Amputation: Preoperative Psychological Preparation

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Abstract: **More than 90 percent of all amputations are now due to the complications of chronic disease. Because most amputations can be anticipated, the preoperative period allows the opportunity for psychological preparation of the patient. This article highlights the important contribution family physicians can make before patients undergo amputation. Common patient reactions before and after amputation are reviewed, and an illustrative case is described.**

Our experience and review of the literature suggest that psychological intervention during the preoperative period is associated with a less complicated postoperative adjustment and grieving experience. The family physician can promote patient adjustment by providing accurate information, eliciting unspoken fears, and encouraging the involvement of the patient's family. By emphasizing the patient's enduring characteristics and his or her past coping ability, we believe that family physicians can lessen the psychological distress of amputation and facilitate adaptation. (J Am Board Fam Pract 1992; 5:69-73.)

Until the end of World War II, the majority of amputations were performed following trauma, which often resulted from combat injuries. In the past 50 years, however, a dramatic increase in amputations associated with the complications of chronic systemic disease has occurred. Of the approximately 60,000 amputations performed annually in the United States, more than 90 percent are due to ischemic and infective gangrene.[1] The rate of amputation increases rapidly for those who are 55 years old or older, and the procedure most often involves lower extremities.[2] It is also reported that almost 75 percent of all amputees are men.[3] Thus, the present-day amputee is likely to be an older, chronically ill man suffering the complications of peripheral vascular disease or diabetes mellitus with the additional likelihood of having limited social support.

The changing demographic nature of the amputee population allows health care workers to focus on the preoperative phase, when supportive, psychological intervention can be provided to improve postoperative adjustment. Most studies, however, have reported on long-term recovery from amputation, and presurgical intervention has received little attention. The family physician is in a position to take a central role in the preoperative period by virtue of the long-term relationship established with the chronically ill patient.

The patient's reaction to amputation is a complex psychological process influenced by many factors. These factors include the patient's age, sex, type of amputation, expectation for rehabilitation, and the perceived or functional value of the lost body part.[4] For example, amputees who have lost their dominant hand have experienced more long-term adjustment difficulties than other amputees.[5] The family physician is especially capable of assessing a number of additional factors critical to the patient's adjustment, including the patient's premorbid personality, coping skills, previous losses, extent of social support, and the quality of the patient's family system (Table 1).

The majority of patients adjust physically to amputation, although all experience periods of psychological distress prior to surgery or during recovery.[4,6,7] The most common manifestations of this distress include grief reactions, anxiety, phantom limb sensation or pain, and preoccupation with body image. Social isolation and withdrawal are common consequences, and long-term difficulties with social adjustment and occupational rehabilitation have been noted. Caregivers, especially spouses, are susceptible also to psychological impairment and poor health.[8,9] Thus, addressing the psychological challenges facing amputees and their families is essential and can, in fact, have

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Table 1. Factors Influencing Psychosocial Adjustment to Amputation.

Age
Sex
Type of amputation
Perceived or functional value of body part
Premorbid personality
Past coping skills
Expectations for rehabilitation
Social support
Family system
Occupational and vocational demands
Type and extent of disease

more importance than the quality of the surgery or the choice of prosthetic device.[7]

Despite this documented psychological morbidity, patients and families seldom receive adequate psychological support or intervention.[10,11] Care is segmented during rehabilitation, and patients become overwhelmed and reluctant to express their fears.[11,12] Primary care physicians frequently fail to provide psychological support because they lack experience with amputees, fail to recognize psychological issues, are pressured by the time demands of practice, or have the care of the patient transferred to other specialists.[7,11,12] Nevertheless, family physicians can make a significant contribution during the preoperative period, when psychological intervention has been shown to lead to a less complicated postoperative adjustment and grieving experience.

Case Example

A 56-year-old contractor and construction supervisor had been treated by his family physician for diabetes and peripheral vascular disease for 12 years. Because of recurrent leg ulcers and resting ischemic pain, he was aware of the potential for amputation of his leg, but he had avoided any discussion of the topic. Treatment failures and findings on diagnostic studies made it increasingly apparent that an above-the-knee amputation of his left leg was indicated.

When the family physician discussed amputation, the patient evidenced superficial acceptance. He stated that he would consider surgery in a few months after a long-planned fishing trip. When the physician explained the urgency of the surgery, he responded with a dramatic increase in emotional lability and psychomotor agitation. He became tearful and began pacing in the examination room. When encouraged to express his concerns, the patient indicated his fear that he would never return to work, that his business would fail, and that his workmen would never respect him again. He began sobbing and referred to himself as a "burden to his family" and "a cripple who would be better off dead."

The patient expressed intense guilt associated with his alcohol abuse, failure to comply with medical treatment, and inattention to his family. He promised to alter his behavior radically to prevent the amputation. Regaining composure, he told his physician that he had always been an authoritarian, no-nonsense person with his workmen, wife, and children. He greatly feared ever having to depend on anyone. Now he feared not only becoming disabled but believed that this was only the beginning and that he would eventually lose his other leg as well.

The patient's reluctance to agree to amputation and his increased emotionality proved highly distressing to family members. The physician met with the patient, his wife, and two adult sons to reinforce the need for surgery and to encourage discussion of the family's concerns. Through this process, it became apparent that family members recognized the extent of the patient's vascular disease and accepted the need for amputation. The family's willingness to discuss rehabilitation needs and to explore strategies that would accommodate the patient's work and recreational activities proved reassuring to him. Although tearful and afraid, the patient agreed to the procedure.

Following a successful above-the-knee amputation of his left leg, the patient proceeded through rehabilitation and chose not to wear a prosthesis but to use a wheelchair. He returned to work in a more supervisory capacity and adjusted well. Three years later, after recurrent ulcers, his right leg was also amputated above the knee.

Discussing Amputation

The psychological response to the threat of amputation is highly individualistic, and every patient will differ in preoperative needs, although several themes consistently reappear. Amputation should be discussed relatively early in the course of a disease if there is any indication that the procedure might be necessary. When the procedure is indicated, the physician should review the attempts that have been made to prevent the loss of the limb to reassure the patient that the

decision is not a capricious one. Reviewing past treatment, however, can elicit self-blaming statements from the patient. These statements should not be dismissed or minimized but should be recognized and discussed. It is important to focus on the necessity of the amputation, and the procedure should be explained in words consistent with the patient's educational level and intellectual ability. Verbal information should be supplemented with illustrations and written material that can facilitate patient understanding[12] (Table 2).

During the preoperative stage, the physician's goal is to establish a supportive relationship with the patient and family.[4,12] For example, although detailed information about the amputation should be provided by the surgeon, this information is often highly technical. The family physician can effectively clarify the surgeon's presentation or answer subsequent questions. The patient's initial emotional reaction can be expected to limit comprehension; therefore, it will be necessary to discuss the procedure more than once, and the information should be provided at a pace the patient can tolerate. There should be reassurance that surgery will not be performed without the patient's consent, although delays between admission and amputation are associated with complications and infection.[2] Family members can provide valuable support and information during this decision-making period.

Table 2. Preoperative Information and Preparation.

Early acknowledgement of possibility for procedure
Firm, clear indication of necessity for procedure
Review previous attempts to prevent loss
Involvement of family
Avoidance of false optimism
Verbal descriptions of procedure supplemented with written materials
Reassurance that procedure will not be done without consent
Clarification of information provided by other specialists

Emotional Reactions

Certain emotional reactions are consistently experienced prior to surgery. An initial period of shock occurs regardless of the obvious necessity for the operation or the amount of forewarning provided. Anxiety is likely to surface and is manifested through psychomotor agitation, hypervigilance, expressions of guilt, and various forms of bargaining, such as promises to make lifestyle changes or perform altruistic deeds.[4] The patient's anxiety can be expressed also through vivid and frightening dreams.

Regressive behavior, anger, and intensely ambivalent responses can also occur and could signal unspoken fears of death and mutilation.[12,14,15] Symptoms of anticipatory grief, such as tearfulness and dysphoric episodes, are also common although too often unexplored. Premorbid personality style, such as dependent, obsessive, or depressive tendencies, might be exacerbated. The physician should encourage the patient to focus on the reality of the upcoming event and should clearly communicate the need for the patient to express unspoken fears. The value of this intervention cannot be underestimated, as amputees are consistently noted to repress their emotional and cognitive reactions.[7,12,13]

In addition to fears of death and mutilation, patients will have recurrent concerns about their degree of future disability, the effect of amputation on their sexual attractiveness, and their diminished worth to family, friends, and co-workers. Major underlying psychological dynamics include body image distortion; feelings of helplessness, dependency, and loss of status; and fears of abandonment. It is not uncommon for patients to anticipate and fear subsequent amputations or procedures, a fear that, given their chronic medical problems, might be warranted.[1,2]

Special attention has been focused on elderly patients undergoing amputation. When compared with younger amputees, this group is more likely to have numerous medical problems, a previous amputation, less social support, and a poorer prognosis.[8,13] Although less prone to immediate postsurgical depression, the elderly are more likely to experience long-term psychological complications, and their quality of life is often poor in comparison with younger amputees.[2] When an older patient has experienced extended suffering associated with a chronic disease process, however, amputation can be perceived as a relief and improvement, [12] and there is some evidence that body image conflicts may be less severe.[14] These findings reinforce the importance of a thorough psychosocial assessment and an individualized approach.

Intervention Strategies

The most important themes of intervention are to maintain a focus on the enduring characteristics

Table 3. Preoperative Intervention.

Recognition of ambivalence
Identify anger, grief, and depression
Elicit unspoken fears: death, mutilation, rejection, sexuality
Challenge patient to confront fears
Anticipate practical concerns: occupational limitations, recreation, lifestyle changes
Attend to caregiver concerns
Challenge heroic cheerfulness
Emphasize continuity of personal characteristics
Elicit patient's coping response during past distressing events

of the patient and to reinforce the patient's ability to survive and cope with past crises (Table 3).[12,13]

Above all, falsely optimistic predictions should be avoided.[11,12] Amputees report such predictions as one of the least helpful interventions by health care personnel, who are probably responding to their own discomfort about amputation. False optimism can create an expectation for "heroic cheerfulness" on the part of the patient,[11] and such statements as "you'll be good as new" have resulted in patient resentment. Reassurance, encouragement, and honest advice about what to expect are ultimately much more appreciated than misleading predictions.

Another important intervention by the family physician during the preoperative phase is to emphasize strongly the family's involvement. Keeping family members informed and involved early in the process is essential to overcoming the patient's likelihood of withdrawing or anticipating social rejection. In addition, by involving family members, it allows them to express their concerns and anticipate how their lives will be affected.[8,9,13] Caregivers have been noted to minimize their own distress during the patient's recovery and should be helped to acknowledge their own needs.[13,16]

Other amputees who have made a functional adjustment can have a positive impact on the patient during the preoperative phase.[4] These persons can provide positive modeling by discussing their adaptation and their fears at the time of diagnosis.[11] This intervention, however, can be overwhelming for some highly ambivalent patients and should be suggested only after cautious consideration and discussion with the patient.

Psychiatric Consultation

During the preoperative stage, some patients will require psychological or psychiatric intervention beyond the ability of the family physician. When more specialized mental health intervention is indicated, a timely and appropriate referral should be provided. Relaxation training or hypnosis has been used effectively for highly anxious patients, and consultation regarding psychotropic medication or pain management might be indicated. Issues of competency, especially with older patients, occasionally must be addressed.[4] Nevertheless, counseling by the family physician, which facilitates the natural grieving process, is appreciated by patients[4,8] and often noted as being more appropriate and effective than psychiatric referral.[12]

Conclusion

Amputation is a traumatic life event with numerous psychological and physical consequences. Increasingly, surgical amputation is performed for patients with chronic disease processes, so that such patients constitute the majority of the amputee population. Because these patients and their families are at risk for a difficult psychological adjustment, attention should be directed to the preoperative period, when preparation has been shown to diminish long-term complications. The preoperative period can be the point of greatest impact by the family physician, who is in a position to provide supportive counseling that will enable patients to begin the process of reestablishing their sense of self as a whole person.

Finally, it should be noted that the issues faced in preparation for amputation also are common to preparation for other disfiguring surgical procedures, including laryngectomies, enterostomies, mastectomies, and facial operations. Each of these procedures presents a critical threat to the patient's self-concept and strain coping abilities, but each also contains uniquely challenging dimensions. Many of the preamputation reactions described are likely to occur when patients are confronted with similarly mutilating interventions, although individual variations in response should be anticipated. The family physician's effectiveness remains in providing an on-going supportive relationship that focuses on the enduring characteristics of the patient.

References

1. Krupski WC, Skinner HB, Effeney DJ. Amputation. In: Way LW, editor. Current surgical diagnosis and

treatment. 9th ed. Norwalk: Appleton & Lange, 1991:757-67.
2. Weiss GN, Gorton TA, Read RC, Neals LA. Outcomes of lower extremity amputations. J Am Geriatr Soc 1990; 38:877-83.
3. Freeland AE, Ward EF, Fisher LC. Orthopedic surgery. In: Hardy JD, editor. Hardy's textbook of surgery. 2nd ed. Philadelphia: JB Lippincott, 1988: 1253-7.
4. Frierson RL, Lippmann SB. Psychiatric consultation for acute amputees. Report of a ten-year experience. Psychosomatics 1987; 28:183-9.
5. Shukla GD, Sahu SC, Tripathi RP, Gupta DK. A psychiatric study of amputees. Br J Psychiatry 1982; 141:50-3.
6. Parkes CM. Psycho-social transitions: comparison between reactions to loss of limb and loss of a spouse. Br J Psychiatry 1975; 127:204-10.
7. Friedmann LW. The psychological rehabilitation of the amputee. Springfield: Charles C. Thomas, 1978.
8. Thompson DM, Haran D. Living with an amputation: the helper. Soc Sci Med 1985; 20:319-23.
9. Thompson DM, Haran D. Living with an amputation: what it means for patients and their helpers. Int J Rehabil Res 1984; 7:283-92.
10. Foort J. How amputees feel about amputation. Orthotics Prosthet 1974; 28:21-7.
11. MacBride A, Rogers J, Whylie B, Freeman SJ. Psychosocial factors in the rehabilitation of elderly amputees. Psychosomatics 1980; 21:258-61, 265.
12. Henker FO 3d. Body-image conflict following trauma and surgery. Psychosomatics 1979; 20:812-15, 819-20.
13. Lundberg SG, Guggenheim FG. Sequelae of limb amputation. Adv Psychosom Med 1986; 15:199-210.
14. Thompson DM, Haran D. Living with an amputation: the patient. Int J Rehabil Res 1983; 5:165-9.
15. Frank RG, Kashani JH, Kashani SR, Wonderlich SA, Umlauf RL, Ashkanazi GS. Psychological response to amputation as a function of age and time since amputation. Br J Psychiatry 1984; 144:493-7.
16. Wilson V. The consequences of elderly wives caring for disabled husbands: implications for practice. Soc Work 1990; 35:417-21.