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Suicide risk in the general hospital

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Abstract

This paper reviews the relationship between physical illness and suicide, reviews the studies of attempters and completers of suicide in general hospitals, and discusses those studies which have investigated the characteristics of patients in the medical setting with suicidal ideation. Study of suicidal ideation in a general hospital setting aimed at characterizing patients' suicidality may allow psychiatrists to better discriminate those patients at greater risk for completed suicide. Comparison of medical patients with suicidal ideation with those who had attempted or completed suicide, and recommendations to reduce suicidal impulses and treat these patients are discussed.

Key words

medical illness, medical patient.

INTRODUCTION

Suicidal patients are among the most challenging patients to confront a psychiatrist in the general medical setting. Chronic medical illness and pain have been found to be risk factors for suicide.¹⁻⁴ Psychiatrists working in general medical hospitals often are asked to evaluate patients for suicidality. Because of this and because these high risk patients have not been well studied, it was felt that characterizing this group would provide a more empirical foundation for evaluation and treatment recommendations.

This paper will first give an overview of the relationship of physical illness to suicide, review the studies of attempted and completed suicides in medical patients, and discuss some recent studies which have attempted to characterize and evaluate patients with suicidal ideation.

RELATIONSHIP OF PHYSICAL ILLNESS TO SUICIDE

Mackenzie reviewed several studies on the relationship of suicide in physical illness.⁵ A meta-analysis of several studies over the years led Mackenzie to make the following conclusions. First, physical illness is reported to be involved with between 20 and 70% of suicides, and was felt to be an important factor in 11 to 51% of suicides. Suicide attempts were often more lethal when related to physical illness. Suicides related to physical illness were often more predominant in older men leading to the speculation that men are less able to emotionally accept passivity and feelings of helplessness. Depression secondary to pain, changes in physical function and structure, and changes in appearance and social relationships are seen commonly.

Mackenzie also discussed ways that physical illness could affect suicidal impulsivity. These include that of (1) the illness itself causing the initiation or exacerbation of a mental disorder (i.e. post MI depression), (2) the illness causing organic mental disorder (i.e. command suicidal hallucinations secondary to delirium), or (3) the patient gives up on the treatment which leads to an effectual suicide. Studies to date suggest that the first cause is the most common. Suicides in patients with physical illness usually have a concomitant mental illness, most commonly depression and alcoholism. The terminally ill who commit suicide are least likely to have mental disorders. Organic brain syndrome was found in only 10 to 20% of suicides in the medically ill.

Certain diseases that were found to have higher incidences of suicide include cancer, head injury, Huntington's chorea, peptic ulcer disease, and spinal cord injury. In cancer patients, men (but not women) with disseminated disease were at greatest risk especially soon after diagnosis. Gastrointestinal cancers, as well as chemotherapy or no treatment compared with surgery or radiation therapy for cancer placed patients at higher risk for suicide. The increased risk with chemotherapy is thought to be related to greater disease severity and consequently poorer prognosis and hopelessness. Huntington's chorea is thought to be related to affective symptoms, peptic ulcer with alcoholism, and spinal cord injury with the possibility that the personalities of these individuals are impulsive and self-destructive inherently. Interestingly, while increased disease severity increased the suicide risk in cancer patients, partial injury in spinal cord injury victims was associated with increased risk, possibly reflecting a decreased ability to adapt mentally. Head injury and suicide is related to cognitive function loss, personality change, and alcohol abuse.

Increased suicide risk after improvement in temporal lobe epilepsy has been thought to be because of the possibility of depression emerging after cessation of recurrent convulsions

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and/or difficulty adjusting to life without a handicap. Rheumatoid arthritis may elevate suicide risk secondary to chronic pain, progressive disability, isolation from others, and steroid use. Multiple sclerosis may have an association with depression.

REVIEW OF STUDIES OF ATTEMPTED AND COMPLETED SUICIDES

A number of retrospective studies have looked at completed suicides. One study found 10 of 11 suicides due to jumps or falls, with seven of 11 having symptoms of delirium.⁶ Pollack speculates that these patients may have either been in a paranoid state and jumped in order to escape something and/or had motoric impairment. Defining these patients as suicidal may be problematic as it seems unclear whether the patients in Pollack's study wanted to die or whether they died accidentally due to organic brain syndrome.

Another study reviewed suicides at the Bronx Veterans Administration Hospital and found a relationship to severe, chronic, terminal illness, with pain dyspnea and disfigurement.⁷ Brown and Pisetsky concluded that loneliness, loss of function, loss of physical and financial independence, and the prospect of certain death lead patients to make their own life-death risk/benefit analysis.

Other studies characterized patients as having impaired relationships, high family stress, excess emotional stress over their illness, a low pain tolerance, and a need to control the treatment.^{8,9} These patients were anxious and depressed about their illnesses and had poor relationships with staff who, in turn, reacted to them in a less supportive fashion. A general lack of emotional support, as well as prior suicide threats, were also present. Impaired alertness or disorientation was not correlated. There were 32 suicides in the study by Pisetsky and Brown from 1955 to 1960 at the Bronx Veterans Administration Hospital; 56% by jumping, with wrist cutting and hanging next most frequent.

In another study of 22 suicides from 1967 to 1973¹⁰ delirium tremens was common, at Brigham Hospital. This study found all attempts to be impulsive, associated with anger, and precipitated by loss of emotional support. These attempts were largely by patients with personality disorder and psychosis.

Dialysis¹¹ and malignancies¹² have also been associated with suicidal behavior. Reports differ from 30% to uncommon in the number who threaten suicide beforehand.

To summarize these studies, the suicide completion rate in general hospitals is low, but of those who do the characteristic seems to be men who jump and leave no suicide note. Many suicides are associated with alcoholism and organic brain syndrome, cancer and dyspnea; often these patients are demanding and dissatisfied. The organic brain syndrome patients may be better considered as accidental deaths, and these reports may actually be describing more than one population of patients. No cases of murder-suicide were found in the literature. Protection from open stairwells, laundry chutes, upper story windows, and removal of sharps

and potentially harmful substances are important protective measures. Suicides that seem rational in medical patients were unusual.

CHARACTERIZATION AND EVALUATION OF PATIENTS WITH SUICIDE IDEATION

Very few studies have reported on suicidal ideation in medical patients and fewer have been a prospective attempt to characterize these patients. One study, over a two year period in Nova Scotia, reported 24% suicidal ideation in 692 consultations; 11.6% of these wished to die imminently.¹³ More than 50% of suicidal patients were under 35 years of age, 42% dependent on alcohol, and many of those abusing street drugs. The Michalon report was in French and the English abstract did not specify whether the suicidal cases included those admitted for medical complications of a suicide attempt, which seemed likely due to the age distribution of the patients.

Hale *et al.* reported on an analysis of patients in the general hospital with suicidal ideation.¹⁴ A total of 116 patients admitted for suicide attempts, including those consulted for suicidal ideation, were studied. This made up 13% of all consultations; 66% were patients admitted following a suicide attempt and 34% had suicidal ideation during admission for a medical illness. The average age of the attempters (35.4 years) was significantly lower than those with suicidal ideation only, 25% who were transferred to psychiatry. Medically ill patients were more likely to have an adjustment disorder whereas suicide attempters were more likely to have schizophrenia. Although there was no systematic attempt to identify the precipitants of suicide, investigators noted that suicidal ideation seemed to arise during periods when pain and suffering were intense and survival was questionable.

A prospective report on the characteristics of patients in the medical setting who have suicidal ideation has recently been published.¹⁵ The purpose of this study was to formulate a database that would allow psychiatrists to better discriminate those patients who are at greater risk for completed suicide. Comparison of medical patients of suicidal ideation with those who had attempted or completed suicide, and recommendations to reduce suicidal impulses and treat these patients were discussed. In this report those variables associated with greater suicidal impulses were discussed in order to further delineate potential high-risk patients. It did not limit itself to a retrospective analysis of actual attempts or completed suicides as in previous studies.

Data were collected from the pool of psychiatric requests at Montefiore Medical Center, a 700 bed general hospital located in the Bronx, New York. The study was conducted over a 4 month period, from February to June 1991. Patients who verbalized suicidal ideas to the treating clinicians, nursing staff were studied, or family, who then relayed this information to staff were studied. Approximately 9% of all psychiatric consultations at this institution were to evaluate suicidality. Because this study's focus on suicidality in the

hospital, patients admitted for medical consequences of suicide attempts were excluded. Psychiatric consultants completed the Suicidal Ideation Assessment Form (SIAF) (Appendix 1) (a consultant-rated questionnaire), during the course of a consultation for suicide evaluation. The degree of suicidal intent on the SIAF was rated by subscales from the Bronx Municipal Hospital Center, Psychiatric Emergency Room violence and Suicide Assessment Scale described elsewhere.¹⁶ Demographic and diagnostic data were obtained from the Physician Consultation Record, also described elsewhere.¹⁷

The main findings of these studies included a possible trend towards high male representation among the suicidal subjects, a high Axis IV stress rating, and a large drop in Global Assessment Functioning in the prior year. There was a trend towards acute medical conditions and acute suicidal ideation, few with prior attempts. Few required constant observation, but at Montefiore 15 min checks could also be recommended and were not recorded on the database. The average age of the patients with suicidal ideation was 55 years, and neither age nor any other demographic variable differed from the consultations as a whole. Interestingly, these results compare to a study by Collins *et al.* who found a greater need for suicide and depression evaluation in Hispanics with fewer such requests in Blacks.¹⁸

The more serious recent suicidal behavior patients were those who tended to have poorer social support, and prior attempts compared with the less serious recent suicidal behavior patients. The more serious patients on current suicidal thoughts were those who had greater current physical distress ratings. It may be that the more serious suicidal patients represent a different subgroup with different characteristics than the less serious group.

Previous studies of suicidal attempter/completer in medical patients describe these patients as being demanding, angry and impulsive, with signs of a personality disorder and/or psychotic, with precipitants of staff conflict and lack of emotional support.^{8,19} In contrast, this study found a trend towards acute changes in medical condition, minimal staff conflict and no psychosis. There was also only one subject with neoplasm compared with prior studies that found a relation between neoplasm and suicidality.¹² The findings in this study are consistent with previous studies, which showed a correlation with maladaptive (emotional) reaction to illness, a loss of physical and role functions, depression (mentioned only briefly),⁸ and few patients with delirium or dementia (who might hurt themselves, but since they were not considered suicidal, would not have been included in the subject group in our study and so we may have picked up a population not comparable to the other studies,¹⁹ some of the prior studies which included organic brain syndrome patients may have been studying accidental death rather than suicide.

Treatment for suicidal patients in the general hospital should include those that can enhance social support and address high stress levels (family meetings, therapist support), support interventions to diminish physical distress

(medical or surgical), support treatment for depression (psychotherapy/pharmacotherapy), and support interventions to improve physical and role functioning (physical therapy, interpersonal therapy). Attention to patients' reaction to acute changes in their medical condition is also important.

The detailed study of suicidality in the medical setting is important to an understanding of the interplay between medical, psychological, and social factors in patients referred to psychiatrists for this reason. Further prospective study needs to be undertaken in order to clarify those at risk for suicide and which interventions are most effective.

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APPENDIX 1: SUICIDAL IDEATION ASSESSMENT FORM (SIAPF)

Patient Characteristics

NAME _____

Chart Number Occupational Status: (1) Working, (2) Disability, (3) Retired, (4) Unemployed, (5) Homemaker, (6) Other.

Living Arrangements: Before Adm. _____

After d/c _____

(1) Alone, (2) With family, (3) Friends/Others, (4) Nursing home/Health-related facility, (5) Hospice, (6) Other Hospital, (7) W/Home attendant, (8) Homeless, (9) Other.

Current Medical Situation

Primary Reason for Hospitalization (chief complaint):

(1) Acute is condition terminal? Is death imminent?
(2) Chronic, (a) Yes, (b) No (a) Yes, (b) No

Currently in pain? Rate: 0–10 (10 = would rather die) (1) Yes (2) No

Currently in physical distress? Rate: 0–10 (10 = would rather die)

(1) Yes (2) No

Room Type: _____

(1) Single, (2) Double, (3) Multiple, (4) ICU, (5) Single/isolation (6) Bioclean.

Suicidal Characteristics

Time of day SI was voiced or attempt was made: (1) Morning, (2) Afternoon, (3) Evening, (4) Night, (5) No information, (6) Ongoing.

Duration of hospitalization up to voicing SI:

Days remaining until planned discharge (if known):

Rate/degree of Suicidal Intent (numbers in brackets refer to score for item)

Current suicidal thoughts (highest during current hospitalization)

(4) Expresses intense wish to kill self and has made a plan.
(4) Reveals psychotic/delusional ideation or hallucination to kill/injure self.
(3) Expresses intense wish to kill self but has made no plan.
(2) Expresses ambivalent wish to kill self.
(0) Reveals no suicidal ideas.

Recent suicidal behaviors (during the past several weeks)

(4) Made a serious suicide attempt (e.g., by gunshot/ingestion/hanging/jumping).

(3) Made a suicide gesture (e.g., superficially cut wrist/ingested two pills).

(3) Made a specific suicide plan.

(3) Attempt made with little chance of discovery.

(2) Had no interest or hope for the future.

(0) Has made no suicidal plans or attempts.

Are suicidal ideas chronic? Affect associated with suicidal ideation (SI) Prior attempt? Serious _____ yes or _____ no.

Social supports: none poor fair good excellent

Extreme use of denial in the face of hopeless reality? _____

Precipitant of Suicidality

(check all that apply, write in details).

_____ Reaction to acute change in medical condition.

_____ New onset physical symptoms. Patient informed of change in DX/PX, (which) for the worse? Patient perceived change in DX/PX (which) for the worse? Other, describe.

_____ Reaction to pain: Acute pain? Chronic Pain? Undertreated? Validity of pain denied by staff?

_____ Related to Organic Brain Syndrome circle: Delirium/dementia/organic psychosis. If direct organic cause is known list:

_____ Related to drug/Alcohol use, specify drug.

Intoxicated during SI? In withdrawal?

_____ In order to get medication prescribed.

_____ Related to psychosis, acute? chronic?

_____ Related to depression, psychotic?

_____ Related to maladaptive reaction to illness, acute? chronic?

_____ Conflict with staff, specifics:

_____ Patient overdependent on medical relationships for support.

_____ Specific staff were away or there was perceived/real rejection.

_____ Validity of medical symptoms challenged by staff.

_____ Staff refusal to do procedure patient requests.

_____ Patient refusal to comply with test/procedure. Are staff pushy?

_____ Acute loss of emotional support. With whom?

- _____ Reaction to relationship with other patients.
- _____ Interpersonal conflict.
- _____ Change in medical status of another patient(s).
- _____ Family conflict, specifics related temporally to family visit/phone call.
- _____ Cry for help/attention, emotional support.
- _____ Preventing interpersonal change (e.g., to keep a lover from leaving).
- _____ Provoking interpersonal change (e.g., to separate from parents; a way out for a battered wife).

- _____ Loss of role function, at work? In the family? In society?
 - _____ Loss of physical function, specify:
 - _____ Shame/loss of face, real/perceived; in what aspect of psychosocial system?
 - _____ Patient was attempting to manipulate his/her social situation (e.g., to obtain services, to cover an alcohol problem, to lessen the responsibility for a crime).
 - _____ Other situation, specify:
-