

CASE REPORT

RETURNING TO SPORTS AFTER PERIACETABULAR OSTEOTOMY FOR DEVELOPMENTAL DYSPLASIA OF THE HIP

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ABSTRACT

Background: A periacetabular osteotomy, indicated for adults or adolescents requiring correction of congruency and containment of the femoral head, is a common surgical procedure to address developmental dysplasia of the hip.

Objectives: To describe developmental hip dysplasia, a surgical procedure performed to address the condition, as well as therapeutic exercise and functional progression principles utilized to return a patient to tennis following periacetabular osteotomy.

Case Description: The patient was a 14 year-old female who underwent a Ganz periacetabular osteotomy of the right pelvis due to developmental dysplasia of the hip. Post-operative outpatient physical therapy consisted of strengthening of the hip, thigh, and core musculature, as well as activities to increase muscular and cardiovascular endurance, anaerobic conditioning, lower extremity proprioception, and soft tissue length. A functional progression program to return to tennis was also provided.

Outcomes: The patient was seen in outpatient physical therapy for a total of 34 visits over the course of 42 weeks. Results of a Lower Extremity Functional Scale (LEFS) indicated that heavy activities of daily living, as well as recreational and sporting activities, were improved following the post-operative rehabilitation program.

Discussion: The role of the physical therapist is vital in prescribing and progressing activity levels to facilitate return of function following this periacetabular osteotomy. Surgery that is technically well performed followed by a comprehensive rehabilitation program can allow for resumption

of pre-morbid activities, enhancement of the quality of life, and return to sports activities.

Key Words: functional progression, tennis, congenital hip dysplasia.

INTRODUCTION

Hip problems in the developing youngster can be congenital or acquired and are frequently encountered by the physical therapist. Sports physical therapists may be comfortable in dealing with acquired hip conditions in active youth, but not as familiar with treating congenital hip dysfunction. On the other hand, pediatric physical therapists may be at ease addressing congenital hip issues but not as well versed in caring for acquired macro or microtrauma of the hip in active, normally developing youngsters. The generalist physical therapist may be somewhere in between these two extremes. The purpose of this case report is to describe developmental hip dysplasia, a surgical procedure performed to address this condition, as well as therapeutic exercise and functional progression principles utilized to return a patient to tennis following periacetabular osteotomy.

Developmental Dysplasia of the Hip

Conditions involving the hip joint in the skeletally immature youngster range from joint dysplasia to joint subluxation and dislocation. Traditionally, all of these conditions have been collectively referred to as congenital dysplasia of the hip; however, the term developmental dysplasia of the hip (DDH) has become more acceptable.¹ Developmental dysplasia of the hip more accurately describes situations when hip problems that may not be noticed at birth, become apparent as a child matures and begins to bear weight in a standing position.

The epidemiology, etiology, examination and treatment of DDH are well documented.¹⁻⁴ In addition to the clinical physical examination, standard anterior-posterior plain film radiographs of the

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