

Randomized controlled trial of desloratadine for persistent allergic rhinitis: Correlations between symptom improvement and quality of life

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ABSTRACT

Allergic rhinitis (AR) symptoms can impart emotional, quality of life (QOL), and work productivity burdens, especially in persistent AR (PER). Desloratadine, an H₁-receptor antagonist, has been shown to be effective against nasal and nonnasal AR symptoms and to improve QOL. Exploratory analyses were conducted to evaluate whether desloratadine-mediated symptom improvement correlated with improvements in QOL and productivity. The Aeriis Control: Clinical and Evaluative Profile of Treatment 2 (NCT00405964) study was a 12-week, multinational, randomized, placebo-controlled prospective study of once-daily desloratadine at 5 mg in subjects with moderate-to-severe PER. Assessments included twice-daily symptom severity ratings (0 = none to 3 = severe; total and individual symptoms), sleep interference (morning [A.M.]), interference with activities of daily living (ADL; evening [P.M.]), the Rhinoconjunctivitis Quality of Life Questionnaire–Standardized version (baseline and days 29 and 85), and the Work Productivity and Activity Impairment–Allergy-Specific questionnaire (baseline and weekly). Pearson product–moment correlation statistics (*r*) were determined to assess correlations between symptom score improvements and QOL factors. All desloratadine-treated patients (*n* = 360) were included in this exploratory analysis. In the desloratadine-treated patients, all correlations tested were positive (all *p* < 0.0001). The highest coefficients were seen for the correlations between A.M./P.M. PRIOR total five-symptom score and interference with ADL (*r* = 0.72) and between A.M. NOW congestion and ADL interference (*r* = 0.69). Continuous daily treatment of moderate-to-severe PER with desloratadine at 5 mg/day significantly improved symptoms, which correlated positively, albeit moderately, with QOL benefits and reversal of functional impairments caused by PER.

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Allergic rhinitis (AR) is conservatively estimated to affect 10–25% of the world's population, and the prevalence is increasing.^{1,2} AR is associated with substantial morbidity and quality-of-life (QOL) impairment. The classic symptoms of AR—rhinorrhea; nasal congestion; sneezing; nasal pruritus; and ocular

pruritus, tearing, and redness—can seriously impair emotional well-being, performance of daily activities, sleep quality, cognition, and productivity at work and school.^{3–5}

AR also generates individual and societal economic burdens related to direct treatment costs and indirect costs of lost personal and professional productivity. Treatment with nonsedating H₁-receptor antagonists has been found to be more cost-effective (direct and indirect costs) than placebo in subjects with persistent symptoms of AR, with lost productivity being the greatest cost contributor in the placebo group.^{6,7}

AR has traditionally been defined as either seasonal or perennial (seasonal AR [SAR] and perennial AR [PAR]) according to allergen exposure patterns (e.g., pollen/grasses or pet dander/dust mites, respectively). The Allergic Rhinitis and Its Impact on Asthma (ARIA) guidelines,^{2,8} however, recommended intermittent AR (IAR) and PAR as more appropriate classifications. This newer classification, which can not be used interchangeably with SAR/PAR, has been validated in routine clinical practice and places greater emphasis on the nature and frequency of symptoms than on seasonality of occurrence.^{9,10} Although IAR

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appears to be more prevalent, persistent AR (PER) is associated with greater symptom severity.⁹

Desloratadine is a selective H₁-receptor antagonist that has been proven safe and effective in patients classified according to the traditional nomenclature of SAR and PAR¹¹ and in patients diagnosed using the newer definitions of IAR and PER.^{6,12,13} Desloratadine is generally well tolerated with a low incidence of adverse events.^{6,11–14} The Aeriis Control: Clinical and Evaluative Profile of Treatment (ACCEPT) 2 (NCT00405964) study was a large trial comparing desloratadine and placebo in subjects with ARIA-defined PER.¹²

The aim of the ACCEPT2 study was to compare symptoms of AR with QOL and work productivity in patients with PER treated with oral desloratadine.¹² This is a report on additional analyses that explored the strength of the correlations between subjective measures of symptoms and objective tools that quantified QOL and work productivity impairment.

METHODS

The data used for these exploratory analyses were generated during ACCEPT2, a prospective, randomized, multicenter, parallel-group study of the safety and efficacy of desloratadine at 5 mg or placebo once daily for 85 days (12 weeks) in subjects with PER.¹² The study was conducted at 61 sites in 15 countries (Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, Italy, the Netherlands, Portugal, Russia, Spain, Sweden, and Turkey) between September 2006 and April 2008. The study conformed to Good Clinical Practices, and the protocol was approved by the local ethics committees (listed in the Acknowledgment section of this article).

Written informed consent was obtained from all participants, including legal guardians, where applicable.

Study Population

Eligible subjects were ≥ 12 years of age with a minimum 2-year history of symptoms consistent with the ARIA classification of PER (AR symptoms present for >4 days/wk and for >4 consecutive wk/yr). Symptoms were required to be moderate to severe at study inclusion, with a total five-symptom score (T5SS; nasal congestion, sneezing, rhinorrhea, nasal pruritus, and ocular pruritus) of at least 8. No other AR medications were permitted. Maintenance regimens of immunotherapy could be continued. Subjects were randomized to treatment with desloratadine at 5 mg or identical placebo tablets for 12 weeks.

Subjects assessed the severity of AR symptoms twice daily on a scale from 0 (none) to 3 (severe) at the time of assessment (NOW) and as a reflective assessment over the past 12 hours (PRIOR). The T5SS was the sum

of the individual symptom scores. Interference with sleep and activities of daily living (ADL) were rated once daily on a four-point scale (0 = none; 3 = severe). Subjects also completed the Rhinoconjunctivitis Quality of Life Questionnaire–Standardized version (RQLQ-S)¹⁵ and the Work Productivity and Activity Impairment–Allergy-Specific (WPAI-AS)¹⁶ questionnaire.

Efficacy Assessments

The primary efficacy end point of the ACCEPT2 study was mean change from baseline (MCB) in 12-hour morning/evening (A.M./P.M.) PRIOR T5SS, averaged over days 1–29. The A.M./P.M. was the mean of the A.M. and P.M. total scores. Secondary end points included MCB in interference with ADL, total RQLQ-S, and WPAI-AS activity domain scores.

Exploratory Analyses. Pearson product-moment correlation statistics (r) were determined to assess the following correlations: MCB (days 1–29) in A.M. NOW congestion and interference with sleep (days 2–29); MCB in A.M. PRIOR congestion (days 1–29) and interference with sleep (days 2–29); MCB in P.M. PRIOR congestion (days 1–29) and interference with ADLs (days 1–29); MCB in A.M./P.M. PRIOR, A.M. NOW, and A.M. PRIOR congestion (days 1–29) and RQLQ-S total score and domain scores for sleep and activities (day 29). Pearson correlation coefficients were also calculated for the MCB in A.M./P.M. PRIOR T5SS (days 1–29) and the following: MCB in interference with ADLs averaged over days 1–29, MCB in total RQLQ-S score at day 29, and MCB in WPAI-AS activity impairment score at day 29.

RESULTS

A total of 716 subjects were randomized to desloratadine ($n = 360$) or placebo ($n = 356$). Baseline characteristics were similar between the two treatment groups. Only desloratadine-treated patients were included in the exploratory analyses.

Improvements in PER Symptoms, QOL Parameters, and Work Productivity

Results from the ACCEPT2 trial have been previously published.¹² In summary, desloratadine-treated subjects experienced significant improvement from baseline compared with placebo in A.M./P.M. PRIOR T5SS over days 1–29 ($p \leq 0.001$) and on day 1 and days 1–15 ($p \leq 0.01$ for both) and in A.M. NOW, A.M. PRIOR, P.M. PRIOR, and A.M./P.M. PRIOR congestion scores ($p < 0.05$; Fig. 1 *a*). Scores for ADL and sleep interference were significantly ($p < 0.05$) improved from baseline in the desloratadine group compared with placebo after 29 days of treatment (Fig. 1 *b*). Scores for total RQLQ-S and individual domains of daily ac-

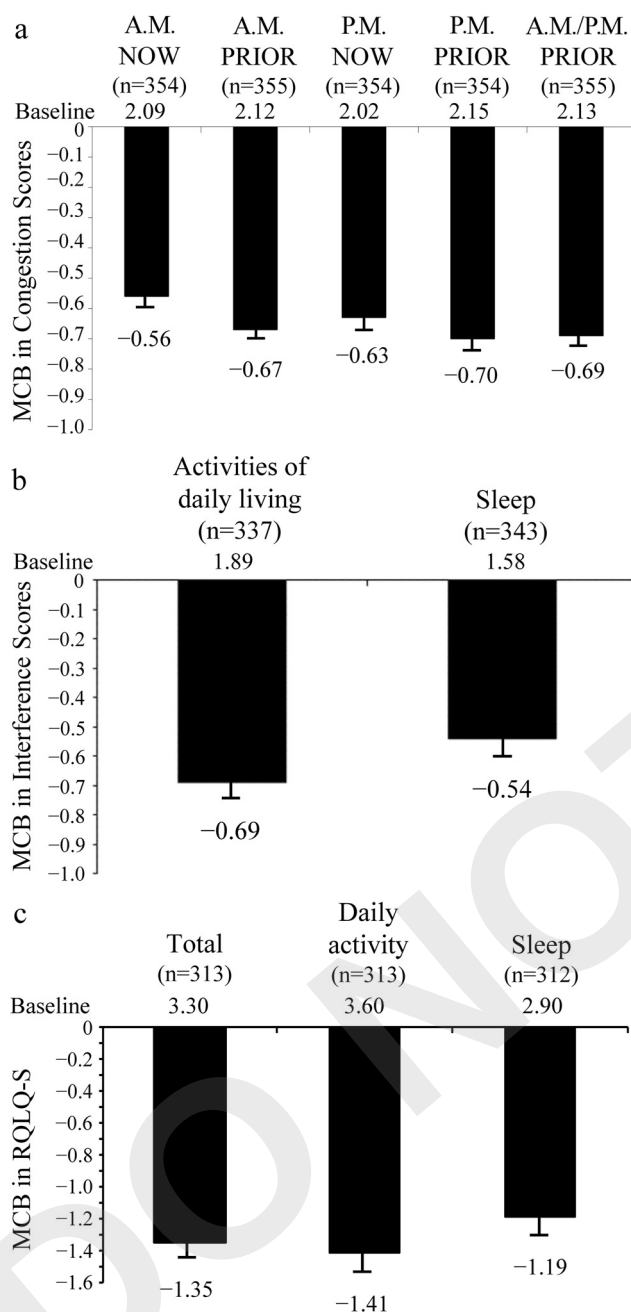


Figure 1. MCB in (a) A.M. NOW, A.M. PRIOR, P.M. PRIOR, and A.M./P.M. PRIOR nasal congestion; (b) interference with activities of daily living and sleep; and (c) RQLQ-S total and activity and sleep domain scores after 29 days of treatment with desloratadine ($p < 0.05$ for all variables versus placebo). MCB, mean change from baseline; NOW, at the time of assessment; PRIOR, as a reflective assessment over the past 12 hours; RQLQ-S, Rhinoconjunctivitis Quality of Life Questionnaire–Standardized.

tivities and sleep were also significantly ($p < 0.05$) improved from baseline in the desloratadine-treated group compared with placebo (Fig. 1 c). The desloratadine-treated group experienced an MCB (improvement) in WPAI-AS activity impairment score ($p =$

0.003). Table 1 and Table E1 (online supplement) show long-term results. Treatment with desloratadine was well tolerated; the rate of adverse events was low and similar between treatment and placebo groups.

Correlations of Congestion with Sleep, ADL, and RQLQ-S

Significant ($p < 0.0001$) positive correlations were observed between the MCB in congestion scores (A.M. NOW, A.M. PRIOR, P.M. NOW, P.M. PRIOR, and A.M./P.M. PRIOR) and interference with sleep and ADL impairment over days 2–29, 30–57, and 58–85 (Table 2 and Table E2 in the online supplement). Positive correlations were also seen between the MCB in congestion and improvements in RQLQ-S total score, RQLQ-S sleep domain, and RQLQ-S activities domain for days 29, 57, and 85. Figures 2 and 3 show the mean scores at baseline and at the end of the study (day 85) for congestion and RQLQ-S (total and sleep and activity domains).

Correlations of Total Symptoms with QOL and Work Productivity

Positive and significant ($p < 0.001$) correlations were observed between MCB in A.M./P.M. PRIOR T5SS and interference with sleep and ADL, total RQLQ-S, and activities and sleep domains, and WPAI-AS, with all correlations being ≥ 0.46 (Table 3). Figure 4 shows the mean scores for A.M./P.M. T5SS, interference with sleep and ADL, total RQLQ-S and activities and sleep domains, and WPAI-AS activity impairment at baseline and day 85.

DISCUSSION

The ACCEPT2 study findings confirmed that desloratadine treatment resulted in significant improvements in symptoms associated with PER and was associated with improved QOL and enhanced functionality. Significant ($p \leq 0.05$) improvements from baseline in the desloratadine-treated group were observed in T5SS, congestion scores, ADL and sleep interference scores, total RQLQ-S and individual domains of daily activities and sleep scores, and in WPAI-AS activity impairment. Effects seen on QOL were broadly consistent with previous research showing nonsedating H_1 -receptor antagonists including desloratadine, cetirizine, and bilastine to significantly improve RQLQ scores.^{17,18} QOL is an important consideration for sustained treatment of a chronic condition such as rhinitis,¹⁹ particularly in its persistent form (PER),²⁰ which has been shown to have a greater impact on QOL compared with IAR because of greater symptom length and severity. In one survey, 70.7% of patients with PER reported insufficient sleep during the past

Table 1 LS mean change from baseline ($\pm$ SEM) and mean percentage change for desloratadine and placebo for congestion and total symptom scores, sleep and activity interference, total RQLQ, and WPAI-AS activities

	Time Interval/Visit (days)	LS MCB ($\pm$ SEM) Mean Percentage Change		
		DL	PBO	<i>p</i> Value (95% CI)
A.M. NOW congestion	2–29	–0.56 (0.05) –24.1% (<i>n</i> = 354)	–0.45 (0.05) –16.6% (<i>n</i> = 350)	0.033 (–0.21, 0.01)
	30–57	–0.83 (0.06) –38.1% (<i>n</i> = 330)	–0.76 (0.06) –32.8% (<i>n</i> = 300)	0.231 (–0.20, 0.05)
	58–85	–0.98 (0.06) –43.9% (<i>n</i> = 311)	–0.94 (0.07) –40.2% (<i>n</i> = 270)	0.556 (–0.18, 0.10)
P.M. NOW congestion	1–29	–0.63 (0.05) –29.5% (<i>n</i> = 354)	–0.43 (0.05) –20.3% (<i>n</i> = 350)	< 0.001 (–0.31, –0.10)
	30–57	–0.88 (0.06) –41.9% (<i>n</i> = 329)	–0.73 (0.06) –35.8% (<i>n</i> = 300)	0.026 (–0.27, –0.02)
	58–85	–1.06 (0.07) –46.1% (<i>n</i> = 309)	–0.93 (0.07) –42.1% (<i>n</i> = 268)	0.08 (–0.27, 0.02)
A.M./P.M. PRIOR congestion	1–29	–0.69 (0.05) –31.3% (<i>n</i> = 355)	–0.53 (0.05) –24.2% (<i>n</i> = 351)	0.002 (–0.26, –0.06)
	30–57	–0.98 (0.06) –43.9% (<i>n</i> = 332)	–0.85 (0.06) –38.8% (<i>n</i> = 300)	0.033 (–0.25, –0.01)
	58–85	–1.11 (0.06) –47.4% (<i>n</i> = 313)	–1.00 (0.06) –44.9% (<i>n</i> = 268)	0.105 (–0.24, 0.02)
A.M./P.M. PRIOR T5SS	1–29	–3.76 (0.22) –37.5% (<i>n</i> = 355)	–2.87 (0.21) –28.8% (<i>n</i> = 351)	< 0.001 (–1.33, –0.46)
	30–57	–4.96 (0.24) –49.3% (<i>n</i> = 332)	–4.28 (0.25) –43.6% (<i>n</i> = 299)	0.009 (–1.18, –0.17)
	58–85	–5.63 (0.25) –53.8% (<i>n</i> = 313)	–5.11 (0.27) –49.8% (<i>n</i> = 269)	0.065 (–1.08, 0.03)
Interference with sleep	2–29	–0.54 (0.06) –25.1% (<i>n</i> = 343)	–0.42 (0.05) –13.3% (<i>n</i> = 343)	0.022 (–0.24, –0.02)
	30–57	–0.71 (0.06) –36.8% (<i>n</i> = 321)	–0.61 (0.06) –24.8% (<i>n</i> = 292)	0.129 (–0.23, 0.03)
	58–85	–0.79 (0.07) –41.3% (<i>n</i> = 302)	–0.74 (0.07) –32.6% (<i>n</i> = 264)	0.506 (–0.19, 0.09)
Interference with ADL	1–29	–0.69 (0.05) –29.3% (<i>n</i> = 337)	–0.46 (0.05) –17.1% (<i>n</i> = 338)	< 0.001 (–0.33, –0.01)

Table 1 Continued

	Time Interval/Visit (days)	LS MCB (SEM) Mean Percentage Change		
		DL	PBO	<i>p</i> Value (95% CI)
RQLQ-S total	30–57	–0.88 (0.06) –40.2% (<i>n</i> = 314)	–0.70 (0.06) –30.7% (<i>n</i> = 288)	0.009 (–0.31, –0.05)
	58–85	–1.01 (0.07) –47.6% (<i>n</i> = 295)	–0.89 (0.07) –35.7% (<i>n</i> = 257)	0.123 (–0.27, 0.03)
	29	–1.35 (0.10) –36.0% (<i>n</i> = 313)	–0.95 (0.10) –27.0% (<i>n</i> = 289)	< 0.001 (–0.62, –0.20)
	85	–1.66 (0.11) –29.3% (<i>n</i> = 278)	–1.39 (0.12) –41.0% (<i>n</i> = 240)	0.023 (–0.51, –0.04)
	29	–20.2 (2.1) –28.1% (<i>n</i> = 306)	–11.8 (2.1) –9.7% (<i>n</i> = 283)	< 0.001 (–12.68, –4.06)
	57	–24.2 (2.2) –34.0% (<i>n</i> = 294)	–17.1 (2.3) –21.0% (<i>n</i> = 252)	0.0004 (–11.86, –2.24)
WPAI-AS activities	85	–24.1 (2.4) –38.8% (<i>n</i> = 262)	–20.5 (2.6) –29.5% (<i>n</i> = 227)	0.176 (–8.72, 1.60)

ADL = activities of daily living; CI = confidence interval; DL = desloratadine; LS = least squares; NOW = at the time of assessment; PBO = placebo; PRIOR = as a reflective assessment over the past 12 hr; RQLQ-S = Rhinoconjunctivitis Quality of Life Questionnaire–Standardized; SEM = standard error of the mean; T5SS = total five-symptom score; WPAI-AS = Work Productivity and Activity Impairment—Allergy Specific; MCB = mean change from baseline; A.M. = morning; P.M. = evening.

month because of their disease, compared with 60.3% of patients with IAR.²¹

The exploratory analyses described here, based on the ACCEPT2 cohort treated with desloratadine, show a positive correlation between the reduction in symptom burden and improvement in QOL. The source data were gathered during a large, well-designed clinical trial under double-blind conditions, and validated instruments (RQLQ-S and WPAI-AS) were used to assess study outcomes. Subjects were required to be moderately to severely symptomatic at study entry.

All correlation tests were significant and positive. For this analysis, a moderate linear relationship was defined as a correlation coefficient between 0.3 and 0.7; a strong linear relationship was defined as an $r > 0.7$. The highest coefficient values were seen for the correlations of A.M./P.M. PRIOR T5SS with interference with ADLs ($r = 0.72$) and A.M. NOW congestion with activities interference ($r = 0.69$), consistent with previous observations of a moderate association between AR symptom scores and QOL.¹⁷

Congestion is the most bothersome symptom of AR. Stull *et al.* showed in a multiple regression analysis

study that nasal congestion was the AR symptom most correlated with sleep and QOL/productivity outcomes.²² Patients with the most severe congestion symptoms reported the greatest amount of missed work time and activity impairment.

Oral antihistamines are recommended among first-line treatment options for AR.² Here, it must be emphasized that this recommendation is limited to modern nonsedating antihistamines (strong recommendation, according to the latest revision of ARIA²) with the high risk of first-generation antihistamines becoming increasingly apparent. Oral antihistamines are often thought to be less effective against congestion than other agents, such as oral/topical decongestants or intranasal corticosteroids. The findings reported here, however, indicate substantial and significant improvement in congestion severity scores in subjects with moderate-to-severe PER treated with oral, once-daily desloratadine, consistent with review of other literature indicating significant beneficial effects of nonsedating H₁-receptor antagonists on congestion in AR.²³ Furthermore, reduction in congestion severity correlated with improvements in sleep quality, daily

Table 2 Pearson correlation coefficients for desloratadine-treated patients: congestion vs sleep and activity interference, total RQLQ and sleep and activity domains, and WPAI-AS activity measures ($p < 0.001$ for all)

Congestion Measures	QOL and Work Productivity Measures	Time Interval/Visit (n)	r^*
A.M. NOW congestion	Sleep interference	Days 2–29 (343)	0.59
		Days 30–57 (321)	0.61
		Days 58–85 (302)	0.60
	ADL interference	Days 1–29 (337)	0.55
		Days 30–57 (314)	0.64
		Days 58–85 (295)	0.69
	RQLQ-S total	Day 29 (313)	0.47
		Day 85 (278)	0.55
	RQLQ-S activities	Day 29 (313)	0.43
		Day 85 (278)	0.54
	RQLQ-S sleep	Day 29 (312)	0.42
		Day 85 (276)	0.46
	WPAI-AS activities	Day 29 (306)	0.39
		Day 57 (294)	0.48
		Day 85 (262)	0.51
P.M. NOW congestion	Sleep interference	Days 2–29 (343)	0.57
		Days 30–57 (321)	0.60
		Days 58–85 (302)	0.64
	ADL interference	Days 1–29 (337)	0.59
		Days 30–57 (314)	0.64
		Days 58–85 (295)	0.64
	RQLQ-S total	Day 29 (313)	0.47
		Day 85 (278)	0.56
	RQLQ-S activities	Day 29 (313)	0.44
		Day 85 (278)	0.54
	RQLQ-S sleep	Day 29 (312)	0.42
		Day 85 (276)	0.45
	WPAI-AS activities	Day 29 (306)	0.42
		Day 57 (294)	0.51
		Day 85 (262)	0.54
A.M./P.M. PRIOR congestion	Sleep interference	Days 2–29 (343)	0.57
		Days 30–57 (321)	0.61
		Days 58–85 (302)	0.62
	ADL interference	Days 1–29 (337)	0.56
		Days 30–57 (314)	0.64
		Days 58–85 (295)	0.63
	RQLQ-S total	Day 29 (313)	0.45
		Day 85 (278)	0.56
	RQLQ-S activities	Day 29 (313)	0.43
		Day 85 (278)	0.56
	RQLQ-S sleep	Day 29 (312)	0.41
		Day 85 (276)	0.48
	WPAI-AS activities	Day 29 (306)	0.40
		Day 57 (294)	0.50
		Day 85 (262)	0.52

* $p < 0.001$ for all correlations.

ADL = activities of daily living; NOW = at the time of assessment; PRIOR = as a reflective assessment over the past 12 hr; QOL = quality of life; RQLQ-S = Rhinoconjunctivitis Quality of Life Questionnaire–Standardized; WPAI-AS = Work Productivity and Activity Impairment—Allergy Specific; A.M. = morning; P.M. = evening.

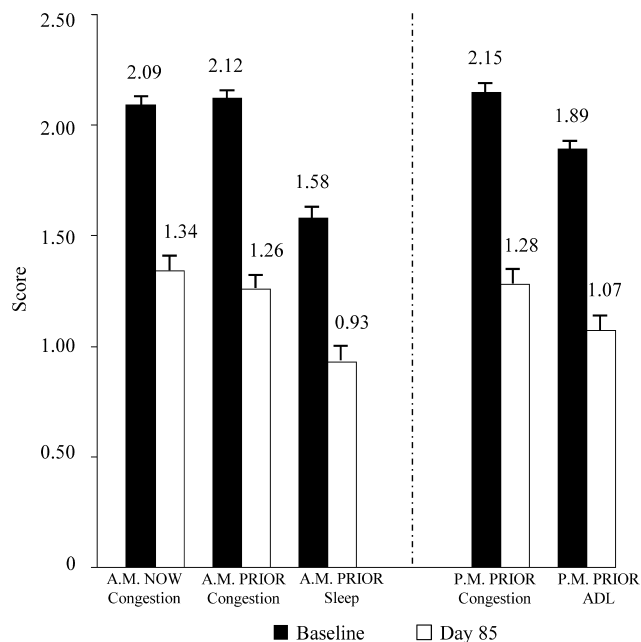


Figure 2. Mean A.M. NOW, A.M. PRIOR, and P.M. PRIOR congestion; A.M. PRIOR interference with sleep; and P.M. PRIOR interference with daily activities scores at baseline and day 85. Significant ($p < 0.0001$) positive correlations were observed between improvement in A.M. PRIOR and A.M. NOW congestion scores and interference with sleep and in P.M. PRIOR congestion scores and interference with daily activities from baseline to day 29. ADL, activities of daily living; NOW, at the time of assessment; PRIOR, as a reflective assessment over the past 12 hours.

activities, and overall QOL, confirming a clinically relevant benefit.

The far-reaching effects of AR symptoms on patients' daily function and work productivity are becoming better understood and continue to be an important part of treatment evaluation. The current study used the validated WPAI-AS instrument to measure the impact of treatment on work productivity. WPAI-AS scores indicated a mean decrease (improvement) in score of almost 20 points from baseline among patients using desloratadine, significantly greater than that observed in the placebo group. These findings are in agreement with previously published data reporting the long-term cost-effectiveness of second-generation antihistamines in AR^{6,7}; further research is needed to determine if this is a true reduction in cost.²⁴ Despite greater initial expenses incurred with physician visits and medication, these costs are more than recouped by eliminating or reducing the amount of lost work time. The current analyses suggest that the improvements noted in daily activities and work-related productivity are related to improvements in allergy symptoms overall and congestion in particular.

Physicians often underappreciate the severity of AR symptoms, compared with patient assessments, in-

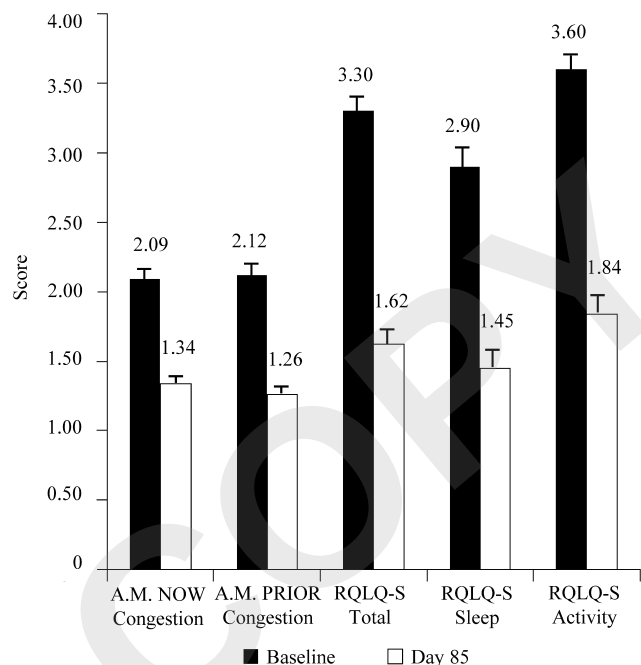


Figure 3. Mean A.M. NOW and A.M. PRIOR congestion and RQLQ-S total, sleep domain, and activity domain scores at baseline and day 85. Positive correlations were observed between improvement in congestion scores and in total RQLQ-S, RQLQ-S sleep domain, and RQLQ-S activity domain from baseline to day 29. NOW, at the time of assessment; PRIOR, as a reflective assessment over the past 12 hours; RQLQ-S, Rhinoconjunctivitis Quality of Life Questionnaire–Standardized.

creasing the likelihood of undertreatment.²⁵ If the goal of AR therapy is to provide symptom relief and improve patient QOL and daily functioning, it is imperative to determine the patient's level of discomfort and impairment, which can be difficult to objectively measure during an office visit. The data presented here confirm that effective treatment of AR symptoms, unhindered by bothersome side effects, can have a measurable impact on overall QOL and is likely cost-effective.

In summary, desloratadine significantly improved PER symptoms, which correlated moderately with QOL gains and reversal of functional impairments caused by PER.

These findings provide further evidence that the benefits of effectively treating PER extend beyond clinical symptom improvement, achieving broader increases in sleep quality, daily functioning, and work productivity.

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Table 3 Pearson correlation coefficients for desloratadine-treated patients: total symptoms vs sleep and activity interference, total RQLQ and sleep and activity domains, and WPAI-AS activity measures ($p < 0.001$ for all)

Total Symptom Measure	QOL and Work Productivity Measures	Time Interval/Visit (n)	r^*
A.M./P.M. PRIOR T5SS	Sleep interference	Days 2–29 (343)	0.64
		Days 30–57 (321)	0.64
		Days 58–85 (302)	0.66
	ADL interference	Days 2–29 (337)	0.67
		Days 30–57 (314)	0.70
		Days 58–85 (295)	0.72
	RQLQ-S total	Day 29 (313)	0.53
		Day 85 (278)	0.64
	RQLQ-S activities	Day 29 (313)	0.52
		Day 85 (278)	0.66
	RQLQ-S sleep	Day 29 (312)	0.48
		Day 85 (276)	0.52
	WPAI-AS activities	Day 29 (306)	0.46
		Day 57 (294)	0.57
		Day 85 (262)	0.59

* $p < 0.001$ for all correlations.

ADL = activities of daily living; PRIOR = as a reflective assessment over the past 12 hours; QOL = quality of life; RQLQ-S = Rhinoconjunctivitis Quality of Life Questionnaire–Standardized; T5SS = total 5-symptom score; WPAI-AS = Work Productivity and Activity Impairment–Allergy Specific; A.M. = morning; P.M. = evening.

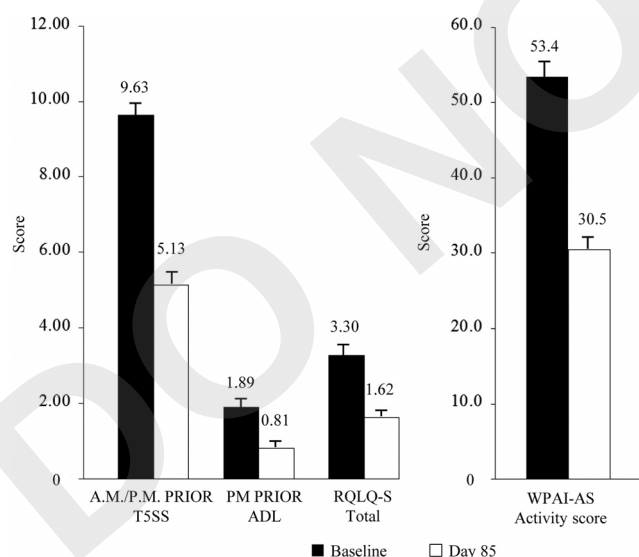


Figure 4. Mean A.M./P.M. PRIOR T5SS, P.M. PRIOR interference with daily activities, RQLQ-S total score, and WPAI-AS activity score at baseline and day 85. Positive correlations were observed between improvement in T5SS scores and in interference with daily activities, total RQLQ-S, and WPAI-AS activity scores from baseline to day 29. NOW, at the time of assessment; PRIOR, as a reflective assessment over the past 12 hours; RQLQ-S, Rhinoconjunctivitis Quality of Life Questionnaire–Standardized; T5SS, total five-symptom score; WPAI-AS, Work Productivity and Activity Impairment–Allergy Specific.

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