

## **Relationship between orbital and systemic Manifestations in patients with granulomatosis with polyangiitis**

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**Objective:** To study relationship between systemic and orbital manifestations in patients with granulomatosis with polyangiitis.

**Materials and methods:** retrospective series of 218 patients with GPA were included into the study. The age of patients ranged from 16 to 86 with the mean age 51 years old. Women were affected twice as often as men (143/75). Data was analyzed with PASW statistic program. We used 2x2 tables and relative risk (RR) afunction to describe correlations.

**Results:** Upper airways were affected in 94% of cases (205/218), lungs in 62,4% (136/218) and kidneys in 48,6% (106/218). Adnexae (excluding conjunctiva) were affected in 34,4% cases (75/218) and presented as orbital masses either primary or secondary to nasal disorders (22,9%, 50/218), dacryoadenitis (7,3%, 16/218), orbital wall destruction (6,4%, 14/218), dacryocystitis (6,0%, 13/218). In this group upper airways were affected in 94,6% (71/75), lungs in 48,0% (36/75) and kidneys in 38,7% (29/75). We found strong negative correlation between orbital involvement and ear (RR 0.542 95% CL 0.359-0.818), lung (RR 0.184; 95% CI 0.368-0.757) and arthritis (RR 0,517; 95% CI 0.321-0.833). This correlation remains fair (valid) between orbital masses and ear (RR 0,47; 95% CI 0,24-0,0044,  $p \leq 0,0044$ ), lung (RR 0,4; 95% CI 0,21-0,77,  $p \leq 0,0002$ ), appear with kidneys (0,54; CI 0,28-1,05,  $p \leq 0,0136$ ). It remains as well with arthritis but exceeds confidence intervals.

**Conclusions:** Statistical univariate analysis of adnexae manifestations shows that orbital involvement is more likely to develop in patients without ear, lung and joint involvement. Orbital masses are less common in patients with ear, lung and kidney disease.