

Terror Attack in Israel and COPD Exacerbation

Jlail Bathish MD MPH^{1,2}, Yael Alshanki MD^{1,2}, and Yves Bitton MD³

¹Department of Internal Medicine B, Rabin Medical Center (Hasharon Campus), Petah Tikva, Israel

²Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel

³Sharan Medical Care at Home, Bnei Brak, Israel

KEY WORDS: chronic obstructive pulmonary disease (COPD), stress disorder, terror attack

IMAJ 2023; 25: 797–798

Chronic obstructive pulmonary disease (COPD) is a common lung disease characterized by restricted airflow, changes of lung tissues, and breathing difficulties [1]. Most patients are treated at home to maintain a stable lifestyle and quality of life [2].

An important feature of COPD is exacerbation, which is an acute worsening of symptoms that can result in decreased pulmonary functions, increased risk of death, and poorer quality of life. The frequency and severity of each exacerbation results in further worsening of pulmonary function [3]. Depression in COPD patients may cause objective impairment in function and decreased adherence to therapeutic interventions [4].

Acute stress disorder is characterized by acute reaction in the first month following exposure to a traumatic event such as threatened death, serious injury, or sexual assault. Symptoms include intrusion, dissociation, negative mood avoidance, and arousal [5]. Stress on a more continuous basis can significantly debilitate a person's emotional and physical well-being, lead to depression and weakened immune system, and influence patients with already stressful and

progressive conditions such as COPD.

We present a patient previously diagnosed with COPD who experienced an acute terror attack, which was a major and stressful event that caused severe exacerbation of the disease.

PATIENT DESCRIPTION

A 55-year-old female patient was referred by her family physician to the Sharan Medical Care at Home inpatient unit with complaints of acute onset of shortness of breath. The symptoms began one day earlier. The patient had been diagnosed with COPD grade 2, according to the GOLD criteria, with only one episode of acute exacerbation one year earlier. She denied experiencing fever, chills, chest pain, or palpitation prior to the current episode. Medical history revealed a 40 pack-year history of cigarette smoking. She had quit smoking a year prior. The patient denied alcohol or drug use. She did not present with allergies or any environmental risk exposure. Family history included significant heart disease. Her current medical therapy included taking rosuvastatin and aspirin for prevention of heart disease for 20 years. On further investigation, the patient said that her symptoms appeared right after she received notification that her 19-year-old son had been declared missing after the Hamas terror attacks in Israel on 7 October 2023, and that he might have been kidnapped and taken to Gaza.

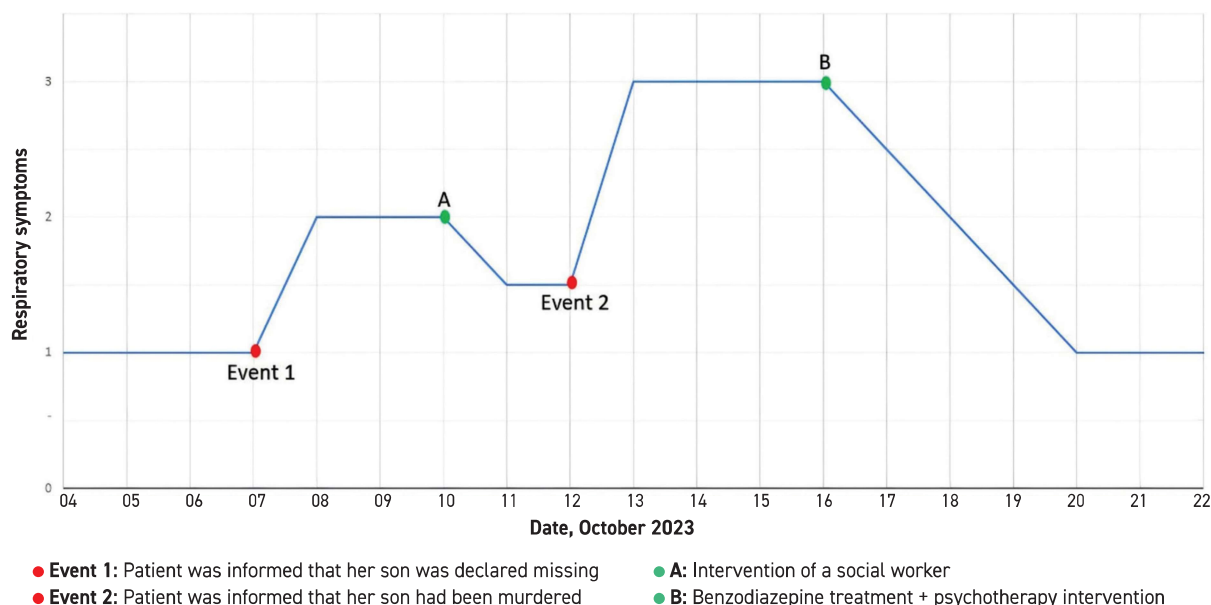
An initial physical examination revealed the following: temperature 37°C, heart rate 100 beats per minute, respiratory rate 24 breaths per minute, blood pressure 124/54, and O₂ saturation 95% in room air. The patient looked restless, presented with tachypnea, wheezing, and bilateral decreased air movement. The patient was barely able to finish a full sentence due to shortness of breath.

Blood tests showed white blood cell count 9000 cells/μL, hemoglobin 12 gm/dL, and C-reactive protein 0.4 mg/dL. A chest X-ray was normal with no sign of infectious source.

At this point, it appeared that the acute stress event caused shortness of breath; therefore, it was decided to treat her at home with inhalers and to monitor the situation.

Following our monitoring, we noticed a gradual worsening of her mental condition, exacerbated by viewing pictures and videos posted on social media of the killing and massacre of civilians by the Hamas terrorist group. A week later she was informed that her son had been murdered but that his body was damaged and further tests were needed for identification. After this, her condition worsened and medical treatment, including systemic steroids, did not improve her condition. We started benzodiazepine treatment combined with psychological support and psychotherapy intervention. Under this treatment, the patient experienced fewer respiratory complaints, and her clinical condition improved.

Figure 1. Respiratory symptoms of a COPD patient during a terror attack in Israel Worsening respiratory symptoms of COPD after stressogenic life events and improvement of the symptoms after psychotherapy intervention and benzodiazepine treatment
COPD = chronic obstructive pulmonary disease



COMMENT

COPD is a common lung disease characterized by restricted airflow, changes of lung tissues, and breathing difficulties. Clinical symptoms include productive cough, difficulty breathing, wheezing, and tiredness. Symptoms may progress to respiratory failure. Cigarette smoking and air pollution are among the most common causes and triggers for exacerbation. Since the disease is incurable, most treatment efforts focus on improvement of quality of life by preventing attacks, stopping cigarette smoking, and reducing air pollution. Medical treatments include inhalers, medicinal oxygen, and pulmonary rehabilitation. Most patients are treated at home to maintain a stable lifestyle and quality of life.

An important feature of COPD is exacerbation and acute worsening of symptoms that result in decreased pulmonary functions, increased risk of

death, and poorer quality of life. The frequency and severity of each acute episode results in further worsening of pulmonary function. The mental state of COPD patients is a major risk factor and objective impairment to functional performance when compared to psychologically healthy patients with the same degree of disease.

On 7 October 2023, Israel woke to news of horrific attacks perpetrated by the Hamas terrorist group. Unbelievable photographs and videos were posted to social media. The 19-year-old son of our patient had attended the NOVA music festival. He was declared missing for a few days, but his body was later found.

CONCLUSIONS

A severe stress event increases the risk of a COPD outbreak and exacerbates various disease symptoms. The exacerbation of COPD can be caused by extreme stress. Basic medical treatment, psychotherapy interven-

tion, and short-term benzodiazepine therapy can be effective [Figure 1].

Correspondence

Dr. J. Bathish

Dept. of Internal Medicine B, Rabin Medical Center (Hasharon Campus), Petah Tikva 49100, Israel

Phone: (972-3) 937-2573

Fax: (972-3) 937-2365

Email: jlalba@clalit.org.il

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