

# Special Report: First International Conference on Achondroplasia— November 17-21, 1986, Rome, Italy

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This conference was held to review the international experience with some of the new methods that have become available to treat achondroplasia. These included leg lengthening, enlarging the foramen magnum, and prevention of kyphosis. A number of other areas were also explored, including genetics and natural history, psychosocial adjustment, lay support group organizations, neurologic complications, and basic biological research.

Among the most exciting reports were those describing leg-lengthening operations. Major progress has been made over the last three to five years in reducing the complications of leg-lengthening procedures by using percutaneous surgery with external fixators. Previous attempts at leg lengthening were complicated by infection and nonunion. However, presently available tech-

niques include innovations by Russian, Italian, and Spanish investigators that have led to a marked decrease in severe complications and a marked improvement in the actual amount of lengthening achieved. On average, a remarkable 30 cm of additional growth has been achieved in the lower limbs. The actual incidence of such complications as nerve compression, joint stiffness, and lack of full range of motion are not yet known. However, the advantages of the new technique are short hospitalization and mobility during the procedures. In addition, some of the other problems associated with achondroplasia—such as bowing of the legs, abnormal joint angles, lumbar lordosis, and lack of range of motion of the hips—are significantly alleviated by the procedures.

Very few data from basic science investigations are available

as yet, but the results presented at the conference were dramatic: The leg-lengthening procedure is a potential therapy for patients with disproportionately short stature. If successful, there is no reason to think the procedure would not benefit patients with other types of dwarfing conditions. In addition, it is proposed that leg lengthening might be accomplished after children are fully grown, although the ideal age may be 14 to 16 years. It is quite clear that older individuals can also benefit from this type of procedure.

In recent years, it has been shown that hormonal therapy has been beneficial in patients whose short stature is due to a variety of etiologies. Since the chondrodysplasias are not among these, it is therefore exciting to learn about the development of an orthopedic procedure that may be an appropriate mode of therapy.