• 系統編號	RN9611-6383		
• 計畫中文名稱	國人再置換人工膝關節中延伸骨柄最佳位置之研究		
• 計畫英文名稱	Investigation of the Optimal Extension Stem Position in Revision Knee Prosthesis for Chinese Patients		
• 主管機關	行政院國家科學委員會	• 計畫編號	NSC94-2614-E038-001
• 執行機構	台北醫學大學外科		
• 本期期間	9408 ~ 9507		
• 報告頁數	6 頁	• 使用語言	中文
• 研究人員	何爲斌; 廖建忠 Ho, Wei-Pin; Liau, Jiann-Jong		
• 中文關鍵字	再置換型人工膝關節; 延伸骨柄		
• 英文關鍵字	Revision total knee prosthesis; Extension stem		
• 中文摘要	在再置換人工膝關節手術中，股骨元件與脛骨基座上大多數會使用延伸骨柄(Extension stem)來加強植入物與骨頭的結合強度。再置換人工膝關節系統中股骨元件延伸骨柄的位置會影響手術中股骨前方骨頭的保留量與股骨元件植入的位置，本研究主要的目的爲在初次置換人工膝關節手術中量測股骨切面中骨髓內定位桿中心相對於 Anterior contex，外側股骨髁最前端與最後端以及遠端股骨切面的最內端與最外端的距離，以決定股骨延伸骨柄的最佳位置。本研究量測了 36 位(男性 8 位; 女性 28 位)初次置換人工膝關節的病患，在完成股骨遠端後利用自製的量尺進行上述四種距離的量測。骨髓內定位桿中心相對於外側股骨髁最前端與最後端以及遠端股骨切面的最內端與最外端的距離結果分別爲 21.3 mm, 40.5mm, 30.4 mm 和 35.3 mm，股骨延伸骨柄的最佳位置在前後方向爲距前方 34.5%前後徑的位置，而在內外方向爲距內側 46%內外靜的位置。		
• 英文摘要	In revision knee arthroplasty, most of cases will use the extension stem in either femoral or tibial sides or both to enhance the fixation between the implant and the bone. In femoral sides, the position of extension stem will affect the amount of reserved bone in the anterior femur as well as affect the femoral component position relative to the resected femur. The purpose of this study was to measure the distances between the center of intramedullary guide rod and 1. the most anterior point on the lateral condyle, 2. the most distal point on the lateral condyle, 3 the most medial point on the distal resected femur and 4. the most lateral point on the distal resected femur in primary total knee arthroplasty. Third six primary total knee arthroplasties performed between September 2005 and June 2006 were included in this study. These patients included 8 males and 28 females and their age ranged from 54 to 82 years		

(average 72 years). After femoral distally cutting completed, a custom-made measurement jig was placed on the resected femur and the distances between the center of intramedullary guide rod and the most anterior and distal points on the lateral condyle, and the most medial and lateral points on the resected femur were measured. The distances between the center of intramedullary guide rod and the most anterior point; the most distal point on the lateral condyle; the most medial point; the most lateral point on the distal resected femur were 21.3 mm, 40.5 mm, 30.4 mm and 35.3 mm, respectively. In design of revision knee prosthesis for Chinese patients, the distance between the most anterior point and the center of femoral extension stem was 34.5% of total anterior-posterior length of knee prosthesis. In addition, the position of stem should be located slight medial relative to its center of medial-lateral width.