

Risk of intra-articular hip injury in adolescent athletes: a five-year multicentre cohort study

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Abstract

Purpose: The purpose of the current study was to establish a risk stratification for hip injury by presenting the classification of sports among adolescent athletes undergoing hip arthroscopy.

Methods: A multicentre registry was queried to examine the incidence of adolescent athletes undergoing hip arthroscopy. Patients were identified and grouped according to their sport-specific risk classification (level I-III). Chi-square analysis was performed to determine the relationship of classification of sport and gender in adolescent athletes to hip arthroscopy. A second chi-square analysis was performed to determine the relationship of classification of sport and number of sports the adolescent athlete was participating in prior to arthroscopic hip surgery.

Results: A total of 297 adolescent athletes were included in the study with 129 (43.4%) participating in level I sports compared with 84 (28.3%) in level II and 84(28.3%) in level III sports. Chi-square testing demonstrated a significant effect on gender and sport classification, $X^2(2, N = 297) = 31.18, p < 0.01$. There was a greater percentage of athletes participating in a single sport (65.3%) compared with multiple sports (34.6%), but was not statistically significant, $X^2(1, N = 297) = 1.88, p = 0.17$.

Conclusion: The current study was successful in stratifying a large, multicentre cohort of adolescent athletes requiring hip arthroscopy based on classification levels of sport. There were more male athletes participating in level I sports, while more female athletes participated in level II and level III sports.