

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



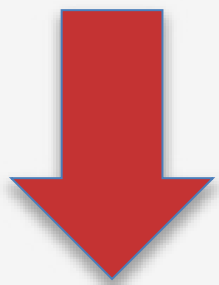
Higher in GPS vs NGPS & controls



Hyperactivity



Higher in GPS vs NGPS & controls



Report-card grades



Lower in GPS vs NGPS & controls



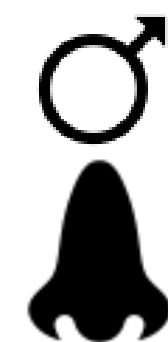
School absenteeism



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

→ increase 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