Paediatric/Spine

Chairperson: D Toby

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The management of bow legs in children

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Objective: To evaluate the management of bow legs in children with the emphasis on infantile and adolescent tibia vara (Blount's Disease).
Methods: Sixteen infantile tibia vara deformities in 11 younger patients were treated with proximal tibial osteotomies. Surgery was performed before the age of six years and the average follow-up was four years. A recurrence of varus deformities greater than 5 was given a poor rating. Twenty-six patients with 29 affected limbs, age eight years or older, were diagnosed with neglected or recurrent infantile tibia vara. They were treated with single-stage double proximal tibial osteotomies. The average follow-up was five years. Four radiologic measurements and clinical outcome were used to evaluate outcomes. Thirty-three limbs in 28 patients with an average age of 13 years with adolescent tibia vara deformities were treated over a 15-year period. The proximal tibial osteotomies were held with the Taylor computerized spatial frame until union.
Results: Infantile tibia vara, younger group – Fourteen of 16 extremities of patients under four years of age (94%) had complete and permanent correction of the varus deformity. The two extremities of patients over four years of age had recurrence of varus deformity.
Infantile tibia vara, neglected or recurrent group – Twenty-five (86%) of the 29 extremities had a satisfactory result and there were four unsatisfactory (14%) outcomes. Recurrence of deformity in three patients was the commonest cause of failure.
Adolescent tibia vara with Taylor spatial frame group – Thirty-one of 33 extremities or 94% had a final satisfactory result. Initial complications included non-union (two limbs), over correction (two limbs) and under corrections (two limbs). Further surgery was required to treat the complications.
Conclusion: A single high tibial osteotomy is an effective treatment for infantile tibia vara when the procedure is performed before four years of age. Single-stage double osteotomies are recommended for children over eight years of age; adolescent tibia vara is best managed with a high tibial osteotomy with Taylor spatial frame or internal plate fixation for moderate to severe tibia vara. Epiphyseal stapling can first be tried for milder cases.

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Umbilical hernia and congenital clubfoot in a black population: a causal relationship?

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Objective: Congenital clubfoot (CTEV) may occur as an isolated malformation or in association with other congenital musculoskeletal and neural tube malformations. Knowledge of the congenital anomalies commonly associated with CTEV in our population may be a pointer toward the possible aetiology.
Methods: A prospective review of all the cases of CTEV which presented to the Clubfoot Clinic in our institution from January 2010 to December 2011 was undertaken. Demographics were studied as well as family history, laterality and other congenital anomalies. A data instrument was used to collect the information at presentation and simple statistical analysis of results was done using SPSS 19.
Results: There were 110 patients with 166 CTEV (54 unilateral and 56 bilateral); M:F = 1:1. Out of these, 36 (32.7%) had associated anomalies. These included umbilical hernia, inguinal hernia, myelomeningocoele and arthrogryposis multiplex congenita. Bilateral CTEV was found in 22 patients (61.1%) and one female patient had a family history of CTEV in a second degree relative. Of the patients with associated congenital anomalies, 24 (66.7%) had umbilical hernias. Six of the patients (four females and two males) had umbilical hernias with other congenital anomalies including inguinal hernias, myelomeningocoele, anorectal malformation, micrognathia and arthrogryposis. Eleven of the patients had bilateral CTEV. Other anomalies found in patients without umbilical hernia

included webbed neck, anomalies of the digits and undescended testes.

Conclusion: The occurrence of CTEV with other congenital anomalies supports the implication of genetic factors in the aetiology of the disease. There is no previous documentation of umbilical hernias in association with CTEV as demonstrated in our series. We found that umbilical hernias were more common than any other associated anomalies. Is the relationship between the two disorders a casual one? Is there a genetic or environmental association between the two entities? Further studies will be required to answer these questions.

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Scoliosis surgery in St Vincent: an example of regional and international cooperation

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Scoliosis surgery was initially not available in St Vincent due to the unavailability of the instrumentation and trained staff. In addition, the majority of the children who required scoliosis surgery could not afford to travel overseas for the procedures. In 2010, The World Paediatric Project, an organization that facilitates surgical missions to St Vincent, decided to explore the possibility of undertaking a scoliosis surgery mission in St Vincent. Following the successful outcome of the first case, annual visits were made by the Scoliosis Surgery Mission in 2011 and 2012 with successful surgeries being performed on eight patients in each year. Scoliosis surgery was also performed on patients from islands adjacent to St Vincent. Scoliosis Surgery Mission is now an established mission which provides surgical care free of cost to children of the region.