

II. Scientific Papers:

1) The Prognostic Value of the Radiologic Appearance of the Ossific Nucleus of the Navicular in Clubfeet

Dr. AlaaEldin A. Ahmad, Pediatric orthopedic surgeon, Arab Care Hospital – Ramallah

Abstract

Introduction: Clubfoot is a congenital deformity consisting of hind foot equinus, hind foot and forefoot varus and supination of the forefoot. In a complex deformity involving many bones, articulations and soft tissue structures. The deformity may be idiopathic or associated with congenital or neuromuscular problems. Plain x-ray is the most dependable radiological exam for diagnosis and prognosis of clubfeet.

The ossific nucleus of navicular usually appears between 3 – 5 years of age. However in clubfeet the appearance of navicular might be delayed or when appearing it might look “abnormal in shape”.

Here was retrospectively evaluated x-rays of 41 feet which were clubfeet who were treated surgically in Hospital for the first time by soft tissue release, and evaluating the relationship of the appearance of navicular with the prognosis of the surgery.

Methods: We reviewed the record and x-rays of 41 clubfeet with no associated congenital or neuromuscular disorders who underwent soft tissue release as a primary surgical treatment. All the patients had their primary treatment in our Hospital between 1993 and 1998 with a follow-up of 5.9 years.

There were 24 feet, which had normal shaped navicular and 17 feet with abnormal shaped navicular.

We evaluated radiographs done pre-op, post-op and at the time of the most recent follow-up visit. We measured talocalcaneal angles, talohorizontal angles, space between articular surface of talus and cunifomis, length of navicular, level of dorsal subluxation of navicular.

Results: For the feet with avascularized navicular and the non-vascularized mean age at surgery was 1.0 year & 1.8 respectively. The mean radiological follow-up was 4.8, 6.9 respectively. Relapsed clubfoot was 15.7%, 16.6% respectively. Post-op infection 15.7, 8.3 respectively. Decreased distance between talus and cunifomis 36.8%, 20.8% respectively.

Conclusions: One result showed that avascular necrosis of navicular has no prognostic value in accordance with the complications of surgery. But increased incidence of avascular necrosis is related to the decreased distance between articular surface of talus and cunifomis and the age of the patient at time of surgery if the patient is less than 1 year old.

Significance: Avascular necrosis has no prognostic value in clubfoot post surgery but it is preferable when doing the surgery to do it in a child 1 year or above and not compressing the navicular between the talus and cunifomis during surgery.

2) Evaluation of post operative residual spinal deformity and patient outcome in idiopathic scoliosis patients in Palestine using the SRS 22 outcome instrument.

AlaaEldin Azmi Ahmad M.D, Arab Care Hospital – Ramallah, Raed Al Jurf, M.D

Presenter: AlaaEldin Ahmad, Pediatric orthopedic surgeon, Arab Care Hospital – Ramallah

Purpose: To clarify the correlation between patient outcomes evaluation (using SRS 22) and resulting spinal deformity after surgery according to radiographic parameters in Palestinian patients.

