

Gradual Hexapodal Correction Of Chronic Knee Dislocation Using Ortho-SUV; A Case Series Of 2 Patients

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INTRODUCTION:

Chronic knee dislocation is a rare condition. The best treatment for this problem is still debatable. We wish to report on 2 cases of chronic knee dislocation that we have successfully treated with gradual hexapodal correction using the Ortho-SUV system.

MATERIALS & METHODS:

2 male patients, aged 21 and 17 respectively, suffered from chronic knee dislocation. Both of them initially sustained left knee dislocation when they were involved in motor vehicle accident. Their knees remain unreduced despite reduction attempts, and progressed to chronic knee dislocation. With consideration of the nature of their injuries as well as duration since trauma, both patients were counseled regarding aims of treatment and options available. We reckon that the ultimate aim of treatment for the first patient was to provide a stable knee in acceptable position for daily use while the second patient was aimed for supple knee to prepare him for ligamentous reconstruction later. Gradual reduction of the knee joint was carried out for both patients using the Ortho-SUV system (13 months post trauma for the first patient, and 4 months post trauma for the second patient), and full correction was achieved after 5 weeks and 8 weeks respectively. A period of programmed passive range of motion exercises was then commenced. Next, modification into hinge construct was done to allow the start of active range of motion exercises in a controlled manner.

RESULTS:

Both patients were satisfied with their outcome. Good reductions of their knee joints were obtained as per radiographic evidence. Resulting knee functions were graded "fair" for the first patient and "good" for the second patient based on Lysholm Knee Scoring Scale. Apart from mild pin tract infections, no other complications occurred during their course of treatment.

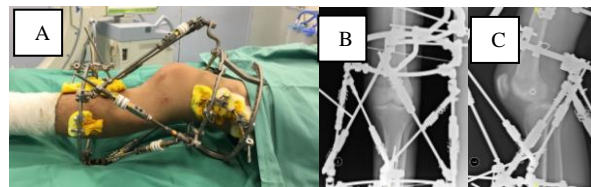


Figure 1: Post operative knee photograph and plain radiographs of one of the patients. (A) Ortho-SUV frame applied in-situ across the dislocated knee. (B) AP view and (C) lateral view plain radiographs demonstrating the posterior knee dislocation.

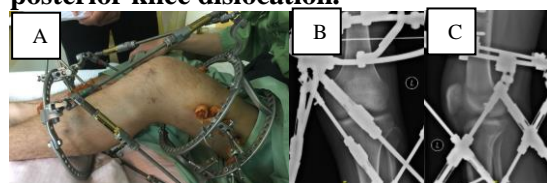


Figure 2: Post reduction knee photograph and plain radiographs of the same patient. (A) The photograph demonstrates gross anterior tibial translation compared to Figure 1(A). Ortho-SUV frame is currently in passive range of motion training mode. (B) AP view and (C) lateral view plain radiographs showing reduced knee joint.

PATIENT	1 (21/MALE)	2 (17/MALE)
LIMP (5)	3	3
SUPPORT (5)	2	5
LOCKING (15)	10	15
INSTABILITY(25)	25	25
PAIN (25)	20	25
SWELLING (10)	10	10
STAIRS (10)	2	2
SQUATTING (5)	0	2
TOTAL	72	87

Table 1: Lysholm Knee Scoring Scale for both patients. (Excellent: 95-100, Good: 84-94, Fair: 65-83, Poor: <64)

DISCUSSIONS:

Knee dislocation is a debilitating injury. Despite advances in modern surgical technique, return to fully functioning knee is uncommon^{1,4}. With even worse outcomes anticipated following a chronic injury, choosing the mode of treatment can be tricky. Only limited amount of publications are available regarding the strategies of treatment; most of which are case reports. There is also the dilemma about the aim of treatment, where there are contradictory interest between