

The impact of continuing terror and stress on the use of psychoactive drugs in Israel

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Summary

An unprecedented wave of terrorism has plagued the Israeli population over the last two years. Between September 29, 2000 and October 1, 2002, Magen David Adom recorded a total of 4,535 casualties. Of these, 539 people were killed, 406 severely injured and 554 moderately injured. Among the additional 3,036 people lightly injured were 11 MDA staff members. Fears of random shootings and of human bombs exploding in schools, restaurants, and buses have caused extreme stress in the general population. Because the country is so small, everyone knows a terror victim personally – or knows someone else who does. At the same time, the economic situation, with its rising unemployment, reflects both the reality of war and the international recession. Stress and uncertainty are widespread. This ongoing study explores the assumption that terror, stress and uncertainty influences the prescribing practices of community physicians. Initially, we were interested only in psychoactive drugs, namely anxiolytics, hypnotics and antidepressants. However, as this pilot study was planned to become part of a larger study done by the Mental Health Services, we then decided to include analgesics, asthma medications and H1 antagonists for hyperacidity and anti-hypertensives. We believed that by measuring changes in prescribing patterns and actually measuring the dispensing of these medications, we would also receive a certain picture regarding the coping mechanisms of Israeli society. This is retrospective study, utilizing prescribing and dispensing data from some of the major HMOs' computerized data bank. The data were to be evaluated in terms of DDD/1000 population for given categories of medication. Our study, like the situation in Israel, is ongoing. Even as this article is being written (in late December 2002), the Israeli medical establishment, along with the rest of the country, is preparing for the possibility of Iraqi chemical and biological warfare. As can be imagined, the fluidity of our security situation has affected the planned study many times over, and forced us to reconsider our goals, scope, and methodology. Indeed, our initial study has since been incorporated into a larger, national study under the

auspices of the Mental Health Services of the Israeli Ministry of Health. At this date, only initial dispensing data have been analysed, but if what we see holds true, our findings are of enormous significance. Initially we assumed that there would be an increased use of anxiolytics and hypnotics, either benzodiazepine derivatives or benzodiazepine-related drugs. Instead, we found no statistically significant increases in either. The use of antidepressants proved most interesting: we noted a significant increase in SSRI dispensing, and to our surprise, it was not at the expense of traditional antidepressants.

Key words: Psychoactive drug use in Israel - Continuing terror
- continuing stress

Introduction

An unprecedented wave of terrorism has plagued the Israeli population over the last two years. Between September 29, 2000 and October 1, 2002, Magen David Adom recorded a total of 4,535 casualties. Of these, 539 people were killed, 406 severely injured and 554 moderately injured. Among the additional 3,036 people lightly injured were 11 MDA staff members¹. Fears of random shootings and of human bombs exploding in schools, restaurants, and buses have caused extreme stress in the general population.

"Each morning when I leave my apartment building, I have an important question to contemplate: Should I turn left or should I turn right? This question may seem inconsequential, but the events of the past few months in Israel have led me to believe that each small decision I make – by which route to walk to school, whether to go out to dinner – may have life-threatening consequences²".

Marla Bennett wrote these lines some 4 months before she was killed by a terrorist bomb in a cafeteria at the Hebrew University in Jerusalem. Israel 2002 is not a normal society.

Israel, in the light of her continued terrorist attacks, has become a "laboratory" for testing the coping mechanisms of a society under stress.

Professor Avi Blich, director of the Lev HaSharon Psychiatric Hospital, has examined the coping mechanisms of the Israeli population under trauma. He found that approximately 10% of the population suffers from symptoms of PTSD, the majority of them women³. Dr. Yacov Polokovitz, director of the Department of Internal Services for Mental Health in the Israeli Ministry of Health, states that after every terrorist incident, there are far more injured people than meet the eye. For each person physically injured in an attack, he explains, there are between ten and twenty others, often relatives and bystanders, who remain severely traumatized and anxious. A full 40% of these patients are minors.

Dr. Galil Wistov, director of the Children and Youth Psychiatric Department at Hadassah Hospital, observed young people in Jerusalem during July 2002, a period of particularly intense terrorist activity in that city. He too concluded that 40% of these young

people exposed to terrorist events continue to suffer from symptoms of PTSD⁴.

Yet, the question of whether specific segments of our population are suffering from PTSD or acute trauma is actually irrelevant to this study. This is because our entire society has been living under extreme stress over an extended period of time. How do we cope?

Objectives

This ongoing study assumes that terror, stress and uncertainty influence the prescribing practices of community physicians. We also expect to explore the behaviour of the medical staff in primary health clinics, and to learn if patients actually fill their prescriptions. Initially, we were interested only in psychoactive drugs, in anxiolytics, hypnotics and antidepressants. This seemed like a normal follow up to Yagur-Greenspoon- Ponizovsky's study of the "Primary Care Clinic Attenders Under War Stress"⁵. In that study of the residents of Gilo, a Jerusalem neighbourhood exposed to frequent gunfire, it was assumed that emotional distress would correlate with actual periods of attack. It was assumed, also, that this distress would be reflected in frequent prescriptions of psychotropic medication. Drugs were not categorized, however; the use of specific drugs was not included in the database.

When our pilot study recently became part of a larger study initiated by the Mental Health Services, we re-evaluated and expanded our initial objectives. We decided to address a larger population than first envisioned. We also expanded it to include a wider list of drug use than originally planned. (I must note here that the Ministry also plans to study the public's use of tobacco and alcohol as coping mechanisms in the face of prolonged stress-but in another framework entirely.)

In our study, we plan:

- to monitor the number of patient visits to their primary care provider over a specific period of time;
- to itemize and classify the amount and types of prescriptions issued by the doctors;
- to contrast our findings with actual dispensing by the pharmacist;
- to compare drug utilization in different types of populations and geographic areas;
- to utilize computerized databases provided by the Israeli HMOs to evaluate prescribing patterns of physicians based upon gender, age and perhaps by their year of immigration;
- to enlarge the database of the drugs to be evaluated – to include the analgesics, anti-hypertensives and drugs used to treat autoimmune diseases such as asthma and psoriasis.

We assumed that easy access to medical care and prescription drugs through the nationalized HMOs would be translated into statistically large increases in all types of psychoactive drugs, analgesics, and particularly, asthma medications, under the

influence of ongoing violence and stress. These findings were corroborated in “Self-Reported Increase in Asthma Severity After the September 11 Attacks on the World Trade Center.”⁶”

We also assumed that the drug use of certain populations - the ultra-orthodox, national religious, and settlers for example, would contrast with populations such as new immigrants who had not yet acclimated to our way of life. According to the literature, members of communities offering religious or ideological support tend to cope more easily with stress and trauma. This would likely affect the number of visits by patients to clinics, and the prescription drugs dispensed.

Methods

This is a retrospective study, based on prescribing and dispensing data gathered from the computerized data banks of most of the major HMOs of Israel. These data, which cover both national and regional levels, were to be evaluated in terms of DDD/1000 population for given categories of medications as defined by ATC classification. Regions of high incidence of terrorist attacks were to be contrasted with those of low incidence. The study was to utilize pre-Intifada drug data as a baseline.

As stated previously, both the prescribing behaviour of physicians and actual pharmacy dispensing would be analysed, while taking into account the socioeconomic and cultural differences within the population. Our fellow colleagues suggested that we concentrate solely on Jerusalem as the active laboratory, since it would be relatively simple to stratify and classify the different neighbourhoods and populations according to our study needs. In this way, we would also compliment the Gilo study.

In addition, we were influenced by Professor Avi Blich’s study on national PTSD that included data on a large percentage of females. We too considered it essential to analyse the dispensed prescription data according to gender and age (16-65).

Results

This study, like the situation in Israel, is ongoing. Even as this article is being written (in late December 2002), the Israeli medical establishment, along with the rest of the country, is preparing for the possibility of Iraqi chemical and biological warfare. The fluidity of our security situation has affected the goals, scope and methodology of our project. As stated earlier, our initial study has been incorporated into a national study by the Mental Health Services of the Ministry of Health under the auspices of Dr. Greenspoon. While we will continue to investigate the prescribing and dispensing patterns of psychoactive drugs, the other goals mentioned earlier will also be assessed.

At this date, only initial dispensing data has been analyzed, but if what we see holds true, our findings are of great significance. Initially we assumed that there would be an increased use of anxiolytics and hypnotics, either of benzodiazepine derivatives and benzodiazepine-related drugs. Instead, we found no statistical increases in either.

The use of antidepressants proved most interesting: we noted a significant increase in SSRI dispensing, and to our surprise, it was not at the expense of traditional antidepressants.

It must be emphasized that our findings are preliminary, raw data.

It is difficult to discuss the implications of this study with only partial data. However, if our preliminary findings follow through, we see a change in prescribing habits by primary care providers. We see benzodiazepines substituted by SSRIs, on account of their anxiolytic effect. If this is the case, we must study and analyze the long term use of SSRIs, including their usage by the “non-typical” depressed population.

We are anxiously awaiting the arrival of additional data from other sources, data that study a wider variety of drugs than originally planned. Through our efforts, we hope to attain a clear picture of the prescribing patterns of Israeli physicians and the coping mechanisms of Israel, a society living under prolonged stress.

Discussion

Israel is indeed a psychological and sociological laboratory for the study of coping under prolonged stress. But are there universal lessons to be learned from our unique experience?

Several years ago, I had the privilege of discussing just this question with Dr. Andrea Barthwell.

This was before September 11 and before the Intifada with its human bombs. It was Andrea who said that for Americans, it was perhaps the urban inner city battlegrounds with their gang violence and drive-by shootings that could best be compared with the Israeli experience. In conclusion, when this study is completed, we envision communities that develop support systems designed to strengthen their members' coping abilities. We envision primary care medical providers trained to ease the suffering of those populations plagued by 21st century surrealistic violence.

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