Methods:

The glm package (v 3.6.2) was applied to run a binary logistic regression model to evaluate the influence of complications in long COVID syndrome and its association in patients with lupus erythematosus and arthritis patients by calculating relative risk (RR). The model was adjusted to age and gender. Results are presented as relative risk (RR) with corresponding 95% Confidence intervals (CI) with statistical significance levels set to 0.05, p-value, and z score. The plots were generated by the ggplot2 package (v 3.3.5). Finally, the statistical analysis was performed by the R software version 4.2.1.

Results:

The relative risk of presenting post-COVID complications in patients with lupus erythematosus, rheumatoid arthritis, and miscellaneous was estimated. The obtained results are shown next.

The relative risk of presenting manifestations in the long COVID syndrome is shown comparing patients with lupus erythematosus and rheumatoid arthritis (Figure 1). The results obtained describe that there is a lower risk of presenting fatigue (RR 0.55, 95% CI 0.44-0.69) in patients with SLE. No significant differences were observed in the rest of the symptoms.

Discussion:

As reported in a previously published meta-analysis of the prevalence and characteristics of post-covid symptoms(33) the prevalence of these symptoms after the infectious event does not differ between patients with or without rheumatological diseases when compared with our results (34).

However, we found a lower relative risk of fatigue in patients with SLE compared to other rheumatological diseases.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Symptom | RR | 95% CI | P value | Z score | SLE vs RA |
| Fatigue | 0.55 | (0.44-0.69) | 0.02 | 0.07 | Decrease risk |
| Headache | 0.58 | (0.43-0.78) | 0.05 | 0.69 | \*No significance |
| Arthralgias | 0.7 | (0.5-0.99) | 0.18 | 0.43 | \*No significance |
| Myalgias | 0.82 | (0.62-1.07 | 0.291 | 0.18 | \*No significance |
| Palpitations | 1.3 | (1.15-1.64) | 0.166 | 0.26 | \*No significance |
| Skin lesions | 0.66 | (0.42-1.05) | 0.171 | 0.29 | \*No significance |
| Depression | 0.73 | (0.39-1.39) | 0.274 | 0.84 | \*No significance |
| Smell disorders | 0.66 | (0.42-1.05) | 0.171 | 0.13 | \*No significance |
| Taste disorders | 1.1 | (0.85-1.44) | 0.393 | 0.12 | \*No significance |
| Dyspnoea | 0.78 | (0.51-1.19) | 0.286 | 0.7 | \*No significance |
| Memory and/or concentration alterations | 0.61 | (0.15-2.38) | 0.244 | 0.68 | \*No significance |
| Hair loss | 1.2 | (0.98-1.45) | 0.291 | 0.92 | \*No significance |

Table 4. Comparison of the symptoms between SLE and RA.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Symptom | RR | 95% CI | P value | Z score | SLE vs MISC |
| Fatigue | 0.57 | (0.44-0.73) | 0.046 | 0.21 | Decrease risk |
| Headache | 0.76 | (0.56-1.04) | 0.241 | 0.98 | \*No significance |
| Arthralgias | 0.47 | (0.31-0.7) | 0.028 | 0.06 | Decrease risk |
| Myalgias | 0.76 | (0.56-1.04) | 0.241 | 0.3 | \*No significance |
| Palpitations | 0.8 | (1.61-1.03) | 0.263 | 0.96 | \*No significance |
| Skin lesions | 0.66 | (0.4-1.08) | 0.185 | 0.86 | \*No significance |
| Depression | 0.48 | (0.22-1.06) | 0.087 | 0.35 | \*No significance |
| Smell disorders | 1.08 | (0.73-1.59) | 0.43 | 0.77 | \*No significance |
| Taste disorders | 1.08 | (0.8-1.47) | 0.417 | 0.37 | \*No significance |
| Dyspnoea | 0.9 | (0.58-1.39) | 0.413 | 0.47 | \*No significance |
| Memory and/or concentration alterations | 0.51 | (0.11-2.34 | 0.181 | 0.41 | \*No significance |
| Hair loss | 1.4 | (1.14-1.71) | 0.169 | 0.25 | \*No significance |

Table 5. Comparison of the prevalence of symptoms between SLE and Miscellaneous.

Gráfico

Descripción generada automáticamente

Figure 1. Comparison of risk of developing sequels in the long COVID syndrome in lupus erythematosus patients and rheumatoid arthritis patients. IC 95%

Gráfico

Descripción generada automáticamente

Figure 1. Comparison of risk of developing sequels in the long COVID syndrome in lupus erythematosus patients and miscellaneous patients. IC 95%