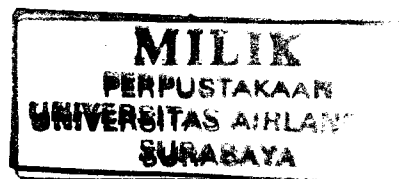


ABSTRAK**ANALISIS PERBEDAAN PERFORMA DAN BIOMEKANIKA SUDUT FLEKSI SENDI LUTUT PADA *COUNTERMOVEMENT JUMP-WITH ARM SWING (CMJAS)* PASIEN CEDERA *ANTERIOR CRUCIATE LIGAMENT (ACL)* PASCA TINDAKAN OPERATIF DAN KONSERVATIF**

PENDAHULUAN. Penanganan cedera ACL dapat berupa tindakan operatif dan konservatif. Tindakan-tindakan ini bertujuan untuk mengembalikan stabilitas, fungsi, struktur, kekuatan, luas gerak dan proprioseptif sendi lutut.. Analisis biomekanika sudah diterapkan dalam fase akhir rehabilitasi, namun perbedaan performa *CMJAS* pasca tindakan operatif dan konservatif pasca cedera *ACL*, sudut fleksi sendi lutut inisial kontak dan fleksi lutut maksimal saat fase pendaratan belum diketahui. **METODE.** Penelitian ini merupakan penelitian analisis observasional dengan *post test only design* dan menggunakan pendekatan *cross-sectional*. Penelitian ini terdiri kelompok tindakan operatif (TO) dan kelompok tindakan konservatif (TK) dengan besar sampel setiap kelompok 15 subjek. **HASIL.** Hasil yang diperoleh menunjukkan bahwa tidak terdapat perbedaan signifikan performa *CMJAS* ($p=0,932 > 0,05$), dengan rerata kelompok TO $38,80 \pm 8,98\text{cm}$ > TK $38,49 \pm 10,75\text{cm}$. Pada nilai sudut fleksi sendi lutut inisial kontak tidak terdapat perbedaan signifikan ($p=0,061 > 0,05$), dengan rerata kelompok TO $61,69 \pm 15,38^\circ$ > TK $52,85 \pm 8,40^\circ$. Nilai fleksi sendi lutut maksimal tidak terdapat perbedaan ($p=0,093 > 0,05$), dengan rerata kelompok TO $76,65 \pm 24,76^\circ$ > TK $65,59 \pm 18,19^\circ$. **KESIMPULAN.** Tidak terdapat perbedaan performa *CMJAS*, nilai sudut fleksi sendi lutut inisial kontak fase pendaratan dan nilai sudut fleksi sendi lutut maksimal fase pendaratan. Perbedaan pada rerata ketiga variabel. Kelompok TO memiliki rerata lebih tinggi daripada kelompok TK pada ketiga variabel.

Kata Kunci: *CMJAS*, cedera *ACL*, tindakan operatif, tindakan konservatif, fleksi sendi lutut inisial kontak, fleksi sendi lutut maksimal.



ABSTRACT

ANALYSIS OF DIFFERENCES IN PERFORMANCE AND BIOMECHANICS OF THE KNEE JOINT FLEXION ANGLE IN COUNTERMOVEMENT JUMP-WITH ARM SWING (CMJAS) ANTERIOR CRUCIATE LIGAMENT (ACL) INJURED PATIENTS POST OPERATIVE AND CONSERVATIVE TREATMENTS

INTRODUCTION. ACL injury management can be operative and conservative treatments. These treatments aim to restore stability, function, structure, strength, area of motion and proprioceptive knee joints. Biomechanical analysis has been applied in the final phase of rehabilitation, however the differences in CMJAS performance post operative and conservative treatments post ACL injury, the angle of knee joint flexion initial contact and maximum knee flexion during the landing phase of CMJAS are unknown. **METHODS.** This research used observational analysis research with post test only design and used a cross-sectional approach. This study consisted of the operative treatment group (TO) and the conservative treatment group (TK) with 15 subjects each group. **RESULTS.** The results obtained showed that there was no significant difference in CMJAS performance ($p = 0.932 > 0.05$), with the average of TO group $38.80 \pm 8.98\text{cm} > \text{TK } 38.49 \pm 10.75\text{cm}$. In the initial contact knee joint flexion angle value there was no significant difference ($p = 0.061 > 0.05$), with the average of TO group $61.69 \pm 15.38 \text{ } ^\circ > \text{TK } 52.85 \pm 8.40 \text{ } ^\circ$. The value of maximal knee joint flexion was no difference ($p = 0.093 > 0.05$), with the average of TO group $76.65 \pm 24.76 \text{ } ^\circ > \text{TK } 65.59 \pm 18.19 \text{ } ^\circ$. **CONCLUSION.** There was no difference in CMJAS performance, the initial knee contact flexion angle of the landing phase and the maximum knee flexion angle of the landing phase. The difference in the mean of the three variables. The TO group had a higher ratio than the TK group in all three variables.

Keywords: CMJAS, ACL injury, operative treatment, conservative treatment, knee flexion angle initial contact, maximum knee flexion angle.

