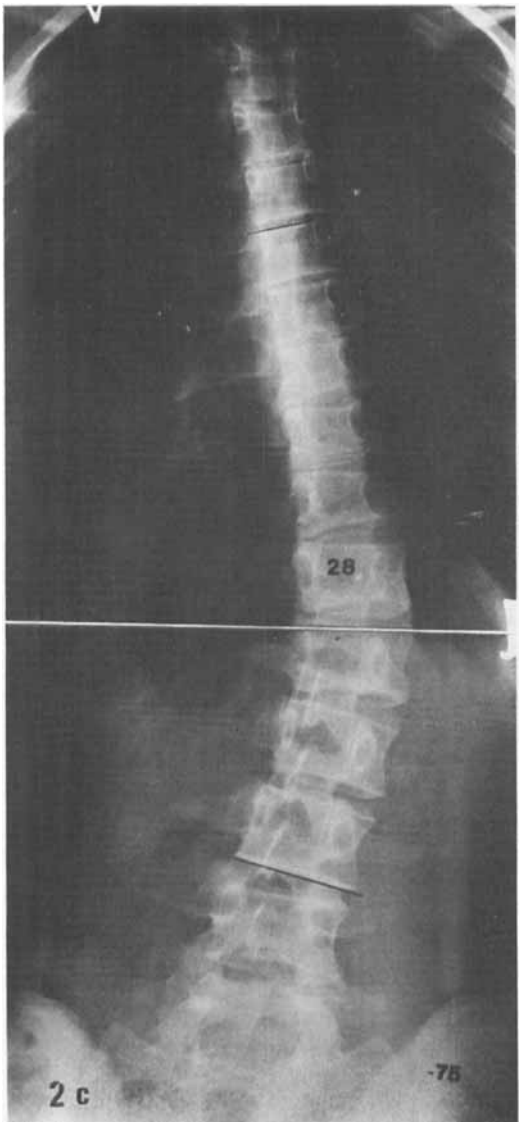


Figure 2. X-rays of the same girl as in Figure 1; at 12 years (a), at 13 years (b), and at 16 years (c) of age. She has now developed a right-*sided progressive type of idiopathic scoliosis.*

scoliosis have the same underlying genetic influence it is really not surprising that we may see early and late onset scoliosis in the same individual. The environmental triggering factors supposed to act in adolescence may also affect patients who at an early age have had a resolving type of infantile scoliosis. In countries where this type of scoliosis is frequent, one might perhaps expect more cases like the one presented here, if infantile and adolescent idiopathic scoliosis share the same basic etiology.



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