البحث الثاني

LncRNAs, MALAT1 and lnc-DC as potential biomarkers for multiple sclerosis diagnosis

Long non-coding RNAs (lncRNAs) play an important role in gene regulation and show greater tissue specificity and complexity of biological functions. There is on-going research in their contribution in autoimmune diseases like multiple sclerosis (MS). Our study aimed at the evaluation of serum levels of lncRNAs, MALAT1 and lnc-DC in MS patients and the investigation
of the association between these lncRNAs and the disease activity. Serum from 45 MS patients and 45 healthy controls was separated. MALAT1 and lnc-DC expression levels were assayed by qRT-PCR. MALAT1 and lnc-DC were significantly increased in MS patients (P=0.004 and P=0.006, respectively) in comparison with controls. There was a significant increase in expression of MALAT1 in secondary progressive MS (SPMS) subgroup compared with controls (P<0.0001); however, significant elevation of lnc-DC was demonstrated in relapsing remitting MS (RRMS) subtype (P=0.003) compared with normal controls.
A positive association between the expression levels of MALAT1 and lnc-DC (r = 0.513, P <
0.0001) in MS patients was detected. Moreover, positive correlation was observed between
MALAT1and lnc-DC in RRMS (r = 0.569, P = 0.001). Serum levels of MALAT1 and lnc-DC may serve as potential novel molecular biomarkers for MS diagnosis and may provide a new direction for its treatment.