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FEMORAL RADIOGRAPHIC LANDMARKS FOR POPLITEUS TENDON RECONSTRUCTION AND REPAIR- A NEW METHOD OF REFERENCE

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INTRODUCTION: Though popliteus muscle-tendon complex is one of the most important structures in controlling the posterolateral rotatory stability of the knee, little work has been done concerning the use of femoral radiographic landmarks in repair and reconstruction. The objective of our study is to identify the femoral insertion of the popliteus tendon (PLT) reconstruction by using standardized radiographic imaging. METHODS: Ten fresh-frozen human knees were dissected, and the PLT was exposed. After identification of the femoral PLT insertion site, the insertion centre was marked with a radiographic marker. True lateral radiographs of the distal femur were taken, and the digital radiographic images were analyzed by 2 independent observers. RESULTS: The PLT was found to be 47.5% (+/-5.2%) across the width of the femoral condyle and 8.1mm (+/-1.8mm) distal to the Blumensaat line. In all specimens, the anatomical PLT origin was found to have less than 4mm variance form the mean. Overall intraclass correlation coefficients for intraobserver reproducibility and interobserver reliability were 0.987 and 0.983 respectively. CONCLUSION: A reproducible anatomical and radiographic reference point for PLT insertion was described. This radiographic information can serve as a valuable reference for preoperative, intraoperative, and postoperative assessments of surgical repair and reconstructions.