Evaluation and management of relapsed congenital

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There are three well known factors concerning the natural history of the idiopathic clubfoot. The lesions are complex and rapidly progressive with age.The initial malposition is quickly replaced during growth by deformities andretraction, which in turn become rapidly fixed. The risk of recurrence iscertainly greater with a small fibrous-stiff foot.Although of good initial treatment, surgical failure and evidence ofrecurrent deformity is estimated. It’s incidence is high, recorded as 20% andeven 50%. The recurrence is due to the following iatrogenic causes i.e., delayin reporting for first medical care, rough method of stretching, manipulating,plasting, discontinuing conservative treatment, previous failed surgicalprocedures causing significant scarring about the foot, loss of motion, orresidual deformities and the patho-anatomical changes involved.Treatment of residual clubfeet is one of the most difficult problems inpaediatric orthopaedics. The deformity may take many forms and combination,and there are no clear-cut guidelines for treatment. Each patient must becarefully evaluated to determine what treatment will best correct his particularfunctional impairment.Deformity of the talo-calcaneo-navicular joint complex, internal rotationdeformity of the calcaneus, and scarring and tethering soft tissue structures onthe posterior, medial and lateral side of the foot form the basis for therapeutic program.Clinical evaluation, including careful assessment of forefoot and hindfootdeformity, range of motion, severity of symptoms associated withdeformity, function and activity and quality of walking must be considered intreatment decision making.Radiological examination, as part of evaluation of clubfeet, isindispensable both for planning the treatment and assessment of the result.assess anatomic measurements and brings to light a surprising amount of hiddendeformity. But unsatisfactory radiographic results alone are not the reason forseeking treatment as clinical result.For best result, the deformities must be corrected as a total block withas much attention paid to the adduction and cavus as to the hind foot varus,equinus and rotation deformity of the calcaneus. The worst approach in surgicaltreatment is a partial correction which might invite further surgery. Eachadditional surgical procedure adds scarring, might impair growth. and reduce flexibility.The basic surgical approach of relapsed clubfeet includes both soft tissuerelease and bony osteotomy. The appropriate procedures and combination of procedures should be selected on the basis of the patient need, and the amount of residual deformity and pathological anatomy that requires correction. So,surgical treatment should be performed by knowledgeable and experienced surgeon.Fifty

three relapsed clubfeet treated by complete soft tissue releasefollowed by serial corrective cast, above knee night splint, and medical boot.The average age at time of surgery 33.4 months; and duration of post-operativefollow up care varied from 19 to 49 months. In less severe cases, correctionis achieved with complete posteromedial and plantar release. If the calcaneumis not only in varus position, but also rotated horizontally, as in severe cases,the posteromedial and posterolateral release is done through extensivecircumferential release. Carroll's procedure or McKay procedure.Tibialis anterior transfer is performed to correct the muscle imbalance,caused by a strong tibialis anterior and weak peronei, for correction thesupination of fore part of the foot during the swing phase of gait.The bony procedure is performed for structural bony element of thedeformity including calcaneo-cuboid arthrodesis (Evan's operation), closedwedge osteotomy of the distal end of the calcaneus (Lichtblaus's operation), or a lateral closed wedge osteotomy of the calcaneus (Dwyer's operation).Using complete clinical evaluation, and a separate radiographicmeasurement, according to Simons rating system (1985), satisfactory resultswere obtained in 75.5 % and unsatisfactory result in 24.5 %. Many factors areconsidered in interpreting these results, including the age of patient, previousnon-operative or operative treatment, the severity of the deformity, andpostoperative care. The high percentage of unsatisfactory result, following acomplete release, is noted in older children, especially in stiff-fibrous feet, anda relatively short post-operative care period.Operatively, the general tendency is to operate before the child is aged12 months (prewalking age - average 6 to 12 months). By this time, the childis large enough, so that anaesthetic techniques are simplified, and the structuresin the foot are of sufficient size that complete correction is enhanced.Repositioning of the talo-calcaneo-navicular joints complex and completereleasing all of the thickening and contractu res of the soft tissue are essentialfor successful operation.The reconstruction of the feet should be done through two incisions,medial and posterolateral (Carrol's procedure), through which the posterolateraland posteromedial releases are performed.The problem of skin healing and post-operative scarring could beprevented by the following:_ deep dissection of the skin flaps at the level of the deep fascia._ adequate surgical exposure is necessary to perform a meticulous and sharpdissection, under direct vision to avoid traumatizing articular surfaces of thetarsal anlagen and rigidity of the foot._ the tourniquet should be released, hemostasis, secured, and the skin shouldbe closed without tension.Maintenance of the surgical correction is achieved by serial plaster casts,above knee night splint, medical boot and a strict protocol of physical therapy,as long as 18 months until recovery of the evertors.