



RESEARCH ARTICLE

EAST BALTIMORE LIFT: BEST TECHNIQUE FOR CLOSED REDUCTION
OF POSTERIOR HIP DISLOCATION

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ARTICLE INFO

Article History:

Received 11th February, 2017
Received in revised form
13th March, 2017
Accepted 19th April, 2017
Published online 31st May, 2017

Key words:

East Baltimore Lift,
Hip Dislocation,
Easy Method.

ABSTRACT

Posterior hip dislocation is the most common type of hip dislocation and occurs in about 90% of all hip dislocations. Several methods are there for the reduction of hip dislocations. These are Bigelow, Stimson and Allis manoeuvres. These methods allow reduction without disturbing the anatomy or the neurovascular status of limb. The East Baltimore lift is another method of reducing a posterior hip dislocation. For this method (after considering sedation or analgesia) the patient is placed supine. The affected leg is flexed at right angles at both the hip and the knee. The doctor and assistant stand on opposite sides of the patient (pelvis level) and each places an arm under the patient's calf, cradling the leg and resting their hand on the shoulder of the person opposite. Traction is applied by anterior lift whilst the leg is stabilised by the doctor maintaining knee's right angle. A third person is required to stabilise the pelvis. Bigelow has high complication rate and that manoeuvre was not used in this study.

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Citation: Narinder Sharma, Mohinder Singh Chib and Anita Sharma, 2017. "East baltimore lift: best technique for closed reduction of posterior hip dislocation", *International Journal of Current Research*, 9, (05), 51407-51408.

INTRODUCTION

Aims and objectives: To compare different reduction manoeuvres and to see which is easier for the doctor and giving less complications to the patient

MATERIAL AND METHODS

This prospective study was conducted in the post graduate department of Orthopaedics Government Medical College, Jammu during the period from 1st april 2016 to 31st march 2017. Both male and female patients were included in the study. The selection criterion was based on the given criteria below.

Inclusion criteria

Isolated injury, age between 18 to 50 years, fresh injury.

Exclusion criteria

Multiple injured patients, associated neurovascular injuries, cancer or severely ill patients which increases the procedure morbidity, patients below 18 and above 50 years, old dislocations, pregnancy. All the patients were initially assessed in the emergency section of GMC Jammu.

They were given first aid in the form of analgesia, limb immobilization, and other resuscitation measures. After selection of the patients for procedure, patients were prepared for reduction manoeuvre in minor ot and if it failed then operation theatre.

Pre-operative evaluation

Pre-op evaluation included patients name, age, sex, address, date of injury, associated chronic illness, date of procedure and date of discharge. Every patient was evaluated for swelling, bruising & ecchymosis at the site and visible deformity. Shortening of the limb was measured by a measuring tape. A careful neurological and vascular examination of the involved limb was done. All the routine investigations like complete blood count & biochemistry were done. Radiographic evaluation by X-ray of the chest, pelvis AP view was done in every patient. Informed and written consent was taken from the patients

Technique-only east Baltimore lift is described here

The patient is placed supine (after considering sedation or analgesia) and the affected leg is flexed at right angles at the hip and the knee. The doctor stands on the side of the dislocation (pelvis level) with the assistant opposite and cradles the calf as described above. The free hand of both the doctor and assistant is then placed distally on the affected leg.

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	Baltimore lift group	Allis group	Stimson group
No. Of patients	10	10	10
Mean time for reduction	Less than 1 minute	2 to 3 minutes	More than 15 minutes
Sedation/short GA	10/0	6/4	8/2
Complications (neck or head fracture)	0	2	0
Ease to doctor during procedure	9	6	8
Ease to patient during procedure	8	4	2

With force applied upward on the knee whilst simultaneously lowering pelvis by the third assistant, traction is placed on the dislocated hip allowing a gentle relocation. Sometimes controlled rotation of the may be necessary using doctor's other free hand. Post reduction cautions are as similar as for other methods in maintaining reduction and a confirmation X-ray should be requested. It is particularly useful for heavy built and obese patients in which manipulation and stabilisation of the pelvis can be quite difficult. We find this method extremely useful in our local institution where it is practiced as a standard. We have even had success with fractures associated with dislocation and subluxation associated with soft tissue incorporation between bony surfaces. . The same contra-indications that apply to the other techniques also apply to the East Baltimore lift

Postoperative evaluation

Post operatively the limbs were immobilized for comfort. ct scan with 3mm cuts was done and reduction of the dislocation long with other complications were noted .pt. was put on non weight bearing. At six weeks post procedure pt. Is allowed to bear weight. Intermittent physiotherapy by a trained physiotherapist was advised.

RESULTS

30 patients divided into 3 groups randomly in allis method group, stimson method group and Baltimore lift group. 20 pt.s were between 20 to 30 yrs old.7 pt.s were between 30 to 40 and rest above 40 yrs. 19 patients were male and the rest were females. Time for reduction was the least in Baltimore group and was more patient and doctor friendly. no patient needed short GA for this procedure as compared to the other groups. Post reduction complication rate was least in this as compared to others.

DISCUSSION

Our study included 30 patients of posterior dislocation hip and were divided into three groups and evaluated as per these parameters in the table above. This comparative method study clearly shows east Baltimore method as an easily performed manoeuvre with max. Results with minimum complications.

Conclusion

Literature describes many methods for reducing the posterior hip dislocation. different doctors perform different methods to do it. need for a single manoeuvre that is easily performed with minimum power required and least traumatic to the patient and can be done in minor OT with just sedation and analgesia. It is performed with doctor in comfortable position and the power required to do the manoeuvre is lesser as compared to other methods as the position of the doctors leads to greater leverage and thus reduction.

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