Patients with early-onset scoliosis, defined as a lateral curvature of the spine under the age of 10 years, are offered surgical treatment when the major curvature remains progressive despite conservative treatment. Spinal fusion is not recommended in this age group, as it prevents spinal growth and pulmonary development. A growth-sparing technique using traditional growing rods has been commonly used, but requires distraction under general anaesthesia every 6 months, and a child may require as many as 15 operations throughout the entire treatment.\(^1\) The number and frequency of such distractions is correlated with complication rates and unplanned surgical procedures.

A magnetically controlled growing rod (MCGR) is a novel technology that enables non-invasive spinal lengthening in an awake patient in an out-patient setting. The indications for MCGR are identical to those of traditional growing rods, but MCGR has advantages of obviating the need for repeated surgical distractions. Cheung et al.\(^2\) first demonstrated efficacy and safety of this implant system in its ability to maintain curve correction and allow spinal growth.

Since then, other studies have reported similar findings.\(^3\)\(^-\)\(^5\) Nonetheless, there is a learning curve with each new technology, and complications can arise secondary to technical errors or problems with the implant design.

In this issue, Cheung et al.\(^6\) provides an update on the use of MCGR based on discussion by 32 international experts at a users’ meeting. Owing to the small number of patients who have undergone this treatment worldwide, the evidence obtained may not be very robust for the best surgical strategies and risk factors for complications of MCGR. This article describes important tips and pitfalls on the use of this novel technology, and particularly, highlights techniques in rod contouring, and complications such as distraction failure that is due to the design of previous generations of MCGR. Readers can draw on the experience outlined in this article for surgical planning to optimise outcome. Evidently, a multicentre, prospective study is required to fill some of the knowledge gaps that still exist in the use of this technology that may improve the treatment outcome of these children with early-onset scoliosis.

REFERENCES