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P1342 A SCREENING TOOL TO DETECT CHRONIC OCULAR GRAFT VERSUS HOST DISEASE IN A HEMATOLOGY/ ONCOLOGY OUTPATIENT SETTING

Topic: 22. Stem cell transplantation - Clinical

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Background: Chronic ocular GvHD (oGvHD) is reported to occur in 30-60% of patients after hematological stem cell transplantation (HSCT). Presently, there is no diagnostic test available nor a single 'gold standard' sign or symptom for the disease. Instead the diagnosis is confirmed through criteria set by the National Institute of Health (NIH) and the International Chronic Ocular Graft-vs-Host-Disease Consensus Group (ICCGvHD), which place a heavy reliance on findings found on slit lamp examinations. Furthermore, after HSCT patients can suffer from non-GvHD related complications, such as cataracts, leading to compound presentations. Thus, this need for a specialist examination and confounding presentation means that often patient's oGvHD may be advanced before the diagnosis is established and subsequent referral to specialist care. Such delays cause unnecessary suffering and, in some cases, permanent damage.

Aims: We aimed to develop an effective and efficient screening tool for chronic oGvHD that could be integrated into a Hematology/ Oncology outpatient clinic.

Methods: All post-HSCT patients attending the Hematology/ Oncology outpatient department clinic 18 months were invited to partake in the study. In PHASE I the Ocular Surface Disease Index (OSDI) questionnaire was used to screen the participants for chronic oGvHD and a score of >33 was chosen as the threshold. In PHASE II if participants scored >33 in the OSDI they were then asked a further 'yes/ no' question relating to daily use of ocular lubricants. If both criteria were fulfilled, chronic oGvHD was considered likely. In case instance, questionnaires were completed before the ophthalmic examination to prevent bias, and examination was performed by a trained ophthalmologist. Participants were considered to have a diagnosis of chronic oGvHD if they fulfilled one or both of the NIH or ICCGvHD criteria. The efficacy of was measured by sensitivity and specificity along with PPV and NPV. LR were used to assess the screening algorithm as it is less likely to change with disease prevalence. Pearson r formulation was used to determine degree of correlation between OSDI scores and disease severity.

Results: PHASE I (n=100) resulted in a sensitivity of 100%, specificity of 86.9%, PPV of 0.59, NPV of 1.0 and a LR of 7.3 ($p < 0.0001$). PHASE II (n=68) resulted in 100% sensitivity and specificity with a PPV and NPV of 1.00 ($p < 0.0001$). Disease severity and ocular surface disease strongly correlated (n=65, 0.67, $p < 0.0001$).

Summary/Conclusion: We propose that a simple algorithm using the self-assessment OSDI questionnaire and a polar 'yes/ no' question relating to ocular lubricant usage that could be widely implemented in hematology/oncology settings to screen for oGvHD with minimal cost and inconvenience. The algorithm also provides an accurate prediction of disease severity, enabling ophthalmology services to triage patients so that timely care is provided to those in greatest need.