

Asthma Management Program by Remote Control Monitoring of Symptoms and Peak Expiratory Flow Rates

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Introduction

Asthma is a complex disease that continues to be a major cause of morbidity and mortality even if its treatment is carefully controlled and an aggressive approach to its management is established.

At a general level, all the management programs emphasize the need for administering correct medications, reducing exposure to known triggers and allergens, recognizing symptoms that require emergency care and communicating effectively with the expert care giver.

To better cope with asthma, we used the trans telephonic monitoring system of "SHAHAL" (Emergency Medical Service) to monitor patient's symptoms and peak expiratory flow rates (PEFR).

Objective

To evaluate the value of Trans Telephonic Monitoring of symptoms and PEFR in a group of asthmatic patients.

Subjects and Method

Thirty four patients with bronchial asthma of variable severity were followed up for a period of one year.

On enrollment to the study the following data were obtained: disease severity, baseline pulmonary function, allergy status and daily treatment. A Trans Telephonic System was used to monitor symptoms, drug consumption and PEFR. A trained medical team was available at all the time who decided on the proper management during an attack. When needed the team visited the patient and/or transferred him to the emergency room for proper care.

The data was analyzed after one year of follow up.

Results

The mean age of the group was 55 (± 7) ys, range 15-78 ys. 22 of the patients were atopic, 19 had severe disease, 12 moderate and 3 mild disease.

Throughout the year there were a total of 793 telephone calls: 93% were handled via the telephone by trained nurses, 1.2% by physicians, 4.5% by an ambulance team and 0.9% were transferred to an emergency room.

As shown, there was a decrease in mean monthly calls from 8.2 in the first month to 6.3 in the last month ($p < 0.05$).

The mean PEFR increased from 225 \pm 104L in the first month to 245 \pm 117L in the last month (mean \pm SD). There was a significant improvement in the mean monthly peak flows between the first and last half of the year ($p < 0.05$).

Summary

Trans Telephonic Monitoring of symptoms and PEFR in patients with bronchial asthma was useful in improving self management of asthma symptoms and in increasing PEFR.