Diagnosis and treatment of Early Onset Scoliosis (EOS): History and evolution

Scoliosis is a three dimensional deformity of the spine which considered for many years one of the most challenging deforming pathologies to manage. The early onset scoliosis (EOS) is defined as the appearance of scoliotic deformity before the age of ten. The EOS is potentially a challenging pathology which should be considered a fatal, disabling and hard to manage disease particularly when it is severe and progressive. Due to the natural history of the EOS which include severe deformity, restrictive pulmonary disease, cardiac disease, and early mortality, the early diagnosis of this disease has a paramount importance to improve the survival and quality of life of these patients. The early diagnosis may be made in severe cases in the early stages by parents or health care personals however the diagnosis in less severe cases need a precise screening programs and can even be missed in the very beginning periods of the disease. To avoid the later, a precise clinical evaluation and physical examination of pediatric patients should be programmed and performed. Deciding the strategy to manage EOS depends on many factors including the age of the patient, the severity and magnitude of the scoliosis curve, the natural history of the disease, the etiology of the scoliosis including a wide range of syndromes and other pathologies and finally general condition of the patient, particularly cardiopulmonary condition. Considering these factors, the surgeon can decide to perform surgery or conservative strategies including orthoses and serial derotational castings. A review of the evolution of different techniques to manage EOS may help the surgeons for better understanding of the natural history of this pathology and the way they have to confront with this. Review the contemporary history of EOS surgical management, reveal the existence of early fusion concept in the very beginning period to the extensible and growing systems in the last two decades. Nowadays it is preferred to perform a temporary surgery and apply an extensible system to simply buying the time in order to postpone the final fusion to a later time to avoid early fusion and eventually growth stop. However it is very important to know that there is not any general management protocol for EOS and each case should be evaluated individually based on its own characteristics.

Biography

Greggi T is a surgeon and specialist in Orthopedics and Biomedical Technologies. Since 1991, he has been focusing exclusively on spinal surgery. He has published over 200 scientific papers in reputed journals and has been serving as an Editorial Board Member of repute. Since 2000, he had positions of responsibility at the Department of Surgery of Deformities of the Spine and from 2009 till date, he is the Director of Department of Surgery of Deformities of the Spine.

Tiziana Greggi
Rizzoli Orthopaedic Institute, Italy

tiziana.greggi@ior.it