Incidence of Long-Term Psychiatric Complications in Severely Burned Adults

N. J. C. ANDREASEN,* M.D., PH.D., A. S. NORRIS,** M.D., C. E. HARTFORD,*** M.D.

From the Departments of Psychiatry and Surgery, University of Iowa, Iowa City, Iowa

THOSE who care for the severely burned are dealing with a catastrophic illness. With the development of sophisticated supportive measures and effective topical antimicrobial agents such as Sulfamylon and silver nitrate, the physicians and nurses who care for these severely injured people are winning the battle with increasing frequency. Now young healthy patients with 40% or greater burns often live, and those with less usually do. Yet as in the case of other advances in medicine such as renal dialysis or transplants, we must pause occasionally and ask ourselves what the long-term effects of these "medical miracles" are. Our obligation to use them cannot be affected, of course, but we may be able to use them with fuller confidence or with greater assurance to the patient if we know what his long-term adjustment is to be. The burn victim is subjected to intense trauma: he experiences severe pain, has a prolonged hospital stay, has been suddenly and catastrophically separated from his family and work, and invariably has some amount of scarring or deformity. How often does this experience of intense trauma leave emotional scars as well? How well does the burn patient adapt psychologically several years after he has been discharged as physically cured?

Surprisingly, few people have studied the burn patient from the psychiatric point of view. Interest in the burn victim was essentially nil until the Cocoanut Grove fire in Boston stimulated the investigations of Adler [1] and Cobb and Lindemann,[3] who found that about half the victims suffered from psychological complications when followed up one year later. These were usually minor, with "general nervousness" or "anxiety neurosis" being the most common diagnoses. Most of the more recent studies have tended to focus on psychiatric problems during hospitalization, on epidemiology, and on methods of management during hospitalization.[2, 4–7, 9, 16] Generally there has been much more interest in the reactions of burned children and their parents than in the reactions of adults.[8, 10, 12–15, 17–20] Several recent studies of long-term psychiatric sequelae in the pediatric group suggest that both children and their parents have significant and often severe adjustment problems.[20] Accordingly, a study of the long-term adjustment of adult burn victims seemed badly needed.

The objective of this study was to determine the incidence of psychiatric complications in a group of "normal" adults burned during the productive years of their lives when evaluated several years after this trauma. Concentrating on the time of discharge and the months and years thereafter, we raised and attempted to answer a group of questions: 1) How often do patients develop "emotional problems" secondary to their burn? 2) What types of "emotional problems" typically occur? 3) Can one foresee such problems in advance and take any preventive measures?

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* Resident in Psychiatry.

** Professor of Psychiatry.

*** Assistant Professor of Surgery.

Material and Methods

The sample studied consisted of nine women and 11 men seen from 1 to 5 years after being burned. Through review of the charts of all patients hospitalized on the University of Iowa Burn Unit from 1965 to 1969, fifty patients were selected as suitable for inclusion. Minimum selection criteria were that the patients be from 18 to 60 years old at the time they were burned and have a greater than 20% surface area of the body involved by burn; type of burn did not affect inclusion or exclusion, but any patient whose chart indicated a history of alcoholism, seizure disorder, or hospitalization for psychosis or "nervous breakdown" was excluded.

From this group 33 patients were contacted and invited as part of a follow-up study of the long-term emotional adjustment of burn patients to come for interviews and psychological tests. Those contacted were not selected randomly. Because we felt more could be learned from those patients who had suffered greater trauma or more significant deformity, preference was given to patients with facial burns, with greater body surface area burns, and in the 20 to 40 age range. Of the 33 contacted, 20 came for interviews. Among the 13 who did not, five did not answer the letter, three had moved to an unknown address, two declined to come because of significant business or health commitments unrelated to their burn, and three agreed to come but did not keep their appointments. The mean patient was a 34-year-old ($\bar{X} = 34.05$, $\bar{S} = 11.16$) married blue collar worker or farmer born and raised in Iowa with a 12th grade education. He is now 2.3 years post-burn ($\bar{X} = 2.30$, $\bar{S} = 1.26$). He had a 37% ($\bar{X} = 36.95$, $\bar{S} = 20.60$) burn with an initial hospital stay of 79 days ($\bar{X} = 79.20$, $\bar{S} = 65.90$), during which he had several skin grafting procedures. Since discharge he has returned several times for plastic reconstructive procedures.

Data collected consisted of interviews with the patient and one of his relatives, a Minnesota Multiphasic Personality Inventory (MMPI), current color photographs, and review and abstract of relevant information from old charts concerning hospital course. The interview with the patient was tape-recorded and followed a rather consistent and systematic format. Special emphasis was placed on the history since discharge, which explored reactions of family, friends, and strangers to the patient's illness and deformity and the effects it has had on work, social activities, family and marital relations, and recreation. During the course of the interview, each patient was asked to estimate the extent of his disfigurement on a scale of one to four, one corresponding to none, two to mild, three to moderate, and four to severe. An estimate was made independently by the examiner. Each patient was likewise asked to estimate how well he had adjusted to his injury and deformity, using a similar one to four scale with one corresponding to excellent and four to very poor. An estimate was also made by the examiner at the conclusion of the interview. Similar material was covered more briefly during the interview with the relative.

Results

Representative Case Histories

Each of the patients interviewed is very much an individual. Nevertheless, the following two case histories are fairly representative of the general types of problems encountered.

Case Reports

V. R. is a 32-year-old water plant operator burned 4 years ago. He had a 30% surface area burn involving his face, neck, chest, back and both upper extremities including his hands. He continues to have significant facial scarring with loss of facial hair, sideburns, an ear on the left side of his face and a mild lip contracture. He has had several surgical procedures since discharge including contracture releases on his face, a hair transplant, dermabrasion on his face, and

TABLE 1

	Years Post-burn	Estimated Adjustment Patient/Examiner	Psychiatric Diagnosis	Recreation	Work	Family Relations	Interpersonal Relations	Emotional Problems
1) C. B.	3	2/2	1) Traumatic neurosis 2) Mild depression	Decreased	Decreased	Improved	Shyer, more suspicious	Mild
2) T. H.	2	1/2	Chronic alcoholism	Unchanged	Decreased	Unchanged	Unchanged	None
3) B. H.	2	2/1	None	Unchanged	Unchanged	Unchanged	Unchanged	None
4) G. L.	1	1/2.5	Mild depression	Decreased	Decreased	Unchanged but sexually impotent	Unchanged	Mild
5) A. T.	2	1/1	1) Alcoholism 2) Passive dependency	Unchanged	Unchanged	Unchanged	Unchanged	None
6) D. A.	3	1/1	None	Unchanged	Unchanged	Improved	Unchanged	None
7) V. R.	4	1/1	None	Unchanged	Increased	Improved	Unchanged	None
8) L. T.	2	2/2.5	Traumatic neurosis	Decreased	Increased	Improved	Shyer, more easily hurt	Mild
9) D. M.	4	2/1	1) Manic depressive 2) Alcoholism	Unchanged	Unchanged	Unchanged	Unchanged	None
10) B. M.	5	1/1	None	Unchanged	Unchanged	Unchanged	Unchanged	None
11) G. V.	2	2.5/3	1) Traumatic neurosis 2) Mild depression	Decreased	Unchanged	Unchanged	Much shyer	Moderate
12) J. K.	1	2/2	None	Decreased	Decreased	Improved	Shyer	Mild
13) G. L. S.	1	1/1	Castration anxiety	Unchanged	Decreased	Improved	Unchanged	None
14) P. E.	3	2.5/3	1) Marital maladjustment 2) Passive-aggressive 3) Traumatic neurosis	Unchanged	Unchanged	Separated from husband	Unchanged	Moderate
15) M. E.	4	1/1	None	Unchanged	Unchanged	Unchanged	Unchanged	None
16) S. S.	1	1/1	None	Unchanged	Unchanged	Unchanged	Unchanged	None
17) F. S.	1	1/2	None	Unchanged	Unchanged	Improved	Uuchanged	None
18) W. M.	1	1/1	None	Unchanged	Decreased	Unchanged	Unchanged	None
19) M. P.	1	1.5/1	None	Unchanged	Unchanged	Unchanged	Unchanged	None
20) J. H.	3	1/2	Inadequate personality	Unchanged	Unchanged	Unchanged	Unchanged	None
		1.4/1.6		25%	30%	5%	20%	30%

intradermal Triamcinolone. He has a prosthetic ear. He was injured at work while putting a fuel pump on the carburetor of his car. It backfired and exploded, and he found himself in a sudden mushroom of flames.

His hospital stay lasted about 60 days and involved several split thickness skin grafting procedures. He remembered the pain he experiencd vividly 4 years later and had tears in his eyes as he spoke of it. Although he tries to repress it he describes it as a memory "you just have to live with." Early in his hospitalization his eyes were swollen shut and he feared blindness. He had an emergency tracheostomy to which he reacted with great relief because he was suddenly able to breathe. For the first several weeks he

was delirious and had auditory hallucinations. As he began to recover he caught a glimpse of his appearance for the first time by borrowing his wife's compact and looking in the mirror. He then realized he would lose his left ear and felt severe disappointment about this. As he improved he began to appreciate physical therapy and to actively exercise his hand and arm even when the therapist was not there.

The day he was discharged he attended his high school class reunion while still wearing bandages. He felt completely accepted by his old friends. Although he feared his children might be repelled, this was not borne out, for they accepted him immediately and spontaneously expressed their joy in seeing him again. He feels that generally strangers have reacted well. Adults have stared at him or commented on his appearance very little. Children express their reactions more freely and when this first happened he felt quite hurt and had thoughts of giving up and withdrawing completely. Gradually he became hardened to the comments and began to write them off as curiosity natural in children. He returned to work about one month after discharge. His hands had had third degree burns and were still extremely painful and sensitive with some claw deformity. He describes beginning the day with pain so severe as he turned the valves that he felt "as if he had been hit on the hand with a sledge hammer" and tears would run out of his eyes. Gradually he recovered and now has normal function in his hands. He now is working a 40-hour week at the water plant and a 20-hour week as a dental technician. He admits that he uses work as a defense to keep himself from thinking about other problems. His main concern about his appearance is focused on the loss of his ear which he describes as the hardest thing for him to bear about the injury. His relationship with his wife and his family has if anything been made closer. He participates in the same recreation that he used to, including swimming. He was very pleased several years ago when he tried to get back into the Naval Reserve and succeeded in doing so, seeing this as a symbol of his return to normality. He has occasional blue spells but snaps out of them spontaneously. He sleeps normally, although he had severe sleep disturbance during the first month or two after discharge. He has had occasional nightmares but cannot recall them. He estimates his deformity as 2; examiner's estimate is 3. He estimates his adjustment as 1, while the examiner's estimate is 1.

The patient's father was a laborer in a brewery and his mother a housewife. His was a close-knit Roman Catholic family with six children, of whom the patient was the second oldest. He was a hard-working, conscientious youngster who had a paper route which was handed through the brothers by family tradition. As an older child he took quite a bit of responsibility in caring for the younger ones and used his paper route money to support himself during high school. His premorbid personality was stoical, hard-working and independent. His MMPI was normal. He has no psychiatric diagnosis.

C. B. is a 33-year-old housewife and mother of five seen 3 years after burn. She had a 45% burn area involving her fact, neck, both upper extremities, her back and both buttocks. Since discharge she has had contracture releases of her face and neck and injections of intradermal Triamicinolone. She incurred her burns in a house fire, the cause of which is unknown. The fire department implies that her 4-year-old son, Billy, started it, while the patient and her husband prefer to think that it was due to defective wiring. When the patient came downstairs after smelling smoke and saw that her living room was in flames her initial reaction was somewhat irrational. She instinctively ran next door and phoned the fire department as her first measure. She returned to the house and ran upstairs to rescue her 1 and 4-year-old children. Because flames blocked her passage downstairs she threw them out the window and then jumped herself. Her 3-month-old baby was sleeping downstairs in the dining room. In spite of the warnings of observers she broke open a window, crawled in, grabbed the baby and returned. Nevertheless the baby died almost immediately afterward. She has relived the accident retrospectively many times to consider ways that she might have saved all the children, always realizing guiltily then that she could have saved them if she had evacuated them all immediately rather than calling the fire department first.

Her hospital stay lasted about 120 days and involved several skin grafting procedures. During her first 2 weeks of hospitalization she was disoriented and agitated. She had no pain at the time but as she recovered the pain became continuous, severe, and nearly unbearable. She describes herself as quite a difficult patient who felt anger, hostility and a great deal of self pity. She was prone to yell at the nurses, accuse them of being cruel, and argued with them. Because of respiratory distress a tracheostomy was required. She had some terrifying moments when this became clogged and she was unable to breathe. At these times she feared she was about to die. Her eyes were swollen closed and she feared blindness, never asking the staff about it and never therefore having her fears relieved. She worried about her appearance through most of the hospitalization but feared looking in a mirror and did not do this until close

to the time of discharge. She felt then that she was not as ugly as she had expected but nevertheless her revulsion was marked. As she began to have physical therapy she also felt quite angry toward the therapist. In retrospect she feels her attitude toward the nurses and therapist was quite inappropriate and she feels contrite about it and very grateful to them.

When Mrs. B. returned home for the first time her strongest longing was to see her children again. When she walked in the front door the children lined up and stared at her and did not come to her. She interpreted their reaction as revulsion, later learning that they held back because they had been told that Mommy was still in pain and so they should be careful. She continues to be somewhat self-conscious about her appearance. She refuses to wear a bathing suit and chooses her clothing to hide the scars on her cheeks and neck, always wearing a scarf and a long-sleeved dress. Since her injury she has gained quite a bit of weight and she prefers generally to think of her unattractiveness as being due to excessive weight gain and the aging process rather than to burn scars. Her sexual relationship with her husband has been unchanged; their marriage has if anything improved. She has decreased some recreational activities, no longer swimming or enjoying camping and going out to parties much less than she used to. She worked for a time prior to her injury as a nurses' aide and has tried to get this job again but has been turned down. She interprets this as being due to her appearance and is somewhat bitter about it. She is quite fearful of going upstairs or into the basement of their two story house, since she is fearful of being trapped. She continues to have unresolved guilt feelings about the death of the 3-month-old baby and feels chronically tired with decreased drive and interest. Her estimated deformity is 3, and the examiner's estimate is 3. Estimated adjustment is 2, and the examiner's is 2.

The patient grew up in a middle class family in a midwestern town. As a child she had temper tantrums and for a time completely refused to eat. Then for a time she overate and became overweight. She was an above average student in high school and participated in many activities. After high school she attended business school and did secretarial work. She married an insurance salesman but this ended in divorce after about 5 years. Her second marriage, to her present husband who is a mechanic, is a happy one. She describes her premorbid personality as outgoing, friendly and talkative. Her MMPI essentially is normal, with a slight elevation of the depression scale. Psychiatric diagnoses are a traumatic neurosis and mild chronic depression secondary to unresolved guilt feelings.

Incidence of Emotional Problems

The initial problem is defining what constitutes a geniune emotional problem. Is the patient who like V. R. cries as he describes the pain he suffered 4 years ago suffering from a significant emotional problem? What about the patient who like C. B. avoids activities she previously enjoyed because she is selfconscious about her scars? Each of these reactions is quite understandable and in a sense "normal." In general, it seems best to proceed pragmatically. For the purposes of this study, if a patient is seriously handicapped in any of the four dimensions in which we all function—in his capacity to work, to enjoy himself in recreation, to relate lovingly and productively within his family, and to interact comfortably with other people whether friends or strangers—then he can be said to have a significant problem. Thus according to this approach, V. R. can be considered normal and well-adjusted in that he functions effectively and well, while C. B. has an emotional handicap in that she has become limited in three dimensions (work, recreation, and interpersonal relations) as a result of her burn.

Using these criteria and basing the generalization on the 20 patients observed in this study, one may say that the long-term prognosis for most burn patients, even those severely burned, is quite good. Six patients, or 30%, were found to have emotional problems secondary to their burn, 20% of them classified as mild and 10% as moderate. Adjustment tends to improve with time. Of the patients more than one year post-burn, only four could be said to have emotional problems; other patients often described adjustment problems during their first year which cleared spontaneously as time passed. The tendency to have problems does not seem to be correlated with extent of burn or extent of deformity.

Family Relationships. Most strikingly, family relationships have generally been affected affirmatively rather than negatively

by the patient's traumatic experience. Among the twenty patients there have been no divorces and only one separation. Most commonly the patients describe family ties as increased. Patients repeatedly express gratitude for the support provided by their family both during and after their hospitalization. Their spouses, on the other hand, tend to express their continuing love for the injured person, to bolster his self-image by reassuring him that he remains the "same person" despite his altered appearance, and to enhance his self-esteem by respecting him for his courage and will to survive.

The first few months after returning home are often difficult, however. During their long months in the hospital, many patients pass their hours in bed imagining what it will be like to be home again. The reality of the first few days often does not fulfill the dream. Very young children often forget or do not recognize their mothers or fathers, pulling back as if from total strangers. This hurts. Somewhat older children simply respond naturally, however inappropriate or painful it seems to their parents, by commenting on their parent's changed appearance. Because of physicial handicaps, mothers may not be able to care for their children as well as they wish to, and fathers may have to wait to become providers again for several months. But these problems pass with time, and the affirmative aspects of family life far outweigh what eventually become only negative memories.

Interpersonal Relationships. Somewhat predictably, this is the area of adjustment which tends to be affected most negatively. Strangers or acquaintances are more prone to express tactless curiosity or even hostility toward someone who is different or deformed. Reflecting this, four patients or 20% of the sample describe themselves as more hesitant about interacting with other people, especially strangers. Since being burned they have become shyer, more suspicious, more sensitive to the reactions of others, and more easily hurt by rejection. They nevertheless force themselves to go out in public and meet strangers. Not a single patient has attempted to withdraw completely from interpersonal relationships. Of these four, three have significant facial deformity and their increased shyness and sensitivity is not surprising.

Here too patients often describe a difficult time during their first few months after discharge. They tend to hang back from going places and may go only when pushed by a husband, wife, child, or close friend. They gradually become more accustomed to going out as they undergo a process of *progressive desensitization.* This process occurs as they discover that most people will not react with shock or repulsion to them. As the patient, at first somewhat tentatively and fearfully, exposes his assumed "ugliness" to others and sees that they respond to his total self rather than his superficial deformity, he becomes progressively toughened and desensitized, at best having no self-consciousness about his appearance at all and at worst being somewhat shyer or more sensitive but still able to meet the public and shrug off its occasional rebuffs.

Work. Capacity or desire to work is probably not significantly affected over the long run in most burn victims. Six patients or 30% describe their work capacity as decreased, but four of these are in the range of one year post-burn and are in the process of completing their physical rehabilitation; these four are all eager to resume normal levels of function. C. B. is the only patient not working because she has been unable to find suitable work due to her altered appearance, and she does admit that she has not been very aggressive about applying because of feeling chronically fatigued and a bit self-conscious.

Recreation. Of the four aspects of adjustment discussed, recreation is probably of least significance in assessing over-all adap-

tation, in that the otherwise stable person can find other avenues of expression if a favored hobby or activity must be given up. Five patients, or 25%, have changes in their recreational life. Two of these are on the basis of actual physical deformity, in that they cannot handle baseballs or bowling balls as skillfully as they used to. The decreased recreation of the other three patients is emotional in basis in that they avoid activities which they previously enjoyed, such as attending dances or going swimming, since these activities tend to put a premium on physical attractiveness.

Types of Emotional Problems

Most of the problems which burn patients incur secondary to their trauma tend to be neurotic in nature and mild to moderate in degree. In spite of the attempt to cull out "abnormals," five patients had psychiatric problems unrelated to and beginning prior to their burn which were not indicated in the hospital charts from which this sample was drawn. These were most commonly chronic and long-standing personality disorders. One patient had a well-documented previous history of manic depressive psychosis the course of which was in no way affected by her trauma. Only one of these five was also felt to have an emotional problem secondary to his burn.

Traumatic neurosis was the problem noted most frequently, occurring in four patients or 20%. This term refers to a reaction of excessive sensitivity, emotional lability, occasional crying spells, insomnia, pan-anxiety, and sometimes phobias. It is best thought of as an accentuated anxiousness and fearfulness turned on by the experience of intense pain and injury which cannot then be turned off voluntarily by the patient once he has recovered. Most patients describe themselves as experiencing its characteristic symptoms soon after they return home and gradually recovering with time. This emotional state should probably be considered as normal, even in a fairly severe form, during the first few months after discharge and in a mild form during the first year after discharge.

Mild depression is the second most common problem, occurring in three patients or 15%. This condition is expressed symptomatically in periods of blueness, occasional crying spells, decreased drive and energy, increased fatigability, loss of interest in activities previously found enjoyable, and sometimes guilt feelings. This problem is probably best conceived of as an abnormally prolonged grief reaction, during which the patient is actually mourning for a portion of himself or of his identity which has been lost through injury and deformity.

Castration anxiety occurred in one patient who had suffered severe perineal burns. During the year after his discharge from the hospital, he and his wife attempted to have children but were unsuccessful. He became convinced that he had become sterile as a result of the trauma to his perineum and felt quite embarrassed and ashamed about his imagined inadequacy. His functioning was otherwise intact, and thus this was an isolated problem.

Discussion

Unlike the follow-up study of the Cocoanut Grove victims or the studies of burned children and their parents, this investigation suggests a generally optimistic psychological prognosis for the burn victim. Emotional problems are minor, taking the form of neuroses and tending to be mild in terms of the psychic discomfort that they produce. Most patients eventually resume preinjury levels of functioning. The difference between this study and earlier ones lies in part in the nature of the sample and in part in the criteria used to define an emotional problem. The sample drawn on here was a relatively homogeneous group of small town midwestern adults, quite unlike the urban adults seen after 11 months by Adler. Further, we have attempted to base our conclusions as to the incidence and types of

problems on relatively objective criteria and to subclassify them as mild, moderate, or severe. The problems noted by Adler in 50% of her sample would probably be classified as mild in this study, and based on our experience the incidence would probably be less if the patients were seen 2 years after being burned rather than 11 months.

Yet even if the prognosis is good and the problems are mild, the emotional pain which most of these patients experience as they adapt to their return home is quite real. Although most of the patients surmount the problems they must face, we would be doing them a significant service in easing this transition. The surgeon caring for the burn patient, especially if he is the patient's "own doctor," is the logical and natural person to advise him about what to expect. In a large burn unit a chief nurse or a nurse particularly interested in emotional problems may serve the same function.

1. Use of Medication. Patients often experience the traumatic neurosis described above most severely during their first days or weeks at home, and its most troubling symptom is often insomnia. Patients should probably be forewarned of this and discharged with some effective sedative, particularly if they have been taking sedatives while in the hospital. Other psychotherapeutic agents such as diazepam (Valium) in those who have anxiety as a predominant symptom or amitryptilene (Elavil) in those with depressive components may also be helpful during this transitional period.

2. Handling of Deformity. One of the strongest triggers for a severe grief reaction occurs when a patient sees his deformity, especially facial deformity, for the first time. He should be encouraged to ventilate his feelings about this. The responses of those around him may determine his emotional course for the next several months. Nearly all patients wish to be supported and reassured about their appearance, no matter how bad it actually is. Such reassurance, beginning with family members and medical personnel, brings into operation the process of progressive desensitization described above. Nonetheless, the process should not be introduced with excessive rapidity by inviting the patient to look in a mirror when the deformity is still florid, unless the person who does so is willing to provide repeated support and reassurance. Accordingly, it is probably best to keep mirrors inconspicuous in the rooms of burn patients and to use the patient's behavior as a cue in deciding when to let him see himself in a mirror; he will usually wait to ask until he is ready to face himself.

3. Anticipating Questions. As in the case of deformity, there is a fine line between permitting patients to use denial when they are not ready to face their problems and permitting patients to be open and free about expressing their fears. Often the doctor can find out if the patient has any troubling fears by asking in an interested manner if he has any questions or matters he is concerned about. What is obviously a temporary problem to the surgeon may seem possibly a permanent problem to the patient. Patients may interpret their swollen eyes as meaning that they may become blind, their swollen genitalia as meaning that their sex organs or urinary tracts will never work again, etc. In such cases the patient may hesitate to ask about such personal matters or deep-seated fears, and he will be enormously relieved when the doctor anticipates his concerns and reassures him. Thus no harm can be done when those questions which have totally affirmative answers are anticipated and dealt with.

4. Management of Nursing Care. Here again it is best to remain flexible and let the patient provide a guide. In general most patients wish to become independent as soon as possible; they often feel they can remove their own dressings with less discomfort and prefer to feed themselves as soon as possible. A few, however, interpret

enforced independence as abandonment by the nursing personnel and see their messiness in feeding themselves as an additional and painful reminder of their weakness, dependency, and regression. When it is possible, therefore, patients appreciate being given some responsibilities for these minor decisions about their management.

5. Anticipation of Problems on Returning Home. Ideally at some time shortly before the patient is due for discharge, his doctor or a nurse who has been close to him should spend about a half hour discussing with him some of the problems he will have. The transition to the home situation may be eased considerably by a little forewarning that children may not recognize him because he has been away for so long, that it is normal to feel uncomfortable about confronting strangers after having been in the hospital for so long, that he must not give in to the temptation to cover his scars since this slows down the process of progressive desensitization, that most patients experience the symptoms characteristic of a traumatic neurosis after discharge, etc.

Summary

This study evaluates the long-term emotional adjustment of a group of 20 severely burned adult patients seen from 1 to 5 years after their initial injury. Thirty per cent of the patients were found to have emotional problems secondary to their injury, with the commonest types being traumatic neuroses and mild depressions. Twenty per cent of these problems were classified as mild while 10% were felt to be moderate. Most of the patients were functioning at their pre-injury levels in terms of work, interpersonal relationships, family relationships, and recreation. Thus the prognosis for developing a successful adjustment after incurring a severe burn is quite good.

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