

REVIEW

Psychological factors in postoperative adjustment to stoma surgery

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Around one-quarter of stoma patients experience clinically significant psychological symptoms post-operatively. Psychological disorders are often not detected by those involved with the care of stoma patients. Past psychiatric history, dissatisfaction with preoperative preparation for surgery, postoperative physical symptomatology and the presence of negative stoma-related thoughts/beliefs have all been shown to be significantly associated with psychological morbidity after surgery. These findings suggest that health-care professionals (especially surgeons involved with this patient population) should ask all patients about these factors before and after surgery. Questionnaires could be used to screen for difficulties and/or staff could undertake training aimed at improving the detection of psychological morbidity and endeavour to strengthen links with liaison mental health services. Future research in this area should be prospective, using psychometrically valid measures and be focused on the prediction, prevention, detection and treatment of poor psychological adjustment after stoma surgery.

Surgery resulting in the formation of a stoma requires a considerable degree of psychological adjustment (1,2). Some of the patients who have this form of surgery experience clinically significant psychological symptoms. The most common symptoms are those of an anxiety

disorder or a major depressive episode. These symptoms are often not detected by healthcare professionals (1,3). Psychological morbidity prevalence research which has been carried out in this area has been methodologically problematic (4). Stoma patients (regardless of which form of stoma they have) seem to report similar concerns. These can be broadly categorised into concerns about changed body image and attractiveness (5), noise/odour (6-11) and leakage (9,10,12-14). There has been little research which has focused on intrapersonal factors which may be associated with psychological morbidity (15).

This review will outline the prevalence of psychological morbidity among stoma patients. Some of the methodological problems and weaknesses of past research in this area will be described. Detection of problems by healthcare professionals will be considered and the factors which have been shown to be associated with psychological symptomatology will be described. The importance of stoma-related thoughts and beliefs will then be outlined. The clinical implications of the findings from the literature in this area will be summarised and some future research implications will be presented.

Prevalence of psychological morbidity in stoma patients

Approximately 18-26% of patients who experience surgery resulting in the formation of a stoma experience psychological symptoms during the first 3 months after surgery (3,16,17). The prevalence estimates for morbidity

at 1 year after operation are of a similar magnitude (3,18). Some studies have quoted prevalence rates to be much higher than this (19,20). These higher rates are likely to be a reflection of methodological weaknesses which will be discussed later. The most common mental health problems which occur are adjustment disorders with anxious and/or depressed mood, major depressive disorder, panic disorder with or without agoraphobia, social phobia and generalised anxiety disorder. Thomas *et al.* (16) have shown that 29% of the patients interviewed improved psychologically after surgery, that 23% deteriorated and that 48% of patients experienced no change in psychological symptoms. Stoma patients with clinically significant symptomatology at 3 months are likely to continue to have symptomatology when followed up at 12 months (3,18). The prevalence estimates for this group of surgical patients are of the same magnitude as those found for patients who have undergone mastectomy surgery (21). There have been no significant changes in the levels of psychological morbidity experienced by this group of patients despite recent advances in stoma care (5).

It has been demonstrated that psychological morbidity among patients who have undergone sphincter-saving resection is lower than that experienced by patients after surgical procedures resulting in the formation of a stoma (4,22–25). The presence of significant psychological symptoms postoperatively may compromise a patient's overall recovery after surgery. Patients may experience sexual dysfunction postoperatively. This may be owing to surgical factors, psychological factors or a combination of both (26,27). Suicidal ideation may occur after surgery (1,2,6,28). A small number of patients experience difficulties with regard to their occupational functioning (29) and/or their social functioning (18).

Methodological problems with prevalence research

There are a number of methodological problems which are inherent in previous prevalence studies. It is important that surgeons are aware of these methodological issues as they are likely to be involved in discussing, planning or implementing research in this area. Some of the studies in this area have attempted to estimate the prevalence at the time of the study (16) while others have attempted to estimate prevalence retrospectively (25). Studies of the latter type are likely to lead to inaccurate estimates owing to selective memory effects. It has been shown that there are a number of patients who are already experiencing clinically significant psychological morbidity before surgery. Studies have often not taken this preoperative morbidity into account (1,11,19,20,30,31). Studies which use postoperative psychological symptomatology as the sole indicator of psychological adjustment do not allow for changes in distress levels to be measured. Researchers in this area have used different methods to

estimate psychological morbidity. These include patient self report (20); review of hospital records (19); semi-structured interviews (9,16) and non-standardised measures with unknown psychometric properties (1,2,31). Some studies which have used psychometrically reliable instruments have used measures which have not been standardised on physically ill patients (11).

The length of time which has elapsed between surgery and time of interview is an important contributory variable, but some studies do not include this information (30). Those studies that have collected information on the length of time since surgery have studied patients at very different times after surgery. Druss *et al.* (19) studied patients who were between 4 and 19 years after surgery. Devlin *et al.* (1) included patients who had had their stomas for between 2 and 9 years. The range of durations after surgery in one study was between 1 and 44 years (32). It is highly likely that different factors influence levels of psychological morbidity in the immediate months after surgery compared with decades later.

Patients with different premorbid diseases have been studied together (9,16). Most studies have failed to include a suitable control group (3). Small numbers of patients (8) and biased samples, such as those recruited from self-help organisations (33) mean that conclusions are often drawn from observations made on samples which may not be representative of the whole population of stoma patients. Methodological factors can significantly confound the results of studies which aim to provide estimates of psychological morbidity and can make meaningful interpretation of results difficult.

Detection of psychological morbidity

The recognition and treatment of psychological problems after discharge from hospital is often poor (34). Psychiatric disorders are frequently undetected by medical staff (35–37). Clinically significant psychological symptoms after stoma surgery are often not detected by healthcare professionals working with stoma patients (1,3). Surgeons have an important role in highlighting with colleagues the possibility that psychological symptoms are present. The low detection rate may be because of a reluctance of patients to disclose emotionally charged material (21,36,38–40) for fear that they may be considered troublesome (39) and/or it may be because of a reluctance of healthcare professionals to ask about these areas (41–43). Rubin and Devlin (44) have suggested that the way in which surgical outpatient consultations are arranged may not be conducive to the disclosure of worries and concerns by stoma patients. Detection of psychological problems is likely to increase the chance that a patient will receive the appropriate pharmacological and/or psychological treatment. There may be secondary benefits subsequently in terms of a reduction in the inappropriate utilisation of services, return to work and/or improved quality of life.

Factors associated with psychological morbidity

There have been various attempts to identify factors which may be associated with increased rates of psychological morbidity in certain patients. The methodological criticisms mentioned earlier apply equally to this research. Variables which have not been found to be significantly associated with outcome will be outlined. Variables which have been shown to be significantly associated will then be presented.

It is often stated that the duration of illness before surgery is a significant determinant of psychological adjustment. That is, someone who has had many years of debilitating inflammatory bowel disease symptoms is likely to make a better adjustment to life with a stoma than someone who has stoma surgery after the detection of cancer of the bowel. It is possible that this will be the case for some individuals. However, research evidence suggests that length of preoperative symptoms is not significantly associated with the development of psychological symptoms (17,28). Age (11,16–18,45–47); marital status (16,17); gender (17,18,47); type of stoma (17,47); presurgical diagnosis (16–18,48) and severity of illness before surgery (17,45) have not been shown to be related to psychological outcome. The factors which have been identified to be significantly associated with postoperative psychological morbidity can be separated into pre- and postoperative factors. The presence of past psychiatric history has been shown to be associated with increased postoperative psychological symptomatology (2,28,45). The degree to which a patient is satisfied with preoperative preparation for stoma surgery is significantly associated with postoperative psychological adjustment (28,45). Patients who are dissatisfied with their preparation are more likely to develop significant morbidity than those patients who perceive their preparation as satisfactory. Patients who experience postoperative physical complications and/or stoma-related physical symptomatology seem to have more psychological problems (18,28,49).

Researchers in health psychology have demonstrated that a patient's thoughts and beliefs about their illness are more important in understanding their emotional reactions to it than illness-related factors (50–53). White (17) found that the degree to which stoma patients agreed with negative stoma-related beliefs and thoughts accounted for almost 60% of the variability in psychological outcome. Patient responses to items 'My stoma rules my life'; 'I am still a complete person despite my stoma' and 'I feel that I am in control of my body after my stoma operation' explained significant amounts of variability in psychological distress. In other words, two patients may have gone through ostensibly the same procedure, have had similar postoperative complications, but one is clinically depressed while the other has not developed clinically significant depressive symptoms. Their thoughts and beliefs about their situation seem to be the key to understanding why they react in the way they do.

These findings regarding past psychiatric history, satisfaction with preoperative preparation, postoperative

physical symptomatology and the importance of stoma-related cognitions have wide-ranging implications for clinical practice which will now be discussed.

Implications for clinical practice

The main research findings from studies in postoperative adjustment to stoma surgery have implications for the clinical practice of surgeons working in this area. Patients who have undergone this type of surgery should be screened routinely for the presence of major psychological symptoms when followed up postoperatively. It has been suggested that all patients who have undergone surgery resulting in the formation of a stoma be assessed psychologically at 3 months after operation (45). Surgical staff and/or stoma-care nurses could use screening questionnaires which exist for this purpose (42,54) such as the Hospital Anxiety and Depression Scale (HAD) (55). The Stoma Cognitions Questionnaire (17) is another measure which is currently being developed. Screening measures are quick and easy to administer and would help staff to identify psychological symptoms. Questionnaires often act as a prompt for the disclosure of information concerning anxieties and fears (54). One study showed that regular monitoring of breast cancer patients by a specially trained nurse counsellor resulted in 76% of patients who needed psychological help being referred to a mental health practitioner (56). Training courses to help healthcare professionals improve interviewing and assessment skills and to improve the detection of psychological problems (57) may also be of benefit. Patients identified to be experiencing clinically significant symptoms could then be referred to mental health services for advice from a mental health professional and/or specialist assessment, advice and/or treatment, if appropriate. The Royal College of Physicians and Royal College of Psychiatrists have produced a report on the psychological care of medical patients (34). Although it does not deal specifically with the psychological needs of surgical patients, many of the issues relating to the recognition of psychological problems, treatment methods and the provision of liaison psychiatric services are of relevance to surgical patients. Surgeons should have adequate access to liaison mental health services where clinical psychologists and psychiatrists can provide advice on management and also accept referrals of stoma patients who may be experiencing difficulties. The benefits of liaison psychiatric services, aside from producing benefits in terms of reduced distress and disability, include shortened durations of hospital stay and a reduction in inappropriate outpatient attendances (34).

Patients who have a history of psychological difficulties are at particular risk of developing psychological problems after surgery. It is therefore good clinical practice that all patients be routinely asked preoperatively about the presence of a past psychiatric history. Patients who have such a history should be prepared thoroughly for surgery and followed up soon after discharge from hospital in order that psychological symptoms can be identified if

they develop. Satisfaction with preoperative preparation is an important determinant of psychological outcome. Patients should be asked about their level of satisfaction before surgery. Patients who are not satisfied should be given the opportunity to discuss their concerns with a member of the surgical team in an attempt to increase their satisfaction with the preparatory process. Intervention at this stage in the form of education or supportive counselling may have prophylactic benefits.

Patients who report postoperative physical symptoms may also be experiencing psychological problems. The presence of such symptoms should act as a trigger for staff to screen for symptoms of psychological distress. This is of particular relevance for surgeons as it is to them that patients are most likely to report physical symptoms. The significant association of negative thoughts and beliefs about stomas highlights the importance of asking patients about these after surgery. In particular, asking about the degree to which a patient believes that their stoma rules their life, whether they regard themselves to be a complete person and how much they feel in control of their body. If surgeons were to ask all stoma patients about these areas, it is likely that more patients with clinically significant psychological symptoms would be identified.

Future research

Surgeons who are involved with research in this area (either in an advisory or participatory capacity) should endeavour to avoid some of the methodological shortcomings which have occurred in previous studies. The use of valid measures of psychological distress which have been standardised for use with patients who experience physical symptoms is essential. Prospective studies are likely to minimise the confounding effects of selective memory and are to be preferred to retrospective investigations. Researchers should aim to include patients at a similar length of time postoperatively. This is likely to minimise the contamination of results which can occur as a result of factors unrelated to stoma surgery. Surgeons and mental health professionals should work together towards developing effective ways of helping stoma patients who have mental health problems to achieve an optimal quality of life postoperatively. Further research to identify the preoperative characteristics which significantly contribute to postoperative psychological morbidity should be carried out. This will enable researchers to evaluate the effects on postoperative morbidity of interventions designed to modify such preoperative risk factors. Studies to evaluate efforts to increase the rates of detection of psychological problems among stoma patients are also needed. This may involve the training of surgical teams in eliciting patients' concerns and/or detecting clinically significant symptoms. Pharmacological, psychological and/or surgical interventions to minimise postoperative psychological morbidity could also be carefully evaluated.

Many surgeons may believe that psychological issues affecting their stoma patients are not primarily their

concern and/or that these issues are best dealt with by the clinical nurse specialist in stoma care. The issues highlighted in this review are, of course, relevant to stoma nurses. They are also of importance to surgeons who play a vital role in promoting psychological adjustment to this form of surgery and identifying particular patients who are experiencing problems. This review has aimed to provide surgeons with findings from prevalence studies in this area; to highlight methodological problems to be avoided in future studies and to highlight the implications for clinical practice and research aimed at enhancing the psychological care of patients who have surgery resulting in the formation of a stoma.

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