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In sick-listed low back pain patients unsuccessful return to work was predicted by a multivariate model, and type 1 Modic changes were the only degenerative manifestation negatively associated with outcome

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A hospital-based randomised study in 351 sick-listed low back pain (LBP) patients showed no significant difference in regard to return to work (RTW) between brief and multidisciplinary intervention. One third of these patients had radiculopathy and 10% were operated. In 325 of these patients a multivariate prognostic model for unsuccessful return to work (U-RTW) was developed and tested in a subsequent cohort of 120 patients who were recruited, randomised and managed similarly. U-RTW was not significantly different in patients with and without radiculopathy. The model predicting U-RTW included back+leg pain intensity, side-flexion, bodily distress and four psychosocial risk factors: 'low expectations of RTW', 'blaming the work for pain', 'no home ownership' and 'drinking alcohol less than once/month'. The model was validated with success and was able in classifying the patients into three categories with different risks of U-RTW at one year: low risk (5-25%), intermediate risk (25-45%) and high risk (50-70%).

Consecutively, magnetic resonance imaging of the lumbar spine was performed in 141 of these patients. All degenerative manifestations were described standardised and blinded. The degenerative manifestations were analysed in relation to U-RTW with adjustment for the previously identified prognostic factors. Only type1 Modic changes which were identified in 18% were negatively associated with U-RTW, also after adjustment. A multivariate model for prognostic factors associated with one-year pain and function was also developed. Prognostic factors included back+leg pain intensity, disability, low level of exercise in leisure time, worrying and health anxiety, tender points, fear avoidance, compensation issue and low alcohol intake. Type1 Modic changes were the only degenerative manifestations which were associated with change of pain and function, also after adjustment for these prognostic factors.

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