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BI-CRUCIATE LIGAMENT (ACL-PCL) RECONSTRUCTION ASSOCIATED WITH MEDIAL OR LATERAL INSTABILITY IS AT HIGHER RISK OF FAILURE: SURVIVORSHIP ANALYSIS AT LONG-TERM FOLLOW-UP

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DISCLOSURES:

- N.P., A.G., A.P., P.A., G.D.F., G.L., M.V., S.D.P.: NOTHING TO DISCLOSE
- S.Z.:
 - SMITH & NEPHEW, DEPUY CONSULTANT
 - MEDACTA, DEPUY RESEARCH SUPPORT

INTRODUCTION

- MULTILIGAMENT KNEE INJURIES (MLKI) ARE RARE but POSSIBLY DEVASTATING TRAUMAS
- 96% OF PCL LESIONS ARE COMBINED
- BI-CRUCIATE (ACL PCL) INJURIES ARE OFTEN ASSOCIATED WITH MEDIAL AND/OR LATERAL STRUCTURES INVOLVEMENT
- SURGERY BETTER OUTCOMES...



BUT..

FAILURE RATE AND CORRELATED RISK FACTOR ARE STILL UNKNOWN





SURVIVORSHIP ANALYSIS AND CORRELATED FAILURE RISK FACTORS IN A WIDE COHORT OF PATIENTS UNDERWENT SURGICAL TREATMENT FOR PCL BASED MLKI AT LONG TERM-FOLLOW-UP.



METHODS

RETROSPECTIVE ANALYSIS OF RIZZOLI ORTHOPEDIC INSTITUTE DATABASE

PATIENTS UNDERWENT ISOLATED AND/OR COMBINED PCL RECONSTRUCTION BETWEEN JANUARY 2000 AND DECEMBER 2019.

SURGICAL FAILURE: RE-OPERATION TO ONE OF THE RECONSTRUCTED LIGAMENTS AS ENDPOINT FOR KAPLAN-MEIER

MEAN ESTIMATED SURVIVAL TIME FOR THE ENTIRE COHORT, FURTHERMORE

SURVIVORSHIP OF ACL-PCL-MCL AND ACL-PCL-PLC AND OF UP TO TWO LIGAMENTS RECONSTRUCTED AND MORE THAN TWO LIGAMENTS RECONSTRUCTED WAS COMPARED.

THE LOG-RANK TEST WITH HAZARD RATIO WAS CALCULATED, WITH P<0.05 SET AS LEVEL OF STATISTICAL SIGNIFICANCE.

LOGISTIC REGRESSION USING SEX, BMI (=25 VS >25), AGE AT SURGERY, LIMB, PRESENCE OF CARTILAGE LESIONS, DIABETES, SMOKE, MENISCAL LESION AS INDEPENDENT VARIABLES.



RESULTS

42 PATIENTS INCLUDED

MINIMUM FOLLOW-UP 2 YRS, MEDIUM 9.6 YRS

14.3% FAILURES (6/42)

- GLOBAL SURVIVORSHIP: 95.2% (2YRS), 92.6% (5YR\$), 87.1% (12YRS), 74.7% (15YRS)

- SURVIVORSHIP >2 LIG RECONSTRUCTIONS (ACL-PCL-PMC OR ACL-PCL-PLC) WAS SIGNIFICANTLY LOWER (15.4 YEARS [10.5 – 20.3] VS 25.2 YEARS [18.3 – 32.1], P=0.019).

AND THE ACL-PCL-PLC (P=0.063).

- NO SIGNIFICANT OUTCOME INTERACTION FROM THE MULTIPLE REGRESSION ANALYSIS (P=0.069).





CONCLUSIONS

ACL-PCL REC + PERIPHERAL REC FAILURE RISK 9.6 time HIGHER

✓ RELEVANT SURVIVORSHIP DROP at 12 yrs

CLINICAL RELEVANCE

DEEPENING OF THE KNOWLEDGE REGARDING THE NEED OF FURTHER SURGICAL MAJOR PROCEDURES FOR PATIENTS UNDERWENT MLKI INJURY

