ABSTRACT. Objective. To prospectively analyze seasonal distribution in the onset of symptoms of polymyalgia rheumatica (PMR) and its relationship to parvovirus B19 infection.

Methods. Over a 4-year period (September 1997 to September 2001), 68 patients were prospectively diagnosed with PMR in an outpatient rheumatology department, of which only 55 patients (38 women, 17 men) aged 50 to 90 years (mean 74.1 ± 8.1) were able to specify the month of onset of symptoms. During the last year parvovirus B19 IgM serologies were determined in all new cases. Results. No significant seasonal variation in disease onset was observed during the 4-year period; 17 cases were observed in spring, 10 in summer, 15 in autumn, and 13 in winter (p = 0.625). Nevertheless, almost 50% of all cases of PMR were diagnosed in the months of May, February, and August. All of the evaluated patients (14 of 14) had negative parvovirus B19 IgM serologies. Conclusion. Onset of symptoms in PMR is unrelated to seasonal pattern. Yet almost 50% of cases occurred in the months of May, February, and August. Parvovirus B19 infection was unrelated to the onset of PMR. (J Rheumatol 2003;30:2624–6)
the cases presenting in August were observed in 1998 and 2001 (Figure 3).

The serological study for IgM parvovirus B19 was negative in all cases studied (14/14): 7 cases occurred in winter, 3 in spring, 3 in autumn, and one in summer.

DISCUSSION
This study shows that PMR is not seasonal in pattern. Nevertheless, a periodic clustering of cases in May, February, and August was observed. No relationship between parvovirus B19 infection and the onset of disease was found during the last year of the study.

Some studies indicate a seasonal pattern in the incidence of PMR, whereas others do not. The reasons for these discrepancies may be due to several factors. Most of these studies were retrospective, thus the specific recall about the
onset of symptoms is absent. This point is important, since the disease onset does not usually coincide with the month of visit. In this study, the mean duration of symptoms prior to visit was about 2 months, and almost 20% of patients were unable to specify the month of onset. Moreover, the variable periodic clustering of cases may interfere with the evaluation of a seasonal pattern. Thus, the incidence of PMR cases may peak at different months of the year and change between years. In this sense, a previous 12-year study indicated quarterly and annual variations of incidence of giant cell arteritis and PMR. In the present series, symptoms in almost half the patients occurred in May, February, and August, 3 different seasons, with variations between years. However, the low number of cases included in the study may have influenced these results.

The acute onset of symptoms of PMR suggests a precipitating environmental factor as one of the causes. Indeed, an increased prevalence of antibodies against parainfluenza virus type 1 has been reported in PMR, as well as a close temporal relationship between the epidemics of *M. pneumoniae*, *C. pneumoniae*, and parvovirus B19 infections and the incidence peaks of PMR and giant cell arteritis. Nevertheless, the relationship between PMR or giant cell arteritis and parvovirus infection seems to be controversial. Cimmino, et al. in a preliminary study indicated a relationship between PMR and B19 infection, whereas Hemauer, et al. did not confirm these results. The results of my study suggest that parvovirus B19 does not play a role in PMR. However, it should be recognized that parvovirus infection was analyzed during the last year of the study, and B19 infection is known to occur in periodic outbreaks, with peaks of disease activity occurring from 3 to 6 years apart. Therefore, it cannot be totally ruled out that this virus may have been related to other clustering peaks in previous years.

PMR does not appear to be associated with a seasonal pattern. Parvovirus B19 infection was not associated with the onset of symptoms of PMR in this study. Nevertheless, longer prospective studies with larger numbers of patients are necessary to confirm these results.

REFERENCES