

reviewing the literature and cases in their hospital retrospectively, defined subtrochanteric femoral fracture in pediatrics as the fracture distance to be less than 10% from lesser trochanter compared to total shaft length, an area in which the muscle deforming action results in difficulty to control reduction (26).

Modalities of internal fixation include titanium elastic nails (TEN), cephalomedullary nails (CM), interlocking nails, Smith Peterson plates, plate and hip screw, nail and intramedullary hip screw and cancellous screws. Yet these methods of internal fixation have not addressed the challenges of this fracture type sufficiently with respect to the operative wound, dissection, maintenance of reduction, post-operative ambulation and weight bearing. For the management of this injury we use trochanteric antigrade nail (TAN) a rigid intramedullary nail with a trochanteric entry point.

The Purpose of presenting these cases is to decrease wound dissection and to provide secure fixation that will enhance ambulation and full weight bearing which in turn will make a more satisfactory post-operative period, thus a quicker return to pre-operative activities, and augment bone healing.

Conclusion : It is possible to use the reconstructive TAN nail with two proximal 6.3mm and two 5.0 distal locking screws to treat adolescents' fractures of the subtrochanteric region of the femur. It spares the devastating complication of AVN of the femoral head and the possible postoperative angulation or rotational deformities at fracture site, it requires fewer incisions, provides better patient tolerance, earlier motion to the full weight bearing, all of which contribute to a better outcome of the surgery and more convenient post-operative course for the patient, the family, the physiotherapy and the treating surgeon.

5) Decompressing and Fixing Symptomatic High Grade Dysplastic spondylolisthesis with S1 pedicular screws crossing into the inferior portion of L5- Case report

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Introduction: Spondylolisthesis is a radiographic/anatomic description which describes the anterolisthesis of a vertebra on the one immediately caudal to it. The degree of anterolisthesis can be defined by grade ranging from 1 to 5 with each additional grade representing an additional 25% of the distance from normal alignment to spondyloptosis (grade 5). Spondylolisthesis is usually classified by its etiology. The most common classification is that by Wiltse: Dysplastic, Isthmic (aka – Spondylolysis, lytic defect of the pars), Degenerative, Traumatic, Pathologic, and Post-Surgical.

Discussion: Dysplastic Spondylolisthesis is due to congenital dysplastic change of the facet producing the anterolisthesis. This usually occurs at L5-S1. The facet dysplasia can occur in the axial or sagittal plane, or can be due to an elongation of the facets (Wiltse sub classification). The L5-S1 facet joint is oblique to the sagittal and axial plane. The facets of the upper lumbar spine most closely parallel the sagittal plane. As we descend caudally down the lumbar spine the facets close to the sagittal plane.

Normally, the S1 superior facet is approximately 45 degrees to the sagittal plane. The S1 facet is also oblique to the coronal and axial plane. Therefore, dysplasia in the sagittal or axial plane implies the S1 facet is more parallel to the sagittal or axial plane respectively, allowing the L5 inferior facet to “slide” anterior because the S1 facet is no longer acting like a buttress.

Of all the spondylolisthesis types, congenital is most likely to produce neurological deficit by virtue of the anterolisthesis alone. This is because the grade of the listhesis can often progress greater than two and the posterior ring of L5 remains attached to its anteriorly displaced body. The canal becomes narrowed between the posterior, superior corner of S1 and the anteriorly displaced L5 posterior elements resulting in subacute or acute cauda equina syndrome.



Congenital spondylolisthesis is relatively rare. It typically presents in children, adolescents, or young adults. It more commonly presents with neurological symptoms or leg pain as opposed to back pain. May require urgent treatment if it presents as cauda equina syndrome. Some sort of decompression of the L5 lamina is required in association with a fusion, possible instrumentation procedure.

Case report

An 11-year-old girl who was assessed for her back and leg symptoms. She has been complaining of some tightness in her lower extremities. She has been toe walking, particularly on the left side. She was assessed by a physiotherapist and was undergoing some stretching and massage-type exercises in an effort to address this. Her symptoms certainly do not resolve.

Her clinical examination shows a very dramatic picture with a standing position with flexion at the knee and the hip on the left side. She is unable to fully straighten her left leg without discomfort. She has an obvious step-off at the lumbosacral region with a flattened appearance to her buttocks.

More specific examination demonstrates significant tightness in her lower extremities. Her straight leg raising on the left side is about 5 or 10 degrees and on the right side about 40 degrees with crossover pain onto her left leg.

X-rays of her spine confirmed the clinical suspicion of a spondylolisthesis. She has a dysplastic spondylolisthesis with a significant forward displacement of at least grade 3.

Her MRI was reviewed showed an extremely tight stenosis.

We thought that this young lady needed a fairly urgent intervention for this. She required a posterior decompression followed by an in situ fusion from L4 to S1, the pedicular screws of S1 crossed to the inferior portion of L5 to secure stability.

Result: Post operatively she was kept on TLSO brace for 6 months and led an uneventful post operative course with no instability or loosening of the construct. She started regaining her functional abilities gradually and successfully.

6) The use of nerve stimulation during percutaneous pinning of supracondylar fractures in children

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Injury to the ulnar nerve from the medial pin is the major concern during percutaneous pinning for supracondylar fractures. The incidence is estimated to be 2% to 3%.

Fixation of supracondylar fractures by 2 lateral pins doesn't provide enough stability and sometime may not prevent secondary displacement of the fracture fragments especially rotation. Soft tissue edema or excessive mobility of ulnar nerve may be predisposing factors for iatrogenic ulnar nerve injury.

During last three years 81 children with supracondylar fractures were operated in our department. Before use of nerve stimulator, we avoided applying medial pins especially in cases with swelling around the elbow. In all cases we used nerve stimulator permanently connected to pin during all time of wire insertion. In order to produce permanent monitoring of ulnar nerve during fixation, changes in setting of stimulator were made.

There were 67 children with extension type of supracondylar fracture and 14 with flexion type. Average age of the patients was 5.3 years (range 3-9 years). Four of 81 fractures were open supracondylar fractures. Closed reduction and percutaneous KW fixation by 2 or 3 pins were performed.

