Psychiatric Casualties: The Israeli Experience

By Gregory Lucas Belenky, MD

Psychiatric casualties (combat reaction) were a significant source of personnel loss in the Israel Defense Force (IDF) in both the 1973 Arab-Israeli War and the 1982 war in Lebanon. Intense and stressful battle experience decreased combat effectiveness and promoted psychiatric breakdown. High morale and effective group performance decreased the risk of psychiatric breakdown and promoted excellent individual performance and heroism. In the 1973 Arab-Israeli War, all psychiatric casualties were evacuated beyond the division to rear areas. Consequently, none of these casualties were returned to combat duty during the war and many became chronically disabled. In contrast, in the 1982 war in Lebanon the IDF using the American doctrine of brief forward treatment, adopted after 1973, returned 60% of psychiatric casualties to effective combat duty within 72 hours.[1]

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INCIDENCE OF PSYCHIATRIC CASUALTIES

In the 1973 Arab-Israeli War the incidence of psychiatric casualties (expressed as the ratio of psychiatric casualties to wounded) was an estimated 30:100.[1] In the 1982 war in Lebanon the incidence was 23:100.[2] For comparison, the overall ratio of psychiatric casualties to wounded in the American army in the European, Mediterranean, and Pacific theaters of operation during the four years of World War II was 36:100, and the ratio for the American army in European theater of operation in 1944 was 20:100.[3] These ratios are averages of many units in many battles. For a given unit in a given battle, the incidence of psychiatric casualties as ratio to wounded ranged from none to nearly 1:1. This variation was a function of a variety of factors.

BATTLE INTENSITY AND STRESS

For the IDF in 1973 and 1982, and for the American army in World War II and the Korean War, battle intensity (as measured by the number of physical casualties) was the primary determinant of the incidence of psychiatric casualties. In the 1973 war, IDF psychiatric casualties peaked early in reaction to the shock of the initial Arab assault, and peaked again during the Israeli counterattack across the Suez Canal in reaction to the intense indirect fire from the Egyptians. Egyptian and Syrian psychiatric casualties were initially low because of the ease of their advance, but rose when the IDF successfully counterattacked. Overall, 60% of Egyptian psychiatric casualties occurred in temporal and physical proximity to the points of IDF penetration of the Egyptian line. In the 1982 war in Lebanon, the IDF made objective measures of battle

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Rare occurrences of neuroleptic malignant syndrome (NMS) have been reported in patients on neuroleptic therapy. The syndrome is characterized by hyperthermia, muscular rigidity, autonomic instability (labile blood pressure, tachycardia, diaphoresis), akinesia, and altered consciousness, sometimes progressing to stupor or coma. Leukocytosis, elevated CPK, liver function abnormalities, and acute renal failure may also occur. Neuroleptic therapy should be discontinued immediately and vigorous symptomatic treatment implemented since the syndrome is potentially fatal.

Phenothiazine derivatives have been known to cause restlessness, excitement, or bizarre dreams; reactivation or aggravation of psychotic processes may be encountered. If drowsiness or lethargy occurs, the dosage may need to be reduced. Dosages, far in excess of the recommended amounts, may induce a catatonic-like state.

Autonomic Nervous System: Hypertension and fluctuations in blood pressure have been reported. Although hypotension is rarely a problem, patients with pheochromocytoma, cerebral vascular or renal insufficiency, or a severe cardiac reserve deficiency such as mitral insufficiency appear to be particularly prone to this reaction and should be observed carefully. Supportive measures including intravenous vasopressor drugs should be instituted immediately should severe hypotension occur; Levarterenol Bitartrate Injection is the most suitable drug; *epinephrine should not be used* since phenothiazine derivatives have been found to reverse its action. Nausea, loss of appetite, salivation, polyuria, perspiration, dry mouth, headache, and constipation may occur. Reducing or temporarily discontinuing the dosage will usually control these effects. Blurred vision, glaucoma, bladder paralysis, fecal impaction, paralytic ileus, tachycardia, or nasal congestion have occurred in some patients on phenothiazine derivatives.

Metabolic and Endocrine: Weight change, peripheral edema, abnormal lactation, gynecomastia, menstrual irregularities, false results on pregnancy tests, impotency in men and increased libido in women have occurred in some patients on phenothiazine therapy.

Allergic Reactions: Itching, erythema, urticaria, seborrhea, photosensitivity, eczema and exfoliative dermatitis have been reported with phenothiazines. The possibility of anaphylactoid reactions should be borne in mind.

Hematologic: Blood dyscrasias including leukopenia, agranulocytosis, thrombocytopenic or nonthrombocytopenic purpura, eosinophilia, and pancytopenia have been observed with phenothiazines. If soreness of the mouth, gums or throat, or any symptoms of upper respiratory infection occur and confirmatory leukocyte count indicates cellular depression, therapy should be discontinued and other appropriate measures instituted immediately.

Hepatic: Liver damage manifested by cholestatic jaundice, particularly during the first months of therapy, may occur; treatment should be discontinued. A cephalin flocculation increase, sometimes accompanied by alterations in other liver function tests, has been reported in patients who have had no clinical evidence of liver damage.

Others: Sudden deaths have been reported in hospitalized patients on phenothiazines. Previous brain damage or seizures may be predisposing factors. High doses should be avoided in known seizure patients. Shortly before death, several patients showed flare-ups of psychotic behavior patterns. Autopsy findings have usually revealed acute fulminating pneumonia or pneumonitis, aspiration of gastric contents, or intramyocardial lesions. Although not a general feature of fluphenazine, potentiation of central nervous system depressants such as opiates, analgesics, antihistamines, barbiturates and alcohol may occur.

Systemic lupus erythematosus-like syndrome, hypotension severe enough to cause fatal cardiac arrest, altered electrocardiographic and electroencephalographic tracings, altered cerebrospinal fluid proteins, cerebral edema, asthma, laryngeal edema, and angioneurotic edema; with long-term use, skin pigmentation, and lenticular and corneal opacities have occurred with phenothiazines. Local tissue reactions occur only rarely with injections of fluphenazine decanoate.

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High morale and effective group performance decreases the risk of psychiatric breakdown.

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stress and correlated these measures with the incidence of physical and psychiatric casualties.[4,5] Battalions ranked as undergoing greater battle stress (on the basis of preparation, type of battle, tactical and logistic support, and confidence in higher headquarters) had higher numbers of physical and psychiatric casualties, and higher ratios of psychiatric to physical casualties. For the battalions studied, the incidence of psychiatric casualties varied broadly around the mean of 34:100, ranging from 00:100 to 86:100. The battalion suffering the 86:100 ratio was ambushed at night and subjected to four hours of withering direct and indirect Syrian armor and antitank fire before it was able to extricate itself.[4-6]

FACTORS AFFECTING PERFORMANCE

In addition to battle intensity and battle stress, a variety of personal and unit factors influenced whether a given soldier performed well or became a psychiatric casualty. In 1973, IDF soldiers from units with good leadership, good unit cohesion, and who had stable personal and family lives were less likely to become psychiatric casualties[7] and more likely to perform well and to be decorated for heroism.[8,9] On the Golan Heights in 1973, IDF tank crews who had trained together were more combat effective, and, despite equally intense battle, had fewer psychiatric casualties than tank crews who, though equally well trained, had not trained together. In 1982, good personal and unit morale protected IDF soldiers from psychiatric breakdown.[4,5]

Similarly, in the American army in World War II, good company morale prior to the invasion of Normandy resulted in fewer psychiatric casualties during the invasion. In both the Mediterranean and the European theaters of operation, better training produced greater combat effectiveness and fewer psychiatric casualties. Studies conducted just before, during, and after the 1982

war in Lebanon indicated that personal and unit morale were correlated with more effective performance in combat, less liability to suppression by enemy fire, and less likelihood of becoming a psychiatric casualty.[4,5] From these studies, the elements of personal and unit morale were

- Confidence in one's own skills as a soldier;
- Belief in the legitimacy of the war;
- Trust in one's weapons;
- Confidence in one's comrades;
- Trust in one's commander.

Trust in commander depended upon the soldier's perception of the commander's competence, including the commander's overall professional competence (as indicated by prior combat experience, good navigational skills, and thoroughness in preparing for deployment), the care with which the commander tailored missions to the particular strengths and weaknesses of his men, and the personal example of the commander in combat. In the IDF in both 1973 and 1982 and in the American army in World War II, elite units (with their overall higher levels of intelligence, training, unit stability, leadership and morale) fought well and had relatively few psychiatric casualties despite heavy fighting and large numbers of physical casualties.

TREATMENT

The 1973 Arab-Israeli War and the 1982 war in Lebanon were the first in which the IDF sustained large numbers of psychiatric casualties. In the Arab-Israeli wars of 1948, 1956, and 1967 psychiatric casualties were an insignificant proportion of total casualties, and treatment was therefore informal. These casualties were rarely seen by medical personnel, almost never evacuated through medical channels, and no records were kept. Thus, as of 1973, the IDF had no formal experience with combat-related psychiatric casualties and had no doctrine for their identification, treatment, or prevention. When in the 1973 war the IDF sustained psychiatric casualties in large numbers it was unprepared. As a result, all IDF psychiatric casualties in the 1973 war were evacuated to the rear, usually to Israel proper. None were returned to duty during the war, and many became chronically disabled.

Using forward treatment, the IDF was successful in sending 60% of soldiers back to combat duty within 72 hours.

Following the 1973 war, the IDF, sobered by the incidence of psychiatric casualties, adopted the American doctrine of treatment. This doctrine, developed in World War I, and applied again successfully in World War II, the Korean War, and in Vietnam, calls for brief treatment (consisting of physical replenishment—water, food, sleep, and the opportunity to recount battle experiences) near the front with a rapid return to combat duty. To apply this treatment, the IDF deployed mental health teams with the medical battalions supporting division-sized units and operating from 2 to 5 kilometers from the front. Each five-member team consisted of a psychiatrist, one or two psychologists, and two or three social workers. Using this treatment, the IDF was able to return 60% of combat reaction cases to combat duty within 72 hours.[1,4,5] For soldiers treated further to the rear than the division, the return rate was 40%. The overall range for the IDF figures for return to combat duty is similar to return rates of 40% to 70% for psychiatric casualties in American forces during the Second World War.

CONCLUSION

Psychiatric casualties were a significant source of personnel loss for the IDF in the 1973 Arab-Israeli War and the 1982 war in Lebanon. In the 1982 war in Lebanon, as in the 1973 Arab-Israeli War, psychiatric casualties emerged within hours of the beginning of hostilities, and were most prevalent where the battle was most intense. In both wars, the IDF found that high unit morale correlated with increased combat effectiveness and decreased psychiatric casualties. The 1973 war was the first in which the IDF sustained significant numbers of psychiatric casualties. They had no doctrine for treatment. All psychiatric casualties were evacuated to the rear, only a few returned to their units during the war, and many became chronically disabled. Following the 1973 war, the IDF adopted the American doctrine of forward treatment. Using forward treatment, the IDF was successful in sending 60% of soldiers back to combat duty within 72 hours.

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REFERENCES

1. Noy S, Levy R, Solomon Z: Mental health care in the Lebanon war. *Isr J Med Sci* 1984; 20:360-363.
2. Shipler D: The other Israeli casualties: The mentally scarred. *The New York Times* 8 January 1982.
3. Mullins WS, Glass AJ: *Neuropsychiatry in World War II: Volume II: Overseas Theaters.* Washington, DC, Department of the Army, 1973.
4. Belenky GL, Noy S, Solomon Z: Battle stress: The Israeli experience. *Military Review* 1985; 65:28-37.
5. Belenky GL, Noy S, Solomon Z: Battle factors, morale, leadership, cohesion, combat effectiveness and psychiatric casualties, in Belenky GL (ed): *Contemporary Studies in Combat Psychiatry.* Westport, CT, Greenwood Press, 1987.
6. Gabriel RA: *Operation Peace for Galilee: The Israeli-PLO War in Lebanon.* New York, Hill and Wang, 1984.
7. Noy S: Stress and personality as factors in the causation of combat reaction, in Belenky GL (ed): *Contemporary Studies in Combat Psychiatry.* Westport, CT, Greenwood Press, 1987.
8. Gal R: Courage under stress, in Breznitz S (ed): *Stress in Israel.* New York, Van Nostrand Reinhold Co, 1983.
9. Gal R: Combat stress—An opportunity for heroism, in Belenky GL (ed): *Contemporary Studies in Combat Psychiatry.* Westport, CT, Greenwood Press, 1987.

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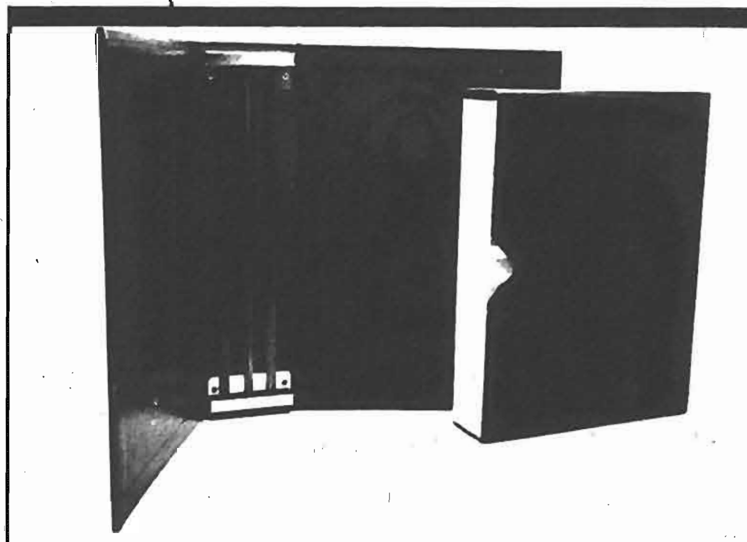

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