

# NAILFOLD VIDEO-CAPILLAROSCOPIC CHANGES IN ADULT BANGLADESHI PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS: CORRELATION WITH DISEASE ACTIVITY

MAHMUD S<sup>1</sup>, PAUL S<sup>2</sup>, SATTAR MA<sup>3</sup>, MIRZADA MR<sup>4</sup>, ULLAH EE<sup>5</sup>, RAJIB MSA<sup>6</sup>, RAZZAQUE MA<sup>7</sup>

<sup>1</sup>Deputy Program Manager (Private Health Care Facilities and Accreditation), Hospital Services Management, Directorate General of Health Services (DGHS), Mohakhali, Dhaka-1212, Bangladesh. Email: dr.sakit 007428@gmail.com  
<sup>2</sup>Professor, Dept. of Medicine, Marin City Medical College, Chattogram, Bangladesh. <sup>3</sup>Professor, Dept. of Medicine, Chittagong Medical College-Chattogram, Bangladesh. <sup>4</sup>Associate Professor, Dept of Medicine- Chittagong Medical College, Chattogram, Bangladesh. <sup>5</sup>Assistant Professor of Dept of Medicine- Chittagong Medical College, Chattogram, Bangladesh. <sup>6</sup>Assistant Professor of Dept of Medicine- Chittagong Medical College, Chattogram, Bangladesh. <sup>7</sup>Registrar of Medicine, Chittagong Medical College and Hospital, Chattogram, Bangladesh.

**Background:** Peripheral microangiopathy is an important feature in systemic lupus erythematosus (SLE). Nailfold capillary (NFC) changes observed by nailfold videocapillaroscopy (NVC) may play a role in early detection of microangiopathy and assessment of disease activity in SLE. The aim of the study was to evaluate nailfold capillary changes, their diagnostic accuracy and NFC-pattern of changes in a group of Bangladeshi SLE patients in comparison to healthy subjects and to determine the correlation with disease activity in SLE. **Methods:** This cross-sectional study with a comparison group was conducted in CMCH, Chattogram; a Tertiary Care Hospital in Bangladesh. **Results:** Twenty-seven (n=27) Bangladeshi SLE patients who were diagnosed by ACR-1997 revised criteria for diagnosis of SLE and Twenty-seven (n=27) age-sex matched health subjects were included. All participants were subjected to full history taking, clinical examination, laboratory investigations as well as NVC examination. SLE disease activity was assessed by SLEDIA scoring tool and nailfold capillary changes were assessed with NFC-pattern of changes by applying NVC. Results: Mean ( $\pm$ SD) age of the SLE patient group was 31.2 ( $\pm$ 7.8) years and female to male ratio was around 6:1. 23 out of 27(85.2%) patients had multiple phenotypes and 18 (66.6%) had either high or very high disease activity. Sub-papillary venous plexus (SPVP) was prominently visible more frequently in SLE patients and capillary density was reduced in SLE patients compared with healthy controls. Capillary changes in NVC were observed in 26 out of 27 (96.3%) patients. Major and scleroderma pattern were detected in 51.9% and 11.1% of the SLE patients; respectively. Nailfold capillary abnormalities were significantly more frequent in SLE patient than in healthy controls. More frequently found different abnormal morphological changes were seen with crossed capillary (66.7%), tortuous capillary (63%) and meandering capillary (37%). There was a significant positive correlation between disease activity of SLE and NFC-pattern of changes ( $r=0.443$ ,  $p=0.021$ ). **Conclusion:** Different abnormal nailfold capillary changes are quite common among patients with SLE, and nailfold capillary changes positively correlate with disease activity in SLE.

**Key words:** Nailfold capillary, Nailfold Videocapillaroscopy (NVC), Systemic Lupus Erythematosus, Disease activity, Adult Bangladeshi patients

**Date of received:** 21.04.2023

**Date of acceptance:** 05.05.2023

DOI: <https://doi.org/10.3329/bjm.v34i20.66161>

**Citation:** Mahmud S, Paul S, Sattar MA, Mirzada MR, Ullah EE, Rajib MSA, Razzaque MA. Nailfold Videocapillaroscopic Changes in Adult Bangladeshi Patients with Systemic Lupus Erythematosus: Correlation with Disease Activity. Bangladesh J Medicine 2023; Vol. 34, No. 2(1) Supplementation: 208.