

SINGLE-IMPLANT SINGLE-APPROACH TECHNIQUE IN SCHATZKER VI TIBIAL PLATEAU FRACTURES, A 1 YEAR GAIT FOLLOW UP

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INTRODUCTION

SCHATZKER VI TIBIAL PLATEAU FRACTURES REPRESENT THE MOST SEVERE INJURIES TO THE KNEE JOINT DESCRIBED IN LITERATURE ASSOCIATED THE EXTENSIVE SOFT TISSUE TRAUMA AND WITH SEVERE POSTOPERATIVE COMPLICATIONS AND A LONG RECOVERY PERIOD. GAIT ANALYSIS WAS USED AS A WAY OF QUANTIFYING THE PROGRESS THAT THE PATIENT HAS MADE IN THE REHABILITATION PHASE OF THE TREATMENT.

MATERIAL & METHOD

GATHERING THE GAIT DATA FROM THE NINE PATIENTS WITH SCHATZKER VI PROXIMAL TIBIAL FRACTURES INCLUDED IN THIS STUDY THAT WERE TREATED USING A LATERAL LOCKED ANGLE PLATE WAS POSSIBLE IN A DEDICATED BIOMECHANICAL LABORATORY WITH THE ZEBRIS CMS 10 (ZEBRIS, MEDIZINTECHNIK GMBH, GERMANY) 3D ANALYSIS SYSTEM AND THE ZEBRIS FDM PRESSURE FLOOR-MAT. THE PATIENTS WERE INVESTIGATED IN 3 SESSIONS, AT 4 (MEAN 3,7), 6 (MEAN 6,2) AND 12 (MEAN 11,7) MONTHS POSTOPERATIVELY AND THIS INCLUDED PATIENTS WITH AND WITHOUT OSTEOSYNTHESIS MATERIAL. HARDWARE REMOVAL WAS DONE NO EARLIER THAN A YEAR. A STATISTICAL COMPARISON WAS MADE BETWEEN THE 6 AND THE 12 MONTHS SESSIONS.

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PATIENTS WERE ASKED TO FILL THE KOOS SCORE AS A SUBJECTIVE EVALUATION REFERENCE.

RESULTS

RELEVANT IMPROVEMENTS INCLUDED THE INCREASED VELOCITY FROM A MEAN OF 42 CM/SEC AT 6 MONTHS TO 75 CM/SEC AT 12 MONTHS, WITH A INCREASE IN STEP CADENCE, THE INCREASE OF KNEE FLEXION ANGLES FROM A MEAN OF 49° TO A MEAN OF 64° AT 12 MONTHS ($P<0,05$) AND THE PROGRESSIVE NARROWING OF THE WALKING BASE WITH A NEUTRALIZATION OF THE PLANTAR FORCE DISTRIBUTION ON THE OPERATED LIMB FOLLOWING THE TOE-MTF-HEEL FORCE LINE, WITH THE EQUALIZATION OF THE LEFT AND RIGHT GAIT AND SINGLE SUPPORT LINES

CONCLUSION

THE RESULTS SHOW A STATISTICALLY SIGNIFICANT IMPROVEMENT IN THE REPORTED PARAMETERS. SUBJECTIVELY THE PATIENTS WERE SATISFIED WITH THE OUTCOME IN CORRELATION WITH THE CLINICAL SCORE THAT SHOWED COMPARABLE LEVELS OF IMPROVEMENT. WE CONSIDER AS THE MAIN LIMITATION OF THIS STUDY THE LIMITED NUMBER OF SUBJECTS BUT FOR THIS GROUP WE CAN SAY THAT THE ANALYSIS OF THE GAIT RETURNED CLINICALLY SIGNIFICANT OF DATA REGARDING THE REHABILITATION PHASE.

KEYWORDS: SCHATZKER VI, ANGLE PLATE, RECOVERY