Association between allergic rhinitis and attention deficit hyperactivity disorder symptoms in pediatric patients

the impact of seasonal variability

Population & Design

Prospective case–control design

6–12 years

Monosensitized, grass pollen sensitization, AR cohort (n=146)

Grass Pollen Season (GPS) vs Non-grass Pollen Season (NGPS)

vs

Healthy controls (n=150)

Evaluation Tools and Outcomes;

- Nasal and ocular symptoms
- VAS scores (nasal/ocular)
- Conners Parent Rating Scale
- School performance and absenteeism

Key Changes in Grass Pollen Season

Attention deficit ↑

Higher in GPS vs NGPS & controls

Hyperactivity ↑

Higher in GPS vs NGPS & controls

Report-card grades ↓

Lower in GPS vs NGPS & controls

School absenteeism ↑

Higher in GPS vs NGPS & controls

Independent Risk Factors

Attention Deficit

- Male sex
- Nasal VAS score
- Snoring

Hyperactivity

- Ocular VAS score

Conclusion

During Grass Pollen Season;

Seasonal exposure

↳ Greater allergic burden

→ ncrease ADHD symptoms

↳ ↑Attention deficit/Hyperactivity ↓ Academic performance

Clinical implication:

*Early diagnosis
*Seasonal follow-up,
*and individualized AR treatment

→ may mitigate neurobehavioral impact and improve cognition & school outcomes

Sogut A, Selmanoglu A, Genis C, et al. Rhinology 2026. https://doi.org/10.4193/Rhin25.185

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