POACEAE POLLEN COUNTS IN A CHANGING CLIMATE: 38 YEARS OF OBSERVATION

Rodríguez, V [1]; Kilimajer, J [1] ; Narganes, MJ [1] ; Craciunesco, C [1], Subiza, J [1]; Cabrera, M [2]
1. Clínica Subiza, Madrid / 2. Hospital Los Madroños (Brunete), Madrid

INTRODUCTION

Our objective was to verify whether or not the climatic change that we are suffering progressively each year, is affecting the aerobiological and clinical behavior of Poaceae pollen in Madrid

MATERIAL AND METHODS

Grass pollen counts were performed since 1979 to 2016 using a Burkard 7 days spore trap located in our allergy center in Madrid.

The beginning of the algid period of pollination was considered the first of three consecutive days with more than 10 grains/m3 and the end, the last day of three consecutive days with more than 10 grains/m3.

Data from the Barajas Meteorological Station were utilized.

Prick tests (PT) using grass pollen was also studied in comparison with a total of PT in 1979 (n=100 pollinosis patients), 1994 (n=316 pollinosis patients) and annually from 1999-2016 (n = 40.998), annual media of 2.411 patients with pollinosis.

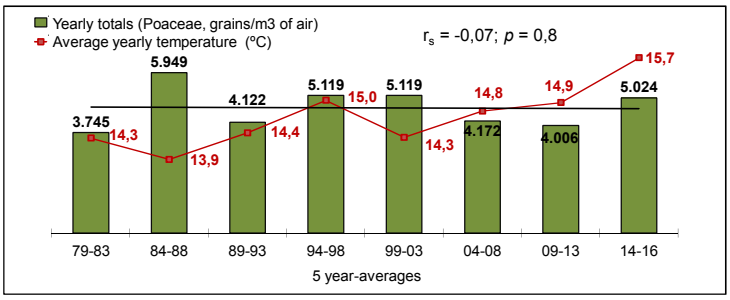
RESULTS

The quinquennial media concentrations since 1979 to 2016 were 3,745; 5,949; 4,122; 5,119; 4,172; 4,006 and 5,024 grains/m3.

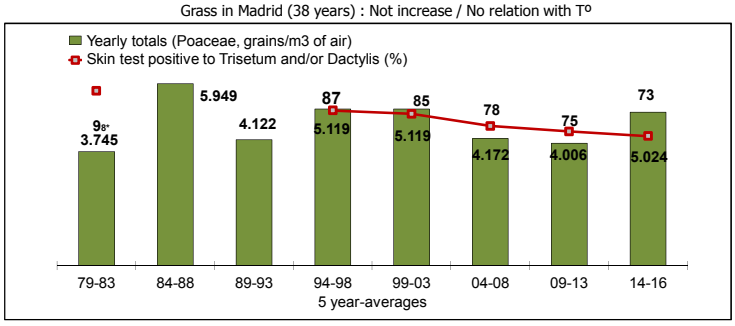
The quinquennial media temperatures were: 14,2; 13,8; 14,3; 14,9; 14,2; 14,7; 14,69 and 15,8ºC. Increase of 1,4ºC (rs=0,9 p<0,05).

The actual season beginning advanced 6 days calculated since may 1st and the end has shortened in 16 days in regard to the period 79-83. The duration of the season shortened 11 days.

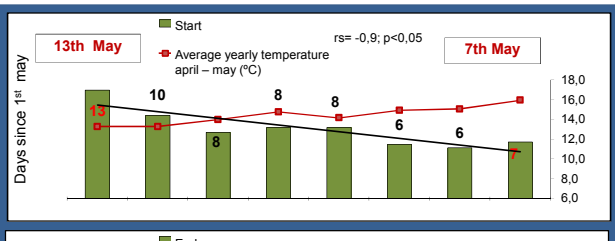
The annual prevalence of positive prick test to grass pollen in 1979 was 90% and 87% in 1994. The quinquennial media from 1999 to 2016 was 85, 78, 75 and 73%.



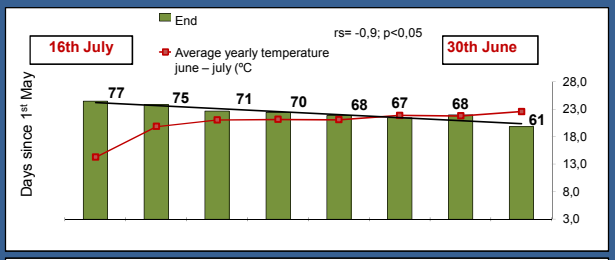
Grass in Madrid (38 years) : Not increase / No relation with Tº



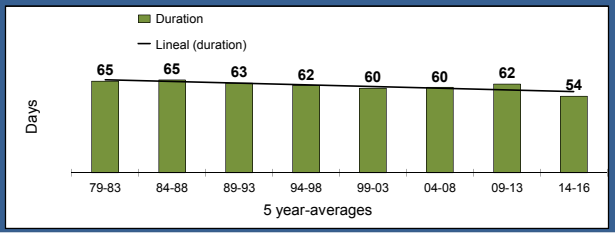
Pollen counts and the prevalence of positive skin tests in Madrid.



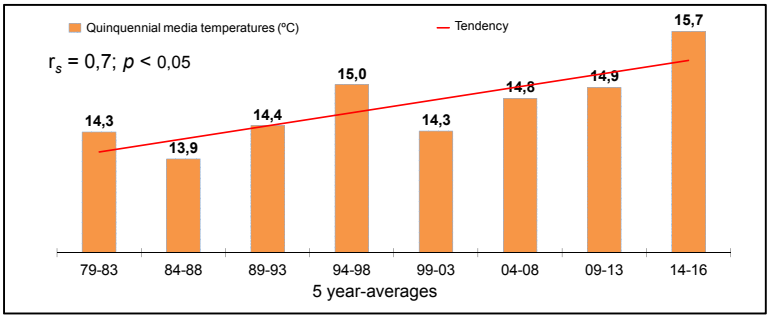
The start of the season is 6 days ahead.



The end of the season is 16 days ahead.



The season lasts 10 days shorter in total.



CONCLUSION

1. Total grass pollen concentration did not suffer any increase or decrease in its counts despite the dramatic increase of the temperature.
2. An advance at the beginning and the end of the season was seen. These changes significantly correlate with the temperature increase during may and july.
3. Discrete decrease in the sensitization prevalence.

In relation to this presentation, I declare that there are no conflicts of interest.

Panel No.: 1371

CLÍNICA SUBIZA