• 系統編號	RN9305-1894		
• 計畫中文名稱	利用增強磁振造影比較冰凍肩期別的組織變化對於復健療程計劃之效益		
• 計畫英文名稱	Efficacy of Treatment Planning and Prognosis of Frozen Shoulder---Dynamic Enhanced MRI Assessment		
• 主管機關	行政院國家科學委員會	• 計畫編號	NSC90-2314-B038-031
• 執行機構	臺北醫學大學醫學系		
• 本期期間	9008 ~ 9107		
• 報告頁數	5 頁	• 使用語言	英文
• 研究人員	陳榮邦; 陳適卿 Chen, Jung-Pang; Chen, Shih-Ching		
• 中文關鍵字	冰凍肩; 黏連性肩被膜炎; 磁振造影; 關節囊攝影		
• 英文關鍵字	Frozen shoulder; Adhesive capsulitis; Magnetic resonance image (MRI); Arthrography		

• 中文摘要

我們嘗試使用非侵入性的檢查─動態增強顯影之磁振造影(MRI)來觀察急性期與慢性期粘連性囊炎的影像變化，並與復健療效做比較分析。本研究前瞻性的蒐集 30 位評估爲粘連性囊炎之患者，動態掃描使用 T1 加權序列並加上脂肪去除參數，每張掃描 7 秒，間隔 1 秒，並使用 0.2cc/kg 的 Gadopentate dimeglumine 以每秒 1.5cc 的速度經注射器注入患側的上肢靜脈，連續掃描約 7 分鐘，成像後測量最大顯影與顯影速度(Rate)並作分析。其中剔除因成像技術失誤的 5 名病患，最後包括 18 名病患患有滑膜囊炎和 7 名無症狀受檢者。結果顯示動態增強顯影的 MRI 成像對於炎性變化應該有較快速(正常 vs.異常，0.48)與最大顯影(正常 vs.異常 62%)的效果($p<0.05$)。我們初步結論動態的增強顯影 MRI 有助於了解粘連性囊炎急、慢性期的病理過程，並可能用來代替侵入性的關節囊攝影檢查，進一步提供治療前的評估。另外，侵入性的關節囊擴張術療程可能較短，但療效則有待探討。

• 英文摘要

We prospectively evaluated 30 subjects with dynamic contrast-enhanced MR imaging in assessment of adhesive capsulitis with clinical correlation. Of these 30, five were excluded due to technical failure during the MR examinations. Finally, 18 patients with adhesive capsulitis (18 shoulders) and 7 asymptomatic shoulders were recruited. Dynamic contrast-enhanced MR imaging was obtained at oblique coronal plane. A FAT-SAT T1-weighted sequence (TR=150msec, TE=15msec) was acquired at 7-sec scanning (including 1-sec interval) for 7 minutes after bolus injection of 0.2cc/kg of gadopentate dimeglumine. The greatest differences of peak enhancement as measured in the axillary capsule were higher in the symptomatic shoulder with adhesive capsulitis than that in the

asymptomatic shoulder (avearge difference 62%). Time to peak enhancement were 322 sec after bolus injection of gadopentate dimeglumine. Their difference in slopes of enhancement was 0.48 (% signal increase per second) with the slope of the diseased shoulder higher than that of the controls. Their differences in both of the peak and slope of enhancement reached statistic significant ($P < 0.05$). We conclude that dynamic contrast-enhanced MR imaging can be helpful in assessing and monitoring shoulder adhesive capsulitis.