

on coping styles, the higher the E scores were, the lower the scores for QL2, RF2 and EF were, and the higher the A scores were, the lower the scores for PF2 and SF were. On the other hand, concerning factors that predict QOL other than coping style, EF and CF of subjects with a high level of education were lower than that of others. PF2 of the subjects who had a job was higher than that in subjects without a job, although SF of the subjects who had a job was lower than that in subjects without a job. Furthermore, PF2, RF2 and CF of the subjects undertaking medical equipment at discharge were lower than those in subjects with no equipment. On the other hand, ANOVA also continuously revealed higher scores for QL2, RF2 and EF, which were seen in subjects with lower E scores than in those with higher E scores (QL2: $F=13.299$, $df=1,75$, $P=.0005$ between groups; $F=7.441$, $df=2,150$, $P=.0008$ between conditions/RF2: $F=4.696$, $df=1,75$, $P=.0334$ between groups; $F=38.743$, $df=2,150$, $P<.0001$ between conditions/EF: $F=5.572$, $df=1,75$, $P=.0208$ between groups; $F=4.171$, $df=2,150$, $P=.0173$ between conditions). For QL2 and EF in particular, a significant interaction between the two factors was observed (QL2: $F=3.816$, $df=2,150$, $P=.0242$; EF: $F=5.812$, $df=2,150$, $P=.0037$). For QL2, scores in the higher E score group decreased from before surgery to before discharge while those for the lower E score group did not change over the 3 test administration days. For EF, scores were lowest before discharge in patients with higher E scores but increased progressively throughout the study period in those with lower E scores. In other words, QOL, as indicated by the above subscales, was more likely to change in the higher E score group than in the lower E score group and, specifically, was more likely to drop prior to discharge. As for A scale scores, there was no significant difference in any QOL scale between the higher A score group and the lower A score group. In addition, no significant relationship was demonstrated between the T scale and QOL by both analyses.

4.5. Factors for predicting coping style

In order to investigate the factors for predicting coping style, multiple regressions were performed only taking into consideration the set of demographic factors as independent

variable and coping style as dependent variable. The results showed that the factor for predicting the T scale score and E scale score was educational background only (Table 5). The T scale score of subjects with a higher level of education received was higher, and their E scale score was lower than that of other subjects.

5. Discussion

5.1. The relationship between a patient's psychological state and coping style

We used the CISS to assess coping styles among cancer patients, which showed that, under various circumstances, a particular coping style could not be the direct cause or result of anxiety and depression. Studies by Endler et al. [23] and Uehara et al. [24] have suggested that individual personality is related to coping style as measured by the CISS. Donoghue et al. [25] assessed the characteristics of patients undergoing hysterectomy using a personality test, NEO Five-Factor Inventory, and the CISS and reported that neuroticism and extraversion directly affect preoperative and postoperative anxiety and depression and that coping style acts as a mediating variable between these factors. Moreover, McWilliams et al. [26] investigated the relationship between coping style and emotional distress and that between coping style and the five-factor model of personality for patients with major depression and reported that emotion-oriented coping style was related to maladjusted personality such as neuroticism and states of psychological distress such as depression and that task-oriented coping style was related to well-adjusted personality. The abovementioned studies suggest that psychological state, personality and coping style are related to each other in a complex way and that an emotion-oriented coping style, in particular, is related to improper personality and psychological state. On the other hand, Endler and Parker [20] reported that even if a particular coping style could decrease stress-related anxiety and difficulties, other factors such as individual experience, contextual factors and personality factors would also prescribe the range of one's coping style under any given circumstance. It might be the reason why our study did not show the relationship between coping style and psychological state, because the effect of individual experience and contextual factors on the psychological state could be greater than that of personality factors or coping style for the cancer patients undergoing surgery. However, our study revealed that a patient's psychological state is related to some QOL subscales and that some of those QOL subscales are related to coping style. If a patient's psychological state was affected by QOL (i.e., the psychological state was the result of QOL), the above finding implicates that a patient's coping style might change the psychological state indirectly (i.e., the coping style might function as a mediating variable between the two factors).

Table 5
Final regression model for coping style

Variables	β	S.E. of β	F	P	R^2
Task-oriented coping style					
Educational background	11.43	0.396	13.369	.0005	.157
Emotion-oriented coping style					
Educational background	-5.614	-0.254	4.97	.0289	.065
Avoidance-oriented coping style					
-					

As many patients experienced some depression before discharge, from our interview with patients, it was suggested that they were depressed because their physical conditions did not recover as well as they imagined. Because the Japanese average admission period is longer than that in other countries, Japanese patients seemed to imagine that they could recover their health to at least the same level before surgery at the discharge.

5.2. *The relationship between QOL and coping style*

The results showed that the emotion-oriented coping style, in particular, was related to QOL, with patients tending to demonstrate this coping style experiencing lower QOL than those who demonstrated less emotion-oriented coping styles. Under the same conditions, the tendency to demonstrate a more emotion-oriented coping style, in other words, whether or not to respond emotionally, could in part determine QOL. An alternative view might be that the lower QOL becomes, the more emotionally a patient is likely to respond. However, in general, individual coping style is defined as the coping style that an individual uses the most often, based on the assumption that a particular commonly used coping style can be specified [21]. In fact, each item of the CISS questions a responder on “How have you faced a lot of stressful situations until now?” not on “How did you face a stressful situation in this time?” Additionally, individual coping style’s stability over time is confirmed [21]. Therefore, it would appear more likely that a person with a trait of adopting a particular coping style would tend to experience a reduction in QOL level as a result, rather than that a person would select a particular coping style as a response to a preexisting low QOL. In a nutshell, in very stressful situations, a person who had a negative coping style originally would have a more negative coping style, although a person who usually had an affirmative coping style was likely to take on a negative coping style.

We then addressed the question, “what kind of cognitive approach do those with a more emotion-oriented coping style tend to take?” QOL consists of a subjective estimation of one’s circumstances in addition to assessments of ADL (activities of daily living), social function and physical function. Moreover, the way in which one recognizes one’s own circumstances is related to one’s sense of value. Uehara et al. [24] investigated the relationships between coping style assessed using the CISS and personality trait assessed using the Munich Personality Test and reported that the task-oriented coping style was related to “extraversion” and “frustration tolerance,” that emotion-oriented coping style was related to “neuroticism,” “esoteric tendency” and “isolation tendency” and that avoidance-oriented coping style was related to “extraversion.” This suggests that people who tend to adopt a more emotion-oriented coping style might be likely to assess their circumstances negatively rather than affirmatively.

Focusing on the other factors, comparatively strong prediction factors for QOL were educational background,

employment status and medical equipment. Medical equipment was also found to be an effective factor for anxiety. The equipment consists of a primary percutaneous endoscopic jejunostomy tube for enteral feeding. Patients who need such equipment are not able to eat enough and must seek the help of others (usually family members) after discharge. Therefore, we can understand that their physical function, role function and cognitive function were lower and that their anxiety was higher than those in patients with no equipment. With regard to employment status, a converse effect was noted in physical function and social function (positive effect to physical function/negative effect to social function). Almost all patients who had no jobs were retirees, not jobless. Therefore, if their physical condition was not good enough before discharge, they might not recognize their social function after discharge as changed. On the other hand, it was suggested that the physical function of an active worker might be high from before surgery as compared with patients without a job. We will discuss educational background, which is a factor for predicting coping style, in the next section.

5.3. *Coping style among cancer patients*

With regard to coping style among cancer patients, Greer et al. [27] have reported a significant correlation between recurrence rate after 15 years and coping style assessed using Mental Adjustment to Cancer (MAC) and that between life expectancy and coping style. In addition, studies by Ho et al. [28] using MINI-MAC, by Dunkel-Schetter et al. [29] using WOC-CA and, in Japan, by Akechi et al. [30] using the Japanese version of the MAC have reported that coping style could affect psychological state among cancer patients. The psychological aspect of QOL is therefore dependent on the way in which individuals recognize their disease state, treatment conditions and associated circumstances and on how they cope with this. Therefore, in the care of cancer patients, even if it is not possible to change a patient’s coping style predominantly, we could optimize care by focusing on their individual coping style. As a result, we could not only discriminate whether or not the patient belongs to a risk group but also deliver and plan efficient and specific care by understanding the patient’s coping style. Moreover, such a psychoeducational approach might enable patients to acquire a more appropriate coping style.

5.4. *Demographic factors predicting coping style*

Our study showed that the factor that predicted whether a patient employed an emotion-oriented coping style or a task-oriented coping style was educational background. With regard to coping style and educational level, Weisenberg and Caspi [31] investigated the effects of sociocultural family of origin and educational level on the verbal ratings of pain and pain behavior during childbirth for 83 women. Their coping style and extroversion were also measured. The results showed that women with low

educational background rated the pain of childbirth as higher and took more pain behavior than those with high educational background, although Middle-Eastern and Western women did not differ in coping style. Shanan et al. [32] administered the Shanan Sentence Completion Test against 59 patients at the onset of hemodialysis and 59 comparison subjects and reported that prolonged stress (chronic renal failure) reduces the tendency to cope actively and that only sex and education showed interaction with illness and coping style. Women appeared to be more vulnerable than men and the effects of education on coping style were reduced as a consequence of the illness. We could not find the studies that were practiced in order to investigate the relationship between coping and educational levels among Japanese or cancer patients. Therefore, we would need more coping style studies among Japanese cancer patients before discussing this finding. On the other hand, when patients are hospitalized for that long a period, social support might become a major factor in coping. In this paper, we investigated only two factors (i.e., employment status and cohabitation status) as the factors that comparatively forecast their social support. Next time, such factors as medical insurance, self-help group and a counseling system should be investigated as coping style-related factors although the number of self-help groups for patients is low in Japan.

6. Summary

With regard to coping style among patients with digestive cancer undergoing surgery, it was clarified that an emotion-oriented coping style, in particular, affected QOL, especially, global QOL, role function and emotional function and that global QOL, emotional function and cognitive function are related to anxiety and/or depression. The results suggested that focusing on a patient's coping style, particularly on an emotion-oriented coping style, is important and that patients likely to adopt a more emotion-oriented coping style should receive enough attention, particularly before discharge.

References

- [1] Hasegawa S, Nishiyama H, Tanaka K, et al. *Journal of Health and Welfare Statistics*. Tokyo: Health and Welfare Statistics Association; 2004. p. 46–9 [in Japanese].
- [2] Hasegawa S, Nishiyama H, Tanaka K, et al. *Journal of Health and Welfare Statistics*. Tokyo: Health and Welfare Statistics Association; 2004. p. 430 [in Japanese].
- [3] Lazarus RS, Folkman S. *Stress, appraisal, and coping*. New York: Springer; 1984.
- [4] Matsushita T, Matsushima E, Maruyama M. Assessment of peri-operative quality of life in patients undergoing surgery for gastrointestinal cancer. *Support Care Cancer* 2004;12:319–25.
- [5] Folstein M, Folstein S, McHugh P. "MINI-MENTAL STATE." A practical method for grading the cognitive state of patients for the clinician. *J Psychiatr Res* 1975;12:189–98.
- [6] Japanese Gastric Cancer Association. *Japanese classification of gastric carcinoma*. Tokyo: Kanehara & Co., Ltd.; 1999 [in Japanese].
- [7] Japanese Society for Cancer of the Colon and Rectum. *Japanese classification of colorectal carcinoma*. Tokyo: Kanehara & Co., Ltd.; 1998 [in Japanese].
- [8] The Japanese Society for Diseases of the Esophagus. *Esophageal cancer treatment guidelines*. Tokyo: Kanehara & Co., Ltd.; 2002 [in Japanese].
- [9] Japan Pancreas Society. *Classification of pancreatic carcinoma*. Tokyo: Kanehara & CO., Ltd.; 2002 [in Japanese].
- [10] Zigmond AS, Snaith RP. The Hospital Anxiety and Depression Scale. *Acta Psychiatr Scand* 1983;67:361–70.
- [11] Zigmond AS, Snaith RP. Kitamura translation: Hospital Anxiety and Depression Scale (HAD Scale). *Arch Psychiatr Diagn Clin Eval* 1993;4:371–2 [in Japanese].
- [12] Zung W. A self-rating depression scale. *Arch Gen Psychiatry* 1965;12:63–70.
- [13] Fukuda K, Kobayashi S. A study on a self-rating depression scale. *Psychiatr Neurol Jpn* 1973;75:673–9 [in Japanese].
- [14] Aaronson NK, Ahmedzai S, Bergman B, et al. The European Organization for Research and Treatment of Cancer QLQ-30: a quality-of-life instrument of use in international clinical trials in oncology. *J Natl Cancer Inst* 1993;85:365–76.
- [15] Bottomley A. Developing clinical trial protocols for quality of life assessment. *Appl Clin Trials* 2001;(January):1–5.
- [16] Fayers PM, Aaronson NK, Bjordal K, et al. On behalf of the EORTC Quality of Life Group. *EORTC QLQ-C30 scoring manual*. 3rd ed. Brussels: EORTC; 2001.
- [17] Shimozuma K, Katsumata N, Ohashi Y, et al. Impact of surgical adjuvant chemotherapy on quality of life (QOL) of patients with breast cancer (BC) — a phase III randomized trial comparing UFT (Uracil/Tegafur) with CMF in high-risk node negative patients. *Proceeding of 35th Annual Meeting of ASCO*. 1999. p. 579a.
- [18] Kobayashi K, Takeda F, Teramukai S, et al. A cross-validation of the European Organization for Research and Treatment of Cancer QLQ-C30 (EORTC QLQ-C30) for Japanese with lung cancer. *Eur J Cancer* 1998;34:810–5.
- [19] Endler NS, Parker JDA. *Coping Inventory for Stressful Situations (CISS): manual*. Toronto: Multi Health System Inc.; 1990.
- [20] Endler NS, Parker JD. Multidimensional assessment of coping: a critical evaluation. *J Pers Soc Psychol* 1990;58:844–54.
- [21] Furukawa T, Suzuki-Moor A, Saito Y, Hamanaka T. Reliability and validity of the Japanese version of the Coping Inventory for Stressful Situations (CISS): a contribution to the cross-cultural studies of coping. *Psychiatr Neurol Jpn* 1993;95:602–20 [in Japanese].
- [22] Fukumishi I, Nakagawa T, Nakagawa H, et al. Validity and reliability of the Japanese version of the Stress and Coping Inventory. *Psychiatry Clin Neurosci* 1995;49:195–9.
- [23] Endler NS, Parker JD, Butcher JN. A factor analytic study of coping styles and the MMPI-2 content scales. *J Clin Psychol* 1993; 49:523–7.
- [24] Uehara T, Sakado K, Sakado M, Sato T, Someya T. Relationship between stress coping and personality in patients with major depressive disorder. *Psychother Psychosom* 1999;68:26–30.
- [25] Donoghue AP, Jackson HJ, Pagano R. Understanding pre- and post-hysterectomy levels of negative affect: a stress moderation model approach. *J Psychosom Obstet Gynaecol* 2003;24:99–109.
- [26] McWilliams LA, Cox BJ, Enns MW. Use of the Coping Inventory for Stressful Situations in a clinically depressed sample: factor structure, personality correlates, and prediction of distress. *J Clin Psychol* 2003;59:423–37.
- [27] Greer S, Moorey S, Watson M. Patients' adjustment to cancer: the Mental Adjustment to Cancer (MAC) scale vs. clinical ratings. *J Psychosom Res* 1989;33:373–7.
- [28] Ho SM, Fung WK, Chan CL, Watson M, Tsui YK. Psychometric properties of the Chinese version of the Mini-Mental Adjustment to Cancer (MINI-MAC) scale. *Psychooncology* 2003;12:547–56.

- [29] Dunkel-Schetter C, Feinstein LG, Taylor SE, Falke RL. Patterns of coping with cancer. *Health Psychol* 1992;11:79–87.
- [30] Akechi T, Fukue-Saeki M, Kugaya A, et al. Psychometric properties of the Japanese version of the Mental Adjustment to Cancer (MAC) scale. *Psychooncology* 2000;9:395–401.
- [31] Weisenberg M, Caspi Z. Cultural and educational influences on pain of childbirth. *J Pain Symptom Manage* 1989;4:13–9.
- [32] Shanani J, De-Nour AK, Garty I. Effects of prolonged stress on coping style in terminal renal failure patients. *J Hum Stress* 1976;2:19–27.

消化器癌患者の心理特性

松下 年子 松島 英介 丸山 道生

Japanese Journal of General Hospital Psychiatry

総合病院精神医学 Vol. 17 No. 1 別刷

【複製禁】

Original article

原 著

消化器癌患者の心理特性

松下 年子*¹ 松島 英介*¹ 丸山 道生*²

【要約】 一般外科病棟において手術を受ける消化器癌患者の心理特性（不安・抑うつ）および、それらと臨床要因との関連を調査した。対象は消化器癌の手術を受ける患者85名と対照患者26名である。手術前、退院前、退院後6カ月の3時点において、面接および日本語版HADS、日本版SDSを実施した。癌患者を重症度により2群に分け、重症・軽症癌群と対照群の3群におけるHADSおよびSDSの経時的な変化を比較したところ、不安、抑うつのいずれにおいても群間に差がみられ、重症癌群の不安、抑うつは他の2群に比べて明らかに高かった。また調査の3時点間では、不安が3時点を通じて変化しないのに対し、抑うつは手術前から退院前にかけて高くなり、退院後6カ月経過した時点でも手術前の水準には戻らなかった。各臨床要因別に癌患者の不安、抑うつの経時的変化を比較した結果では、癌患者の心理状態は疾患の重症度をはじめとする疾病、治療条件の影響を受けやすく、年齢を除く個人要因の影響は小さいことが示唆された。

はじめに

日本における癌死亡者数は、1980年代より全死亡者数の最上位を占め、特に胃癌のそれは1980年代当初から、男性においては1990年代前半まで、女性では現在に至るまで、常に日本人の癌部位別死亡因のトップにあげられてきた。その後、胃癌の治療技術の進歩および検診の普及などにより、その死亡率は下降を示し、2002年における胃

癌死亡者数はおよそ49,200人、癌死亡者全体に占める胃癌の割合は男性が17.3%、女性は14.5%である。しかし、胃癌の早期発見、早期治療が可能になる一方で、依然として罹患率自体は平行状態にあることが報告されており、2002年におけるわが国の胃癌患者数は22万2千人といわれている。また、同じ消化器癌でも結腸、直腸癌に関しては、日本人の食生活の欧米化や運動不足をはじめとするライフ・スタイルの変化から、1950年代以降いずれもその数は漸増している。このように、日本の癌患者において胃癌、結腸癌、直腸癌、さらにその数は少ないものの増加傾向にある肝臓癌、膵臓癌といった消化器系の癌患者の割合は高く、彼らの身体的ケアのみならず精神的ケアの需要は高いことが推測される。

癌患者に対する精神的ケアについてはわが国でも、ホスピスあるいは緩和ケア病棟の終末期患者

キーワード：消化器癌，不安，抑うつ，HADS (Hospital Anxiety and Depression Scale)，SDS (Zung's Self Rating Depression Scale)

*¹ 東京医科歯科大学大学院心療・緩和医療学分野 (〒113-8519 文京区湯島1-5-45)

*² 財団法人東京都保健医療公社大久保病院外科

に関する調査報告はみられるようになった³⁾。しかし、日本の癌患者の大半が治療を受けている一般病棟での、しかも終末期以外の癌患者を対象とした精神的ケアについては、未だ十分に検討されていないのが現状である。人的・経済的要因を含め、現在の日本社会が抱える医療事情を考えると、一般病棟の癌患者に対してはまず、焦点を絞った効率的な精神的ケアが提供されるべきであろう。Sheardら⁴⁾は、癌患者に対する心理的介入調査の meta-analyses を行い、心理的問題を抱えた患者、あるいはその危険性のある患者をターゲットにした介入が臨床的に望ましい効果をあげていることを実証している。特に手術を受ける癌患者は、「癌告知」に加えて「手術」という心身両面における二重の負荷が加わった状態にあることが予想され、治療期間中の精神状態を経時的に逐次確認していくことが望ましい。また、癌患者が共通に経験する精神状態のうち、最も多いのは「抑うつ」といわれており^{5,6)}、これに「不安」が加わって「適応障害」や「うつ病」などの精神障害に発展することが多い⁷⁾。こうした精神症状が癌治療そのものに負の影響を及ぼし、QOL (quality of life) 低下を導きやすいことも容易に推測される^{8,10)}。

そこで本研究では、日本人に多い消化器癌を対象に、一般外科病棟において手術を受ける癌患者の「不安」、「抑うつ」といった心理特性、さらにこれらと他の臨床要因との関連について、手術前、退院前、退院後6カ月の3時点にわたり追跡調査を行った。

対 象

初めに調査を依頼した対象は、東京都立O病院一般外科に2000年5月から2002年4月までの間、初発の原発性消化器癌の手術を受ける目的で入院した患者のうち、認知障害を有する者(術前のMMS (Mini Mental State) 得点が23点未満とした¹¹⁾)を除外した99名である。そのうち2名は本人の承諾が得られず、6名が途中で身体的理由あるいは本人の拒否により脱落した。また別の6名は「手術前」の心理検査を実施した後、入院中に死亡し、「退院前」の検査を実施できなかった。以上14名

は対象から除外した。また、さらに6名は「退院前」の検査を実施した後、退院後6カ月に至る前に死亡し、「退院後6カ月」における検査を実施できなかったため、「退院前」時点までの検討において対象とした。したがって、最終的な対象は、男性53名、女性32名の計85名となった。なお、同時期同外科に悪性腫瘍以外の消化器外科手術の目的で入院した患者のうち、認知障害を有する者を除外した26名(男性14名、女性12名)を対照群として加えた。

癌患者群の平均年齢は68.0 (±標準偏差10.3) 歳 (44~87歳)、平均入院期間は56.6 (±26.5) 日で、腫瘍部位は胃が37名、結腸が26名、直腸が12名、食道が3名、膵臓が3名、肝臓が2名、その他が2名であり、胃と大腸の原発で88%を占めていた。手術様式は、開腹手術78名、内視鏡的手術7名であり、92%が開腹(一部開胸も)手術を受けている。また、手術の病理結果(進行度)から疾患の重症度を求めたが、胃癌の進行度分類は「胃癌取扱い規約¹²⁾」に基づいて決定した。他の部位の癌に関しても、それぞれの基準、大腸ならば「大腸癌取扱い規約¹³⁾」、食道ならば「食道癌取扱い規約¹⁴⁾」、膵臓ならば「膵臓癌取扱い規約¹⁵⁾」を参照したうえで、胃癌の各水準と合致するようstage 1からstage 4の4段階でそれぞれの進行度を決定した。そして、stage 1およびstage 2の該当者を軽症癌患者群(55名; 65%)、stage 3およびstage 4の該当者を重症癌患者群(30名; 35%)とした。

一方、対照群の平均年齢は63.5 (±14.6) 歳 (28~78歳)、平均入院期間は28.7 (±22.6) 日で、疾患名は胆石が18名、その他が8名で、胆石と胆管結石、肝内結石が77%を占めていた。手術様式は、開腹手術15名、内視鏡的手術11名であり、58%が開腹手術を受けていた。なお、対照群に関しては死亡者、脱落者はいなかった。

方 法

本人に調査主旨を説明後、書面による承諾が得られたうえで、「手術前」、「退院前」、「退院後6カ月」の3時点においてSCID-I¹⁶⁾を用いた半構

造化面接を行い、SCID-Iの診断基準による精神疾患の有無を確認後、「不安」と「抑うつ」に関する心理検査として、①日本語版HADS (Hospital Anxiety and Depression Scale)^{17,21)}、および②日本版SDS (Zung's Self Rating Depression Scale)²²⁾を実施した。また、経過中精神疾患が疑われた場合にも適宜、同様の面接を実施した。

HADSを用いた先行研究では、Kennら^{18,23)}がHADSは「抑うつ」を見極める効率性は高いが、「不安」を特定しづらいと報告している一方で、Carrollら²⁴⁾は自身の調査および先行研究から、HADSが癌患者の「不安」や「抑うつ」のスクリーニングとしての使用のみならず、それらの治療効果をみるのに有効であると述べている。また、Hopwoodら²⁵⁾とIbbotsonら²⁶⁾は癌患者にHADSなどの質問紙と精神科医によるインタビューを実施した結果、HADSが癌患者の感情障害について高い予測性を有し、感情障害のスクリーニングに寄与するツールであることを報告している。

日本ではHosakaら²⁷⁾が、癌患者と一般内科患者を対象に、複数の心理検査〔HADS, SDS, SAS (self-rating anxiety scale)²⁸⁾, POMS (Profile of Mood States)²⁹⁾, DRP (Depression-related personality traits)³⁰⁾〕を実施し、両患者群において、ほとんどの検査が抑うつ者と非抑うつ者を鑑別できなかったのに対し、HADS-Dのみは身体条件を問うていないことから、鑑別可能だったと報告している。

以上からわれわれは、HADSが癌患者の「不安」と「抑うつ」のスクリーニングツールとして最適であると判断した。またSDSに関しては、Duganら³¹⁾が外来癌患者を対象として、その実行可能性と信頼性などについて調査し、SDSが癌患者の抑うつ症状を同定するのに有効で簡便なツールであると実証していたため、今回採用することとした。なお、HADSのカットオフポイントは8点ないし11点であり、HADS-A, HADS-Dともに11点以上であれば「確診」、8点以上であれば「疑診」とできるとしている^{19,24)}。SDSに関しては福田らが、日本版SDSの信頼性、妥当性を確認するとともに、日本人正常者群の平均得点が35 (標準偏差23~47) 点、神経症患者群が49 (39~59) 点、うつ

病患者群が60 (53~67) 点であったと報告している³²⁾。

なお、悪性腫瘍の告知に関しては、疾患により多少異なるが、少なくとも入院前ないし手術前(手術前の調査時点より前)に癌であること、あるいは癌である可能性が非常に高いとの告知は受けており、詳細な病理結果は術後に説明される。

分析に関しては、まず癌患者群と対照群における各属性(性別, 平均年齢, 家族形態, 職業の有無, 教育年数など)および臨床特性の相違をMann-Whitney's *U* testあるいはChi-square testにて検定した。次に対象を重症癌患者群(以降, 重症群とする), 軽症癌患者群(以降, 軽症群とする), 対照群の3群に区分したうえで, 3群のHADS, SDS得点の経時的な変化をrepeated measurement ANOVA (analysis of variance) およびその後の多重比較(Scheffe)によって比較した。最後に, 癌患者群のみにおいて, HADS, SDS各スコアと重症度以外の各臨床要因との関連を分析した。臨床要因の詳細と各内訳は以下のとおりである。

1) 年齢は, 癌患者全員の平均年齢(68.0歳)よりも高い者を「老年群」(46名), 低い者を「中・高年群」(39名)として2群に分類した。

2) 家族形態は「単身」, 「夫婦のみ」, 「その他」の3群に分類し, 「単身」が17名(20%), 「夫婦のみ」が30名(35.3%), 「その他」が38名(44.7%)であった。

3) 職業の有無では, 有職者39名(45.9%)と無職者46名(54.1%)の2群に分類した。

4) 学歴は, 最終学歴が義務教育ないし高校卒業までの群(39名)と, 高卒後さらに専門学校, 大学あるいはそれ以上進学している群(37名)の2群に分類した(不明; 9名)。

5) 手術既往歴の有無では, 「癌の手術既往歴あり群」の13名(15.3%), 「癌以外の手術既往歴あり群」の37名(43.5%), 「手術既往歴なし群」の35名(41.2%), 以上3群に分類した。

6) 診断名は, ある程度まとまった症例数のある胃癌と大腸癌(結腸癌および直腸癌)の2群(37名と38名)に分類した。

7) 入院に至る経緯では, 健診で指摘されて受診した「健診群」25名(29.4%), すでに他の疾

Table 1 癌患者群と対照群（非癌患者）の属性および臨床特性

		癌患者群 (n=85)	対照群（非癌患者） (n=26)	Mann-Whitney's U-test	p
入院時の平均（±SD）年齢（歳）		68.0±10.3	63.5±14.6	z=-.950	NS
教育年数		13.2±2.9	12.4±3.4	z=-.694	NS
平均（±SD）入院期間（日）		56.6±26.5	28.7±22.6	z=-5.24	p<.0001
Chi-square test					
性別	男性	53 (62.4%)	14 (53.8%)	$\chi^2=.602$	NS
	女性	32 (37.6%)	12 (46.2%)		
家族形態	単身	17	9	$\chi^2=2.414$	NS
	夫婦のみ	30	8		
	その他	38	9		
職業	+	39	10	$\chi^2=.445$	NS
	-	46	16		
手術様式	開腹手術	78 (91.8%)	15 (57.7%)	$\chi^2=17.01$	p<.0001
	内視鏡手術	7 (8.2%)	11 (42.3%)		
退院後の化学療法	+	37 (43.5%)	0	$\chi^2=16.98$	p<.0001
	-	48 (56.5%)	26 (100%)		

NS : not significant

患で通院中だった「通院群」16名（18.8%）、症状出現により受診した「症状群」44名（51.8%）の3群に分類した。

8) イレウス，リーク，感染症などの術後の合併症有無に関しては，合併症あり群41名（48.2%），なし群44名（51.8%）の2群に分類した。

9) 退院時の医療装備（大半は経腸栄養注入のための経腸チューブ）の有無については，医療装備「あり群」16名（18.8%），「なし群」69名（81.2%）の2群に分類した。

10) 退院後の化学療法は，化学療法「あり群」37名（43.5%），「なし群」48名（56.5%）の2群に分類した。

11) 入院期間は，入院日数が癌患者の平均入院日数（56.6日）よりも長い「長期入院群」36名（42.4%）と，短い「標準入院群」49名（57.6%）の2群に分類した。

以上，各要因別の「不安」および「抑うつ」の経時的変化を，repeated measurement ANOVAによって比較した。

結 果

1. 癌患者群と対照群の属性，臨床特性，および精神疾患の発生率

癌患者群および対照群の基本属性に関しては，両群間に有意な差を認めなかった（Mann-Whitney's U testあるいはChi-square test）（Table 1）。また臨床特性の手術様式，退院後の化学療法の有無，入院期間に関しては，いずれも2群間に有意な相違が認められたが，疾患特性の相違として十分納得できる結果であり，特にその後の検討には加えない。ただし臨床要因別の各心理特性の検討では，手術様式，化学療法の有無，入院期間を，重症群，軽症群，対照群の3群とは別に臨床要因候補として取り扱った。

次に，周術期から退院後6カ月にある患者を対象とした本調査で，この期間中に臨床的に「適応障害」あるいは「大うつ病」の診断・治療を受けた患者は，癌患者群85名中7名（8.2%）（「適応障害」4名，「大うつ病」3名）で，対照群は26名

Table 2 重症群, 軽症群, 対照群それぞれの HADS-A, HADS-D, SDS 得点の経時的変化

		手術前	退院前	退院後 6カ月	
HADS-A	重症群	3.3 ± 4.0	3.6 ± 4.6	2.8 ± 3.4	群間における主効果: F = 8.516, p = .0004 ^a 3時点間における副効果: F = 1.130, p = .3251
	軽症群	1.8 ± 2.1	1.3 ± 2.6	1.2 ± 2.0	
	対照群	1.4 ± 1.8	1.7 ± 3.0	1.1 ± 1.9	
HADS-D	重症群	3.0 ± 4.0	4.5 ± 4.3	3.1 ± 3.2	群間における主効果: F = 7.602, p = .0008 ^a 3時点間における副効果: F = 5.799, p = .0036 ^b
	軽症群	0.9 ± 1.5	2.1 ± 3.1	2.5 ± 3.3	
	対照群	0.5 ± 1.2	1.8 ± 3.7	2.0 ± 2.9	
SDS	重症群	31.4 ± 10.6	37.9 ± 12.0	34.1 ± 9.0	群間における主効果: F = 11.586, p < .0001 ^a 3時点間における副効果: F = 10.225, p < .0001 ^b
	軽症群	26.0 ± 5.1	29.8 ± 8.6	28.4 ± 8.1	
	対照群	24.5 ± 4.3	28.4 ± 9.5	29.2 ± 8.2	

NS = not significant

^a: 重症群対軽症群, 重症群対対照群 (p < .05; Scheffe)

^b: 手術前対退院前, 手術前対退院後 (p < .05; Scheffe)

HADS-A, HADS-D, SDSにおける, 群間および条件間 (3時点間) の交互作用: NS

中1名 (3.8%) (「適応障害」)であった (いずれも SCID-I を用いた面接によるものではない)。発症率に関して両群間に有意な差はなく (Chi-square testにて), また, その他の精神疾患は両群ともに認められなかった。

2. 重症度別の「不安」と「抑うつ」の推移

対象を重症群, 軽症群, 対照群の3群に分けたうえで, 「不安」, 「抑うつ」の各スコアの経時的変化を比較した (Table 2)。「不安」(HADS-A)については, 3群間に有意な相違が認められ (HADS-A; F = 8.516, p = .0004), 特に重症群が軽症群および対照群に比べ有意にスコアが高かった (p < .05; Scheffe)。また「抑うつ」についても, HADS-DおよびSDSともに3群間に有意な相違が認められ (HADS-D; F = 7.602, p = .0008, SDS; F = 11.586, p < .0001), 特に重症群が軽症群および対照群に比べ有意にスコアが高かった (p < .05; Scheffe)。

一方, 3時点の条件間については, 「不安」は経時的変化が認められないのに対し, 「抑うつ」では有意な相違が認められ (HADS-D; F = 5.799, p = .0036, SDS; F = 10.225, p < .0001), 「手術前」から「退院前」にかけて有意にスコアは高くなり, 「退院前」から「退院後6カ月」にかけて

その水準は変わらなかった。ただし「不安」において, 3時点を通じた上記経過が顕著だったのは重症群においてであり, 他の軽症群と対照群では少なくとも「退院後」に「不安」は軽減した。また「抑うつ」の上記変化は軽症群と対照群において顕著であり, 重症群では「手術前」から「退院前」にかけて上昇し, その後「退院後6カ月」にかけては低下, 結果的に「退院後6カ月」における「抑うつ」の水準は「手術前」と大差を認めなかった。なお, 各スコアについていずれも群間, 条件間に交互作用は認められなかった (Table 2)。

3. 癌患者群の「不安」および「抑うつ」と他の臨床要因との関連

癌患者群全体を対象として, 性別, 年齢, 家族形態, 職業の有無, 最終学歴, 手術既往歴の有無, 診断名, 入院に至る経緯, 術後合併症の有無, 退院時の医療装束の有無, 退院後の化学療法の有無, 入院期間など, 各臨床要因別に「不安」および「抑うつ」の経時的変化を比較した。なおその際, 「抑うつ」については, 重症群の場合特に高く, 軽症群, 対照群においても高値であった「退院前」の「抑うつ」得点を目的変数とした。

その結果, 「不安」に関しては, 年齢と退院後の化学療法の有無に有意な関連が認められ, 年齢

では中・高年者のほうが老年者よりも「不安」が高かった (HADS-A ; $F=6.021$, $p=.0164$)。また、退院後の化学療法「あり群」が「なし群」よりも「不安」が高かった (HADS-A ; $F=5.678$, $p=.0196$)。

「抑うつ」に関しては、退院時の医療装備の有無、退院後の化学療法の有無、入院期間が有意に関連しており、退院時の医療装備「あり群」が「なし群」よりも (HADS-D ; $F=13.467$, $p=.0004$, SDS ; $F=15.244$, $p=.0002$)、また退院後の化学療法「あり群」が「なし群」よりも (HADS-D ; $F=1.931$, $p=.1684$, SDS ; $F=4.688$, $p=.0332$)、最後に「長期入院群」のほうが「標準入院群」よりも (HADS-D ; $F=8.102$, $p=.0056$, SDS ; $F=7.848$, $p=.0063$) 「抑うつ」が高かった。

それ以外の臨床要因である性別、家族形態、職業の有無、最終学歴、手術既往歴の有無、診断名、入院に至る経緯、術後合併症の有無に関しては、「不安」や「抑うつ」との間に有意な関連を認めなかった。

考 察

1. 消化器癌患者における精神疾患の発生率

癌患者の適応障害、うつ病の発生率に関しては一般的に、15～40%とする報告が多い^{8, 33, 34)}。一方でCarrollら²⁹⁾のレビューによれば、癌の部位とステージによってその範囲は4.5～58%に及ぶという。また診断後1～2年が経過して、たとえ表面的にせよ治癒した場合でも、その罹患率は一般人よりも高いという報告もある³⁵⁾。Logeら³⁶⁾は、治癒した癌患者でもその27%が、「不安」あるいは「抑うつ」、またはその両者を呈していたと報告している。一方Derogatisら³⁷⁾は、癌患者の30～40%に抑うつを認めたが、その大多数が実際には診断を受けていないか、適切な治療を受けていないのいずれかであったと報告している。

周術期から退院後6カ月にある癌患者を対象とした本調査では、臨床的に「適応障害」あるいは「うつ病」の治療を受けた患者が8.2%を占めた。これは、前述の発症率に比べると少ない数字とい

える。その要因として第一に、全員が(癌の進行度および身体的条件の両面において)手術を受けられる状況にあったこと、しかもその65%が軽症群であったこと、第二に彼らのほとんどが、初回面接時点においてすでに癌の告知後一定期間を経過しており、一方で治療開始後間もない状況にあったことが関係していると思われる。

一般に癌の進行度が高く重症度が高いほど、また身体的条件(Performance Score)が低いほど、「抑うつ」の罹患率は高いことが報告されており^{24, 37)}、癌告知に関しては、癌患者は告知当初から2週間ほど「不安」、「抑うつ」などの感情を経験するが、その程度は時間経過とともに低下して適応段階に入ると報告されている³⁸⁾。また癌患者の縦断的調査からDerogatisら³⁹⁾は、一般に癌回復後の経過が長い者ほどより高い精神的苦悩(distress)を呈し、特に「抑うつ」が強かったと述べている。つまり本研究対象の癌患者は、先行研究で対象としていた癌患者よりも、身体的にも状況的にもより精神的負荷の軽い状況下にあったということがいえるであろう。

2. 消化器癌患者の手術をめぐる「不安」と「抑うつ」の経時的変化

手術をめぐる経時的な変化という観点からは、重症群の「不安」(HADS-A)は3時点を通じて変化しないこと、また「抑うつ」(HADS-DおよびSDS)は手術前から退院前にかけて高くなり、さらに退院後6カ月経過した時点では手術前の水準に戻ることが本調査で明らかになった。そこでまず、本調査で把握された重症群の「不安」の経時的変化を考察したい。

「手術」を控えた癌患者は、「手術」そのものに対する不安に加え、癌告知に関連する不安を伴うことから、他の状況下にある癌患者と比較して「不安」が低いとは決していえないであろう。したがって、その手術前と同じレベルの不安が術後も続き、退院後6カ月の時点でも存続している事実は見過ごすことができない。癌告知のように望ましくないストレスフルな出来事が「不安」や「抑うつ」状況を導くことは明らかであるが^{40, 41)}、Aaproら⁴²⁾は、闘病が長期にわたった寛解期患者

も active な病状にある者と同程度の「不安」を示すこと⁴³⁾、すなわち癌サバイバーの不安は外来につながっているか否かにかかわらず持続することを報告している。

われわれの研究結果からも、「不安」は手術をめぐる治療経過や経時的な環境変化から影響を受けづらいことが把握されている。つまり早期癌を除く癌患者の心理には、その原因は変化するとしても、常に一定の「不安」が潜在していることが推測されよう。一方、軽症群に上記傾向が認められなかった点は、今回 stage 1, 2 を軽症群にしたことから、軽症群の身体的条件、退院後の治療方針、予後に対する見通しなどが実際対照群に近い状況にあったこと、したがって3群間の相違というよりも、むしろ重症群に対して軽症群、対照群という構図が想定され、後者2群は、一般の消化器外科手術を受ける患者の心理過程を示した可能性が一要因として推測される。軽症群の「不安」が手術前から退院前ないし退院後にかけて軽減しているのは、危機状態を脱したという本人の意識などが関係していると思われる。

次に「抑うつ」について考察すると、われわれは調査に入る前、「抑うつ」が手術前に最も高く、手術後には改善するというパターンを想定していた。しかし実際は、3群いずれも退院前のほうが手術前よりも「抑うつ」が高いことが明らかにされた。「不安」と比較して、ある意味で状況に即応しており、治療経過や環境条件によって影響を受けやすい可能性が示唆された。裏返せば、患者の現在の状況をアセスメントすることで、「抑うつ」の早期予防、早期発見を図ることができるといえよう。

前述の Carroll ら²⁹⁾は、癌患者に対する HADS を用いた調査において、「不安」は入院と外来患者間に有意な差はなかったが、「抑うつ」では両者間に有意差が認められ、入院患者の「抑うつ」のほうが外来患者のそれよりも高かったと報告している。また、寛解期にある患者とそうでない患者との間で、「不安」得点では有意差がないものの、「抑うつ」では後者の得点が有意に高かったことを加えている。彼らの結果も、「抑うつ」が状況に即応していることを示唆しており、この点につ

いては、今回のわれわれの所見と一致する。

なお、重症群の「抑うつ」が退院前から退院後にかけて低下するのに対し、軽症群が平衡状態になっている点であるが、前者に関しては退院前の「抑うつ」が極端に高いことが問題であり、それには、退院前の時点において重症群のみに負荷された諸条件の影響があったものの、結局は時間経過とともに適応していったと推測される。一方、軽症群の場合も、何かしらの要因をもって「不安」とは独立して、退院後より「抑うつ」が高くなったと考えられるが、重症群の水準には及ばなかったこと、またその状態が退院後まで続いたことから、重症群とは別の要因が軽症群の「抑うつ」に関連していたと考えられる。

以上、重症群、軽症群の「抑うつ」の要因については、次項の他の臨床要因との関連において詳細を述べたい。

最後に、手術をめぐる「不安」や「抑うつ」の全体的水準であるが、HADS と SDS 得点の結果から癌患者（重症群、軽症群）の「不安」や「抑うつ」が病的水準には至っていないことが把握された (Table 2)。同じ HADS を使用した先行研究^{25, 44)}と比較しても、本対象者のほうが明らかに低い得点を示している。ただし本調査対象者のなかには、前述の「適応障害」、「大うつ病」で治療中の者も含まれており、彼らがもし治療を受けていなければ、退院前の得点はもっと高くなるであろうこと、また先行研究では、対象の癌患者が必ずしも外科的手術を受ける人ばかりではないこと、再発期の者も含まれていることなど、対象条件の相違を考慮する必要はあろう。

3. 他の臨床要因との関連

癌患者群全体を対象とすると、重症度（進行度）、年齢、退院時の医療装備の有無、退院後の化学療法の有無、入院期間と、「不安」ないし「抑うつ」の間に有意な関連が認められた。このうち、退院時の医療装備の有無、退院後の化学療法の有無、入院期間は、ある意味で「癌の重症度」を反映した指標である。すなわち、癌患者の心理状態を左右するのは、疾患の重症度をはじめとする疾病、治療条件の影響が大きく、年齢を除く個人要因は、

「不安」や「抑うつ」に対して影響力が小さいことがわかる。

癌患者の心理状態と他の臨床要因との関連について、先行研究^{37, 45-47)}からは疾病の重症度、転移の有無、年齢との関連が指摘されている。疾病の重症度に関しては、Noyesら⁴⁶⁾が400人以上の癌患者を対象として、IDS (Illness Distress Scale) を用いて身体的、精神的distressを測定し、疾患により顕在化した身体症状が最も強くdistressの要因になっていること、また癌の進行度が進むほどdistressが高まることを報告している。年齢についてもNoyesら⁴⁶⁾は、若年の成人が年齢の高い成人よりも癌などの重症な疾患によりdistressを受けやすいことを報告している。前述のCarrollら²⁴⁾も、HADSを用いて癌患者809人の「不安」と「抑うつ」を調査し、「不安」に関しては59歳以下の女性が最も高かったこと、つまり高齢よりも若年女性の「不安」が有意に高かったと述べている。本対象者において重症群の「不安」、「抑うつ」のレベルが軽症群および対照群のそれよりも高かったこと、また中・高年者の「不安」が老年者よりも高かったことは、上記先行研究の所見に一致するものであり、癌患者におおよそ共通した現象であることが確認されたといえる。

次に、重症群において退院前の「抑うつ」が問題になる諸条件であるが、「抑うつ」と臨床要因との関連では、疾患の重症度に関係した指標、具体的には退院時の医療装備の有無、退院後の化学療法の有無、入院期間との有意性が示されたが、いずれも退院前の重症群に特に負荷されやすい条件といえる。入院が長期に及び、やっと退院まで辿りついて、医療装備を抱えたまま退院しなければならない、または外来通院での化学療法が待っているという状況が、患者の抑うつのきっかけとなり得るのは想像に難くない。

また、軽症群と対照群の「抑うつ」水準が、手術前から退院前にかけて上昇するものの重症群の水準には及ばず、その後退院後にかけては横ばいであったことについて考察すると、上記「抑うつ」との関連要因の多くが重症度に関連したものであり、特に軽症群や対照群に該当する指標は見出せないことから、軽症群と対照群の退院前以降の

「抑うつ」に直接影響を及ぼすのは、それ以外の要因、たとえば身体条件（退院前における身体状況が、本人が予想していた水準に至らなかった、体力の減退を自覚したなど）、退院後に控えた生活や職場復帰に関連した問題などが一般的には考えられるかもしれない。

結 語

手術を受ける消化器癌患者の「抑うつ」に関しては、特に退院前でのアセスメントおよび精神的ケアの必要性、またアセスメントの際には疾病の重症度（進行度）に加え、退院時の医療装備の有無、退院後の化学療法の有無、入院期間などに配慮すべきことが示唆された。一方の「不安」については、年齢への配慮、さらに、特に進行癌患者の場合は、「抑うつ」と比較して状況に左右されることが少ない分、（その内容は変化しているとしても）常に患者の心理に潜在していること、以上を念頭にケアする必要性が示唆された。これらの所見をふまえ、効率的かつ時機を得た心理的介入を実践することが、一般外科病棟における癌患者の「不安」や「抑うつ」の軽減および予防を可能にすると思われる。

また今回は、PS (Performance Score) を代表とする身体症状と心理特性との関連の検討が不十分であったため、今後の研究ではそれを視野に入れて取り組んでいきたいと考える。

文 献

- 1) 長谷川慧重, 西山 裕, 田中克平, 他, 監修: 国民衛生の動向. 厚生指標 51 (臨時増刊): 46-49, 2004
- 2) 長谷川慧重, 西山 裕, 田中克平, 他, 監修: 国民衛生の動向. 厚生指標 51 (臨時増刊): 430, 2004
- 3) Minagawa H, Uchitomi Y, Yamawaki S, et al: Psychiatric morbidity in terminally ill cancer patients. A prospective study. *Cancer* 78: 1131-1137, 1996
- 4) Sheard T, Maguire P: The effects of psychological interventions on anxiety and depression

- in cancer patients: results of two meta-analyses. *Br J Cancer* 80 : 1770-1780, 1999
- 5) McDaniel JS, Musselman DL, Porter MR, et al : Depression in patients with cancer. Diagnosis, biology, and treatment. *Arch Gen Psychiatry* 52 : 89-99, 1995
 - 6) Spiegel D : Cancer and depression. *Br J Psychiatry* 168 : 109-116, 1996
 - 7) Massie MJ, Holland JC, Glass E : Delirium in terminally ill cancer patients. *Am J Psychiatry* 140 : 1048-1050, 1983
 - 8) Massie M, Holland J : Overview of normal reactions and prevalence of psychiatric disorders. In Holland J, Rowland J, eds. *Handbook of Psycho-oncology*, OUP, New York, 273-282, 1990
 - 9) Molassiotis A, van den Akker OB, Milligan DW, et al : Quality of life in long-term survivors of marrow transplantation: Comparison with a matched group receiving maintenance chemotherapy. *Bone Marrow Transplant* 17 : 249-258, 1996
 - 10) Montgomery C, Pocock M, Titley K, et al : Individual quality of life in patients with leukaemia and lymphoma. *Psychooncology* 11 : 239-243, 2002
 - 11) Folstein M, Folstein S, McHugh P : "MINI-MENTAL STATE" A practical method for grading the cognitive state of patients for the clinician. *J Psychiatr Res* 12 : 189-198, 1975
 - 12) 日本胃癌学会編 : 胃癌取扱い規約. 金原出版, 東京, 1999
 - 13) 大腸癌研究会 : 大腸癌取扱い規約. 金原出版, 東京, 1998
 - 14) 日本食道疾患研究会編 : 食道癌治療ガイドライン. 金原出版, 東京, 2002
 - 15) 日本膵臓学会編 : 膵癌取扱い規約. 金原出版, 東京, 2002
 - 16) Michael BF, Robert LS, Miriam GM, et al (高橋三郎監修) : 精神科診断面接マニュアル (SCID). 日本評論社, 東京, 2003
 - 17) Zigmond AS, Snaith RP : The Hospital Anxiety and Depression Scale. *Acta Psychiatr Scand* 67 : 361-370, 1983
 - 18) Kenn C, Wood H, Kujici M, et al : Validation of the Hospital Anxiety and Depression Rating Scale (HADS) in an elderly psychiatric population. *Int J Geriatr Psychiatry* 2 : 189-193, 1987
 - 19) Herrmann C : International experiences with the hospital anxiety and depression scale, a review of validation and clinical results. *J Psychosom Res* 42 : 17-41, 1997
 - 20) Boormeister F, Berard MF : Factor structure of the hospital anxiety and depression scale in cancer patients. *South Afr Med J* 88 : 1495-1499, 1998
 - 21) Johnston M, Pollard B, Hennessey P : Construct validation of the hospital anxiety and depression scale with clinical populations. *J Psychosom Res* 48 : 579-584, 2000
 - 22) Zung W : A self-rating depression scale. *Arch Gen Psychiatry* 12 : 63-70, 1965
 - 23) Barczak P, Kane N, Andrews S, et al : Patterns of psychiatric morbidity in a genitourinary clinic: a validation of the Hospital Anxiety and Depression Scale (HAD). *Br J Psychiatry* 152 : 689-700, 1988
 - 24) Carroll BT, Kathol RG, Noyes R Jr, et al : Screening for depression and anxiety in cancer patients using the Hospital Anxiety and Depression Scale. *Gen Hosp Psychiatry* 15 : 69-74, 1993
 - 25) Hopwood P, Howell A, Maguire P : Screening for psychiatric morbidity in patients with advanced breast cancer: Validation of two self-report questionnaires. *Br J Cancer* 64 : 353-356, 1991
 - 26) Ibbotson T, Maguire P, Selby P, et al : Screening for anxiety and depression in cancer patients; The effects of disease and treatment. *Eur J Cancer* 30A : 37-40, 1994
 - 27) Hosaka T, Aoki T : Depression among cancer patients. *Psychiatry Clin Neurosci* 50 : 309-312, 1996
 - 28) Zung W : A rating instrument for anxiety disorders. *Psychosomatics* 12 : 371-379, 1971
 - 29) McNair D, Lorr M, Droppleman LF : Manual for the Profile of Mood States. Educational and Industrial Testing Service, San Diego, 1971
 - 30) 箕口雅博, 三宅由子, 吉松和哉 : 世代社会精神医学的研究のための尺度開発—「うつ病親和性

- 性格傾向 (DRP) 尺度」の信頼性および妥当性
一. 社会精神医学 13 : 51-60, 1990
- 31) Dugan W, McDonald MV, Passik SD, et al :
Use of the Zung Self-Rating Depression Scale
in cancer patients: feasibility as a screening
tool. *Psychooncology* 7 : 483-493, 1998
- 32) 福田一彦, 小林重雄 : 自己評価式抑うつ性尺度
の研究. *精神誌* 75 : 673-679, 1973
- 33) Derogatis LR, Morrow GR, Fetting J, et al :
The prevalence of psychiatric disorders among
cancer patients. *JAMA* 249 : 751-757, 1983
- 34) Parle M, Jones B, Maguire P : Maladaptive
coping and affective disorders among cancer
patients. *Psychol Med* 26 : 735-744, 1996
- 35) Devlen J, Maguire P, Phillips P, et al : Psy-
chological problem associated with diagnosis
and treatment of lymphomas. I: retrospective
study. *Br Med J* 295 : 953-954, 1987
- 36) Loge JH, Abrahamsen AF, Ekeberg O, et al :
Psychological distress after cancer cure: A sur-
vey of 459 Hodgkin's disease survivors. *Br J*
Cancer 76 : 791-796, 1997
- 37) Massie MJ, Holland JC : Depression and the
cancer patient. *J Clin Psychiatry* 51 : 12-17,
1990
- 38) 秋月伸哉, 明智龍男, 内富庸介 : サイコオンコ
ロジー. *JIM* 10 : 775-778, 2000
- 39) Derogatis LR, Abeloff MD, Melisaratos N :
Psychological coping mechanisms and survival
time in metastatic breast cancer. *J Am Med*
Assoc 242 : 1504-1508, 1979
- 40) Van Servellen G, Sarna L, Padilla G, et al :
Emotional distress in men with life threaten-
ing illness. *Int J Nurs Stud* 33 : 551-565,
1996
- 41) Salokangas RK, Poutanen O : Risk factors for
depression in primary care. Findings of the
TADEP project. *J Affect Disord* 48 : 171-180,
1998
- 42) Aapro M, Cull A : Depression in breast cancer
patients: The need for treatment. *Ann Oncol*
10 : 627-636, 1999
- 43) Thomas SF, Glynn-Jones R, Chait I, et al :
Anxiety in long-term cancer survivors influ-
ences the acceptability of planned discharge
from follow-up. *Psychooncology* 6 : 190-196,
1997
- 44) Pinder KL, Ramirez AJ, Black ME, et al : Psy-
chiatric disorder inpatients with advanced
breast cancer: Prevalence and associated fac-
tors. *Eur J Cancer* 29A : 524-527, 1993
- 45) Massie MJ, Holland JC : Diagnosis and treat-
ment of depression in the cancer patient. *J*
Clin Psychiatry 45 : 25-29, 1984
- 46) Noyes R Jr, Kathol RG, Debelius-Enemark P,
et al : Distress associated with cancer as mea-
sured by the illness distress scale. *Psychoso-*
matics 31 : 321-330, 1990
- 47) Akechi T, Okamura H, Yamawaki S, et al :
Predictors of patients' mental adjustment to
cancer: Patient characteristics and social sup-
port. *Br J Cancer* 77 : 2381-2385, 1998

受理日 : 2004年11月10日

Abstract

Psychological Characteristics of Patients with Digestive Cancer

Toshiko Matsushita^{*1}, Eisuke Matsushima^{*1}, Michio Maruyama^{*2}

^{*1} *Section of Liaison Psychiatry and Palliative Medicine, Graduate School of Tokyo Medical and Dental University, 1-5-45 Yushima, Bunkyo-ku, Tokyo 113-8519, Japan*

^{*2} *Department of Surgery, Tokyo Metropolitan Health and Medical Treatment Ohkubo Hospital*

This study sought to characterize the psychological status of digestive cancer patients, and to investigate the relationships between psychological characteristics and clinical factors. The subjects consisted of 85 in-patients scheduled to undergo surgery for digestive cancer and 26 control patients. The Japanese versions of HADS (Hospital Anxiety and Depression Scale) and SDS (Zung's Self Rating Depression Scale) were administered for all subjects before surgery, before discharge, and six months after discharge.

Changes in HADS and SDS scores across the three examination days for three subject groups (advanced-phase, early-phase and control groups) were compared. The mean scores of anxiety and depression were higher in the advanced-phase group than in the other groups. Examination day showed a significant effect on depression score, but no significant effect on anxiety score. Post hoc tests showed that depression score increased from before surgery to before discharge, and did not return to the preoperative level at six months after discharge. The relationships between psychological trends and clinical factors showed that disease and treatment conditions have considerable influence on a patient's psychological state, while individual factors (excluding age) exerted only minor influences. The results indicated that we should pay careful attention to cancer patients undergoing surgery, especially young ones, who are constantly at risk of anxiety, and assess their depression taking into account their disease and treatment conditions.

Key words : Digestive cancer, Anxiety, Depression, HADS, SDS

Regular Article

Anxiety and depression of patients with digestive cancer

TOSHIKO MATSUSHITA, PhD,¹ EISUKE MATSUSHIMA, MD, PhD¹ AND
MICHIO MARUYAMA, MD, PhD²

¹Section of Liaison Psychiatry and Palliative Medicine, Graduate School of Tokyo Medical and Dental University, ²Department of Surgery, Tokyo Metropolitan Okubo General Hospital, Tokyo, Japan

Abstract

This study sought to characterize the psychological status of digestive cancer patients, and to investigate the relationship between psychological characteristics and clinical factors. Subjects were 85 inpatients scheduled to undergo surgery for digestive cancer and 26 control patients. The Japanese versions of Hospital Anxiety and Depression Scale (HADS) and Zung's Self Rating Depression Scale (SDS) were administered for all subjects before surgery, before discharge, and 6 months after discharge. Changes in HADS and SDS scores across the three examination days for three groups of subjects (advanced-phase, early phase, and control groups) were compared. The mean scores of anxiety and depression were significantly higher in the advanced-phase group than in the other two groups. Examination day showed a significant effect on depression; depression increased from before surgery to before discharge, and did not return to the preoperative level at 6 months after discharge, but no significant effect on anxiety. As for the relationship between psychological trends and clinical factors, anxiety in the 'middle age' and 'chemotherapy' groups was more severe than in the 'elderly' and 'no chemotherapy' groups. Depression in the 'medical treatment equipment', 'chemotherapy', and 'long-term hospitalization' groups was more severe than in the 'no equipment', 'no chemotherapy', and 'standard-term hospitalization' groups. These results suggest that we should pay careful attention to cancer patients undergoing surgery, especially young patients who are constantly at risk of anxiety, and assess their depression taking into account their disease and treatment conditions, especially after the time when their discharge is determined.

Key words

anxiety, depression, digestive cancer, Hospital Anxiety and Depression Scale, surgery, Zung's Self Rating Depression Scale.

INTRODUCTION

In Japan, the mortality rate from stomach cancer, while high, has been decreasing in recent years due to more widespread management of advanced stomach cancer and more routinely performed medical examinations. Despite this decrease, mortality from stomach cancer in 2002 was about 49 200 patients, and the proportion of stomach cancer among all cancer deaths was 17.3% in males and 14.5% in females.¹ Furthermore, even

though early stage detection of stomach cancer and early treatment has become possible, the number of stomach cancer patients in 2002 was estimated to be 222 000 patients.²

In contrast, the mortality rate in 2002 from colon and rectum cancer, which are also gastrointestinal cancers, was about 37 700 patients, representing an 11.2% ratio in males and a 14.2% ratio in females of all cancer deaths.¹ The mortality rate of liver and pancreas cancer, which are digestive cancers, is also increasing.¹ These data seem to suggest that the number of gastrointestinal cancer patients undergoing surgery is high.

Previous studies report that mental health problems experienced by cancer patients most commonly involve occasional depression and, in association with anxiety, they can also develop mental diseases such as

Correspondence address: Dr Toshiko Matsushita, Graduate School of International University of Health and Welfare, Amity Nogizaka, 1-24-1, Minamiaoyama, Minato-ku, Tokyo 107-0062, Japan. Email: 5213.lppm@tmd.ac.jp

Received 20 December 2004; revised 25 March 2005; accepted 3 April 2005.

adjustment disorder and major depression.^{3,4} Cancer patients undergoing surgery, in particular, are considered to be burdened with two kinds of stress; that associated with surgery itself and that associated with cancer declaration.^{5,6} Therefore, they might be likely to show psychological symptoms. Such psychological manifestations can exert a negative influence on their treatment and quality of life (QOL).^{7,8} In order to improve the QOL of gastrointestinal cancer patients undergoing surgery, we should offer mental care to them and support from the beginning. To that end, we should confirm their mental condition at different stages of treatment and offer efficient, focused mental care that takes into account Japanese social and medical circumstances, including manpower and economic factors. As for focused interventions, Sheard and Maguire showed by meta-analyses that psychological interventions for cancer patients with psychological problems, or those at risk of developing psychological problems, achieved desirable clinical outcomes.⁹

Since few studies have investigated the psychological state of Japanese digestive cancer patients perioperatively and in the short term after discharge, here we investigated psychological characteristics such as anxiety and depression in digestive cancer patients who were scheduled to undergo surgery. We examined these characteristics on three occasions (before surgery, before discharge, and 6 months after discharge) and investigated the relationships between various clinical factors and these psychological characteristics. If we understand the perioperative change in anxiety and depression for patients with digestive cancer, we could offer accurate mental care for them in a timely manner. If we know the relationship between anxiety/depression and other clinical factors, we could prevent their mental problems by taking into account their risk factors.

SUBJECTS AND METHODS

The subjects were drawn from a total of 99 consecutive inpatients of the surgical ward of Tokyo Metropolitan Okubo General Hospital who were due to undergo surgery for primary digestive cancer at some point between May 2000 and April 2002. Patients with a cognition disorder (Mini Mental State [MMS] score less than 23 points)¹⁰ were excluded. The second criterion was that the patient was over 20 years of age.

Twenty-six patients (14 men and 12 women) who were hospitalized for surgical treatment of digestive disorders other than malignancy served as a control. The criterion of the control group was also the same. Almost all of the patients were told their diagnosis, and could understand their physical condition. A few elderly

patients suffering cancer were told that the 'possibility of cancer is high'.

Procedure

Following routine admission and stabilization, informed written consent was obtained from each patient. After first confirming that the patient had no psychiatric diseases (all diseases on the DSM-IV axis I) by administering a semistructured interview based on DSM-IV,¹¹ we investigated their degree of anxiety and depression by giving psychological tests such as the Japanese version of Hospital Anxiety and Depression Scale (HADS),^{12,13} and the Japanese version of Zung's Self Rating Depression Scale (SDS).¹⁴ These tests were carried out on three occasions: before surgery, before discharge, and 6 months after discharge. Additional interviews were conducted if patients showed any signs of mental health problems during the study. This research program was conducted after obtaining permission from the hospital's ethics committee.

The cut-off points for HADS is assumed to be 8 or 11 points, where a total score of HADS-D and HADS-A of 8 points in a given case constitutes suspected depression and a score of 11 points or higher indicates depression.^{13,15} The reliability and validity of the Japanese version of HADS was confirmed by Kugaya *et al.* (They reported that the optimal cut-off point for screening for adjustment disorder and major depressive disorder was 10/11).¹⁶ Fukuda and Kobayashi confirmed the reliability and validity of the Japanese version of the SDS, and concluded that the average score of normal Japanese is 35 (standard deviation 23–47) points, that of the neurotic group is 49 (39–59) points, and that of the depression group is 60 (53–67) points.¹⁷

Statistical analysis

The demographic/clinical characteristics between the subject and control groups were analyzed by the Mann-Whitney *U*-test or χ^2 test. The differences in HADS and SDS scores between the advanced-phase group (group A), the early phase group (group E), and the control group (group C) were analyzed using two-way analysis of variance (two-way ANOVA), with repeated measures on one factor (three groups [group A, group E, group C] \times (3 days [before surgery, before discharge, 6 months after discharge]), with post-hoc comparisons (Scheffé's *F*-test; 95% significance). The relationships between HADS and SDS scores of cancer patients and clinical factors other than severity were analyzed using two-way ANOVA, with repeated measures on one factor (groups of each clinical

factor \times (3 days [before surgery, before discharge, 6 months after discharge]), with post-hoc comparisons (Scheffé's *F*-test; 95% significance).

Details of the clinical factors and group classification at analyzing with ANOVA are as follows.

1. Age: subjects were classified into either the 'elderly' group when their age was greater than the mean age or otherwise the 'middle age' group.
2. Patient living arrangements – 'who they lived with': subjects were classified into either the 'alone' group, 'with partner only' group, or 'with others' group.
3. Employment status: subjects were classified into the 'employed' group and 'unemployed' group.
4. Education: subjects were assigned to either the 'standard educational background' group if the last educational organization attended was compulsory education or high school, or the 'high educational background' group.
5. History of surgery: subjects were classified into the 'cancer surgery' group, 'surgery for other than cancer' group, and 'no surgery' group.
6. Diagnosis: because the number of patients with other forms of cancer was small, only patients with stomach cancer and intestinal (colon and rectum) cancer were classified into the 'stomach' group or 'intestinal' group.
7. Process leading to hospitalization: subjects were classified into three groups according to the process by which they were hospitalized: the 'examination' group if they received physical examinations and were advised to have further examination, the 'follow up' group if they received follow up at the hospital for other diseases, and 'symptom' group if they consulted a physician about their symptoms and were subsequently diagnosed with cancer.
8. Presence of postoperative complications such as ileus and leak: subjects were classified into the 'complications' group or 'no complications' group.
9. Medical treatment equipment at discharge: equipment consisted mainly of perintestine tubes for perintestinal nourishment injection, and subjects were classified into either the 'equipment' group, or 'no equipment' group.
10. Chemotherapy after discharge: subjects were classified into the 'chemotherapy' group or 'no chemotherapy' group.
11. Admission period: subjects were classified into either the 'long-term hospitalization' group if their terms were more than the mean duration of admission or the 'standard-term hospitalization' group.

RESULTS

Characteristics of subjects

Two patients refused to participate in the study from the beginning, and six patients were eliminated later due to their physical condition or refusal. Another six patients died before discharge, making a total of 14 patients who were excluded before the second psychological exam. Although another six patients died within the first 6 months after discharge, 85 inpatients served as subjects for this study.

Diagnoses and reasons for surgery were stomach cancer ($n = 37$), colon cancer ($n = 26$), rectum cancer ($n = 12$), esophagus cancer ($n = 3$), pancreas cancer ($n = 3$), liver cancer ($n = 2$), and other cancers ($n = 2$), with primary gastrointestinal cancer accounting for 88% of cases. Severity of cancer was defined by cancer stage as described in the Japanese Gastric Cancer Association (JGCA) Japanese classification of gastric carcinoma.¹⁸ Similarly, we referred to the diagnostic standard to determine stage in the respective classification of colon,¹⁹ esophagus,²⁰ and pancreas cancer.²¹ In all cases, the stage of cancer was matched to the gastric cancer stage. Severity of disease was decided from common cancer progress level; patients whose progress level was stage 1,2 were assigned to the early phase group ($n = 55$; 65%), and those whose progress level was stage 3,4 ($n = 30$; 35%) were assigned to the advanced-phase group.

In the control group, 18 patients were diagnosed with gallstones. Gallstones, bile duct stones, and liver stones accounted for 77% of the diagnoses. No control subject died or dropped out during the course of the study. Table 1 shows the patient characteristics of the cancer patient group and the control group. There were no significant differences in demographic characteristics between the cancer group and control group (Mann-Whitney *U*-test or χ^2 test).

Incidence of mental disease

Some patients were clinically diagnosed with and treated for adjustment disorder or major depressive disorder (by the clinical doctor or consultation-liaison psychiatrist) in the time between just before surgery to 6 months after surgery: among the 85 cancer patients, four (4.7%) were treated for adjustment disorder and three (3.5%) were treated for major depressive disorder, and among the 26 control patients, one (3.8%) was treated for adjustment disorder. There was no significant difference in the incidence rate between two groups. There was no incidence of other mental disease besides adjustment disorder and depression in either group.

Table 1. Sociodemographic and clinical characteristics of patients with and without cancer

		Patients with cancer (subjects group) (<i>n</i> = 85)	Patients with-non-cancer (control group) (<i>n</i> = 26)	Mann-Whitney's <i>U</i> -test/ χ^2	<i>P</i>
Age at admission (average \pm SD, range)		68.0 \pm 10.3 (44–87)	63.5 \pm 14.6 (28–78)	<i>z</i> = -0.950	NS
Years of education (average years)		13.2 \pm 2.9	12.4 \pm 3.4	<i>z</i> = -0.694	NS
Duration of hospitalization (mean days)		56.6 \pm 26.5	28.7 \pm 22.6	<i>z</i> = -5.24	<i>P</i> < 0.0001
Gender	Male	53 (62.4%)	14 (53.8%)	χ^2 = 0.602	NS
	Female	32 (37.6%)	12 (46.2%)		
Living arrangements of patients	Single	17	9	χ^2 = 2.414	NS
	Spouse only	30	8		
	Others	38	9		
Occupation	+	39	10	χ^2 = 0.445	NS
	-	46	16		
Surgical treatment	Abdominal operation	78 (91.8%)	15 (57.7%)	χ^2 = 17.01	<i>P</i> < 0.0001
	Laparotomy	7 (8.2%)	11 (42.3%)		
Chemotherapy after discharge	+	37 (43.5%)	0	χ^2 = 16.98	<i>P</i> < 0.0001
	-	48 (56.5%)	26 (100%)		

NS, not significant.

In addition, although HADS and SDS are not instruments for diagnosing or evaluating the degree of anxiety and depression, if we estimate their scores (referring above-mentioned cut-off point), there were 24 (28.2%) possible cases of mental disease (HADS score \geq 8 and/or SDS score of at least moderate severity) in the cancer patient group, and four (15.4%) in the control group.

Comparison of anxiety and depression between the advanced-phase, early phase, and control groups, and between examination times

Two-way ANOVA with repeated measures was used in order to compare anxiety/depression between three groups: the advanced-phase, early phase and control groups across the three examination days (before surgery, before discharge, and 6 months after discharge). Comparison of anxiety between the three groups across the three examination days showed significant differences (HADS-A: $F = 8.516$, d.f. = 2,2, $P = 0.0004$) (Table 2). The scores for the advanced-phase group were significantly higher than those of the early phase and control groups ($P < 0.05$; Scheffé's test). Comparison of HADS-D and SDS scores between the groups across the three examination days showed significant differences in severity of depression (HADS-D: $F = 7.602$, d.f. = 2,2, $P = 0.0008$; SDS: $F = 11.586$,

d.f. = 2,2, $P < 0.0001$). Both scores for the advanced-phase group were significantly higher than those for the early phase and control groups ($P < 0.05$; Scheffé's test).

Next, changes in HADS-A, HADS-D, and SDS scores across the three examination days for the three groups were compared. There was a significant difference in depression scores taken on different days (HADS-D: $F = 5.799$, d.f. = 2,2, $P = 0.0036$; SDS: $F = 10.225$, d.f. = 2,2, $P < 0.0001$). Scores before discharge were significantly higher than those before surgery, but the difference between scores before discharge and after discharge was not significant. In contrast, there was no significant difference in anxiety between days. Moreover, there was no significant interaction between the two factors (Table 2).

Relationship between psychological characteristics and clinical factors in digestive cancer patients

For all cancer subjects, the relationship between anxiety/depression scores across the three examination days and the 12 above-mentioned clinical factors including gender was investigated by two-way ANOVA with repeated measures. As for anxiety, the relationships between anxiety and age/chemotherapy were significant. Scores for the 'elderly' group were lower than those for the 'middle age' group (HADS-A: $F = 6.021$,