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POSTER ABSTRACTS

624.HODGKIN LYMPHOMAS AND T/NK CELL LYMPHOMAS: CLINICAL AND EPIDEMIOLOGICAL

Causal Relationships between Immune-Mediated Inflammatory Diseases and Hodgkin's Lymphoma: A Mendelian Randomization Study

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Introduction: Immune-mediated inflammatory diseases (IMIDs) constitute a clinically heterogeneous group with a disruption of the immune system that provokes inflammation of any organ system on a chronic basis. Previous observational investigations have demonstrated an association between a person's or their family's medical background of IMIDs and a higher likelihood of developing Hodgkin's lymphoma (HL). Nevertheless, the exact causal connection between specific IMIDs and HL remains ambiguous. Therefore, the investigation aims to explore the causal effects between IMIDs and HL.

Methods: A two-sample Mendelian randomization (TSMR) approach was employed in this study, using publicly available genome-wide association study summary statistics. The inverse variance weighted (IVW) method was the primary approach used for the Mendelian randomization (MR) analysis. Furthermore, supplementary statistical approaches such as MR-Egger, simple mode, weighted median, and MR-PRESSO were employed. In order to identify potential heterogeneity and pleiotropy, several tests were conducted, including Cochran's Q test, the MR-Egger regression test, and the MR-PRESSO test. Moreover, the leave-one-out method was implemented to examine the reliability of the MR results.

Results: Based on the IVW analysis the findings revealed a positive causal link at risk for multiple sclerosis (MS) and HL [odds ratio (OR) = 1.281; 95% CI = 1.087-1.510, p = 0.003] and a negative causal link at risk for type 1 diabetes (T1D) and HL (OR = 0.853; 95% CI = 0.776-0.937, p = 0.001). However, no significant causal relationship was found between the risk of HL and the other eight IMIDs, including inflammatory bowel diseases (OR = 1.034; 95%CI = 0.910-1.176, p = 0.606), systemic lupus erythematosus (OR = 1.041; 95%CI = 0.944-1.149, p = 0.422), Crohn's disease (OR = 0.952; 95%CI = 1.840-1.078, p = 0.436), ulcerative colitis (OR = 1.042; 95%CI = 0.874-1.242, p = 0.644), primary sclerosing cholangitis (OR = 1.061; 95%CI = 0.937-1.202, p = 0.349), primary biliary cirrhosis (OR = 1.046; 95%CI = 0.918-1.192, p = 0.495), psoriasis (OR = 0.989; 95%CI = 0.954-1.026, p = 0.565), celiac disease (OR = 1.198; 95%CI = 0.911-1.574, p = 0.195). **Figure 1** displayed a detailed visual representation of the findings obtained in the study. No indication was made of any potential heterogeneity or horizontal pleiotropy. Besides, no outliers were discovered in the MR using MR-PRESSO. In addition, the leave-one-out analysis indicates that the MR estimates are not driven by any single SNP, suggesting that the observed associations are robust and reliable. **Conclusions:** The present investigation emphasizes an increased susceptibility of MS to the risk of HL and a potential protective effect of T1D against the risk of HL. In light of these findings, patients with MS receiving immunosuppressive therapy are highly suggested to undergo periodic physical evaluations and lymphoma surveillance. Further investigations are warranted to explore the potential mechanisms of MS and T1D on the development of HL.

Disclosures No relevant conflicts of interest to declare.

Exposure MS	Methods	.SNPs	OR (95%CI)	p val
	Inverse variance weighted	51	1.281(1.087-1.510)	0.00
	MR Egger	51	1.866(1.204-2.891)	0.007
	Weighted median	51	1.267(1.001-1.605)	0.04
	Simple mode	51	1.216(0.759-1.947)	0.42
	Weighted mode	51 🕨 📕	1.339(0.908-1.974)	0.146
SLE	Inverse variance weighted	45 ⊨∎⊣	1.041(0.944-1.149)	0.423
	MR Egger	45	1.062(0.840-1.344)	
	Weighted median	45	1.064(0.928-1.219)	
	Simple mode	45	1.015(0.759-1.357)	
	Weighted mode	45	1.042(0.838-1.296)	
IBD	weighted mode	45	1.042(0.030-1.290)	0.71
	Inverse variance weighted	113 🛏	1.034(0.910-1.176)	0.60
	MR Egger	113	1.033(0.829-1.288)	
	Weighted median	113	1.140(0.918-1.414)	
	Simple mode	113	0.899(0.548-1.475)	
	Weighted mode	113	1.114(0.904-1.373)	
UC				
	Inverse variance weighted	34 🛏	1.042(0.874-1.242)	
	MR Egger	34	1.072(0.636-1.807)	
	Weighted median	34	1.112(0.870-1.422)	0.397
	Simple mode	34	1.005(0.538-1.878)	0.987
	Weighted mode	34	1.333(0.747-2.379)	0.338
CD	Inverse variance weighted	83	0.952(0.840-1.078)	0.436
	MR Egger	83		
			0.730(0.528-1.009)	
	Weighted median	83	0.894(0.741-1.078)	
	Simple mode	83	0.868(0.600-1.255)	
PsO	Weighted mode	83	0.860(0.664-1.114)	0.257
-30	Inverse variance weighted	60	0.989(0.954-1.026)	0.565
	MR Egger	60	0.992(0.947-1.039)	
	Weighted median	60	0.989(0.940-1.041)	
	Simple mode	60	1.000(0.922-1.085)	
	Weighted mode	60	0.995(0.952-1.041)	
T1D				
	Inverse variance weighted	44 📕	0.853(0.776-0.937)	0.001
	MR Egger	44 🛏 🛏	0.916(0.782-1.073)	0.284
	Weighted median	44 +	0.852(0.749-0.969)	
	Simple mode	44	0.859(0.681-1.083)	
	Weighted mode	44 🛏	0.843(0.726-0.980)	
CeD				
	Inverse variance weighted	10	1.198(0.911-1.574)	0.195
	MR Egger	10 -	0.984(0.360-2.691)	0.975
	Weighted median	10	1.145(0.798-1.643)	0.461
	Simple mode	10	1.055(0.610-1.826)	0.852
	Weighted mode	10	1.121(0.643-1.956)	0.696
PSC				
	Inverse variance weighted	20	1.061(0.937-1.202)	
	MR Egger	20	0.980(0.806-1.192)	0.846
	Weighted median	20 🛏	0.961(0.827-1.117)	
	Simple mode	20	1.551(1.009-2.385)	
	Weighted mode	20	0.952(0.808-1.121)	0.560
PBC	Invorce veriance weighted	20	4 040/0 040 4 400	0.40
	Inverse variance weighted	20	1.046(0.918-1.192)	
	MR Egger		0.868(0.629-1.198)	
	Weighted median	20	1.030(0.855-1.241)	
	Simple mode	20	1.208(0.863-1.689)	
	Weighted mode	20	1.126(0.847-1.497)	0.424



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