Scoliosis programme in Brunei Darussalam

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Scoliosis is a sideward bending of the spine and can be classified into infantile (<3 yrs old), juvenile (4-10 yrs old), adolescent (11 yrs to skeletal maturity) and adult onset. The aetiology is diverse and include congenital abnormalities (hemivertebrae and fused vertebrae), spinal cord tumours, syringomyelia, connective tissue disorders (Marfan’s syndrome) and age related degeneration of the spine. The most common type is the adolescent variety which is usually idiopathic, convex to the right and has no neurological disorder. It usually affects females and has a tendency to run in families. However, no definite pattern of inheritance has been observed. Although not life or limb threatening, scoliosis produces an unsightly appearance which can result in psychological trauma. Treatment is based on the degree of the curve; observation for small curves (<25°), external body braces for medium curves (25-40°) and surgical corrections for larger curves (>40°).

Scoliosis treatment and surgery was not routinely done in Brunei for many years. Patients were evaluated and referred to Malaysia or Singapore for further treatment. This incurred inconvenience to patients and families and enormous financial cost to the Ministry of Health (MOH).

The Brunei Scoliosis Programme started as a result of a chance meeting with Professor KV Menon at a spine conference in India. Professor Menon was at that time the chairman of AO spine international Asia Pacific region, an international organisation based in Switzerland. AO Spine is an international network of spine surgeons, orthopaedic surgeons, neurosurgeons, academics, researchers and other specialists dedicated to delivering knowledge, experience and evidence to improve patient care and outcomes. It has about 6000 members from all around the world and runs regular conferences and workshops in different parts of the world. This chance meeting had resulted in this workshop and the ability to provide scoliosis treatment and training in Brunei Darussalam.

With the support of the MOH, a Memoran–
dum of Understanding was signed with the AO Spine, which was represented by Mr. Michael Pricillo (CEO AO Spine). Based on the agreement, the Department of Neurosurgery will select patients for surgery and coordinate with AO spine faculty. AO spine will send one of its experienced spine surgeons to Brunei every six months to operate on these patients. The cost of the programme including professional fees and implants used will be borne by the MOH. The first group of patients were operated in 2007 November. To date 45 patients have been operated upon with excellent results.

In the year 2009 November, with the support of the MOH, the operating sessions were converted into an international workshop, whereby young surgeons from around the world could come to Brunei. The first such workshop was held in November 2009. To date, three such workshops have been conducted attracting doctors from Malaysia, Philippines, Indonesia, Taiwan, China, Hong Kong, India, Bangladesh, Oman, Iran, Nepal and Iraq.

AO spine advertises this workshop in their website and is open to doctors all over the world. Each workshop can only accommodate a maximum of 12 person to ensure full participation and adequate training over the seven days. Patients are selected by the Department of Neurosurgery and arrange all the preparations. This year, four local faculty (Neurosurgery: Mr Haroon and Dr. Anbu Selvam: Orthopaedic: Dr. Ketan Pande and Anaesthesia: Dr. Vinod) provided training. Every morning a patient was operated and the images transmitted live to the lecture theatre with facility of two way communication. In the afternoon, there were lectures, seminars, instrument familiarisation, hands on practice on plastic models and preoperative planning for the following day’s surgery. This was followed by ward rounds to see the patients after surgery and to discuss the post operative recovery and problems. In addition, there were two online lectures given by AO spine faculty.

At the end of the workshop, the delegates are expected to have a clear understanding of the principles behind scoliosis surgery, the preoperative planning, the fundamentals of operative technique for scoliosis and post operative care.

With the establishment of the Brunei Scoliosis Programme, there are innumerable benefits for both patients and the country. These include financial saving (estimated around 250,000 Brunei dollars for treating patients per workshop), patients’ satisfaction, in-house training and the opportunity to showcase Brunei Darussalam.

There are two future plans for the programme: to train local doctors who have already had basic orthopaedic training and who have an interest in spine surgery and implementation of school screening programme for scoliosis. Selected doctors will be sent to AO spine specialised centres for their training in scoliosis surgery. For scoliosis, early detections allow for managing such cases before the scoliosis may become severe which will necessitate major surgical corrections.