



Title	Systemic lupus erythematosus (SLE) is associated with telomerase activation
Author(s)	Lau, WCS; Liu, Y; Tong, KK; Chan, A; Tsao, SW
Citation	The 4th Medical Research Conference, Hong Kong, China, 30-31 January 1999, v. 21 n. Supp, p. 41
Issued Date	1999
URL	http://hdl.handle.net/10722/46777
Rights	Creative Commons: Attribution 3.0 Hong Kong License

75

QUALITY OF LIFE (QoL) IN SOUTHERN CHINESE WITH SYSTEMIC LUPUS ERYTHEMATOSUS (SLE). PY Leung, KW Lee and CLK Lam, CS Lau. Department of Medicine, The University of Hong Kong, Hong Kong, China.

Objective: QoL is an important outcome measure in SLE. A Chinese version of the Medical Outcome Survey SF-36 questionnaire has recently been validated. We have used it for the first time to assess the QoL in our local patients. Effects of disease activity and damage, treatment as well as physical, marital, educational and socioeconomic status were assessed.

Methods: Patients with SLE were recruited from a specialist lupus out-patient clinic. Clinical and demographic data were recorded. Disease activity was measured using the SLEDAI and disease damage using the SLICC/ACR score. The Chinese version of SF-36 was self-administered by the patients. Results were compared with controls (n=236).

Results: 107 patients were studied [Age: 32 (21-60) years; duration of disease: 6 (0-12) years]. There was strong interscale correlation between all of the subscales and the total QoL scores. SLE patients had poorer QoL, particularly bodily pain, social function and role emotional, when compared with controls.

Subjects	Physical Function	Role physical	Bodily pain	General health	Vitality	Social function	Role emotional	Mental health
SLE	81.1	59.3	56.5*	44.4	52.2*	74.8	64.3*	67.2
Controls	87.9	61	70.4	53.4	55.3	84.9	49.7	67.4

There were no correlations between any of the QoL scores and SLEDAI and SLICC/ACR scores. Treatment with high dose steroid with or without immunosuppressants did not have a significant impact on QoL. There was a negative association between age and physical functioning score. Employment status was the main determinant of physical functioning, role-physical and social functioning scores with unemployed patients scoring the lowest.

Conclusion: Data of this preliminary study in Chinese patients with SLE suggested that these patients had poorer QoL. Socio-economic status appeared to be a major determinant. However, the sample size of our study was small and only out-patients were involved. A larger scale prospective study is currently underway.

76

SYSTEMIC LUPUS ERYTHEMATOSUS (SLE) IS ASSOCIATED WITH TELOMERASE ACTIVATION. CS Lau, Y Liu*, KK Tong, A Chan, SW Tsao*. Departments of Medicine and Biochemistry*, The University of Hong Kong, Hong Kong, China.

Objective: Telomerase is a ribonucleoprotein enzyme that maintains the telomeric length at chromosomal ends with simple repetitive sequences. It compensates for the end replication problem associated with cell division and allows cells to proliferate indefinitely. Telomerase activation is common in malignant transformation and has been used as a diagnostic and prognostic marker in some human cancers. SLE is associated with increased T and B cell activation. In this study, we have examined telomerase activity in peripheral blood mononuclear cells (PBMC) in patients with SLE.

Methods: 35 SLE patients were studied. Clinical and laboratory data as well as records of drug treatment were recorded. The overall disease activity was assessed using the SLE Disease Activity Index (SLEDAI). PBMC was obtained by density gradient centrifugation of fresh heparinised blood. Telomerase activity was determined using the telomeric repeats amplification protocol (TRAP). In this assay, cell extracts containing active telomerase adds a varied number of telomeric repeats onto the 3' end of the substrate oligonucleotide. These extension products are then amplified by PCR.

Results: Increased telomerase activity in PBMC was found in 15/35 (43%) patients and none in control subjects. However, there was no association with disease onset, duration of disease, serum levels of anti-dsDNA antibody, C3, C4, and the use of steroid and cytotoxic drugs (azathioprine, cyclophosphamide and mycophenolate). Four patients had active lupus nephritis at the time of study. 3 had increased telomerase activation. There was also a tendency for increased telomerase activity in patients with active disease (SLEDAI \geq 4) (6/11) compared with inactive disease (9/24) but the difference was not statistically significant ($p>0.05$).

Conclusion: Telomerase may be responsible for the activation of PBMC in the immune response in SLE. The sample size of our study may be too small to allow us to assess the usefulness of telomerase activity measurement as a marker of disease activity in SLE. A prospective study is currently underway.