REHABILITATION OF PATIENTS WITH GASTRIC CANCER

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The value of rehabilitative follow-up care in patients with gastric cancer is unambiguous. In contrast to curative follow up care , it is not the controlling of the disease which represents the focus of all efforts. It is the minimization of tumour mass and therapy-related disability which constitutes the aim of rehabilitative procedures. The negative effects of disease and therapy in physical (somatic), psychological, social and vocational areas are to be eliminated or at least mitigated by rehabilitative measures.

A REHABILITATIVE MEASURES AIMING AT REDUCING SOMATIC PROBLEMS ("rehabilitation in order to combat disability")

Before carrying out rehabilitative measures a rehabilitative assessment must take place, with rehabilitation planning and documentation of the goals to be achieved. Here, the consequences of stomach surgery constitute the main focus.

Table 1: Frequent rehabilitative somatic problems in gastric cancer patients

- Effects of partial or total gastrectomy (post-gastrectomy symptoms)
- Effects of chemotherapy (for example, polyneuropathy, cardiac disturbances)
- Alterations in pharmacokinetics
- Anemia
- Osteopathy
- Lack of information / need for information
- Psychological strain / anxiety disorders
- Social difficulties
- Dependence on nursing care
- Inability to perform work / pursue profession

Table 2: Frequent physical (somatic) rehabilitative needs

- Nutrition deficiencies
- Weight loss
- Gastric emptying syndrome
- Dumping syndrome
- Late dumping
- Afferent loop syndrome
- Reflux esophagitis
- Reflux gastritis
- Maldigestion, malabsorption
- Alterations in pharmacokinetics
- Diarrhea
- Anemia
- Osteopathy
- Polyneuropathy
- Immobility
- Necessity of information

Table 3: Possible causes of weight loss in potentially curatively resected gastric carcinoma patients

- Decreased food intake due to lack of appetite
- Decreased food intake due to fear of pain
- Malassimilation
- One-sided and incorrect nutrition
- Relative (secondary) pancreatic insufficiency (with pancreocibal asynchron)
- Colonization of the small intestine by harmful bacteria (with afferent loop syndrome)
- Dysphagia following truncal vagotomy

Table 4: General recommendations following total stomach resection

- Eat slowly
- Chew well
- Eat 6-10 meals a day (in the first ½ year following surgery)
- Eat foods with low volume and high energy
- Drink liquids between mealtimes and not during mealtimes (in the first ½ year following surgery)
- Avoid foods which are very hot or cold, are heavily smoked or cured or grilled
- Avoid very sweet or very salty foods
- Avoid carbonated drinks
- Use hygienic utensils and dishes
- Take in at least 50 kcal / kg body weight
- Eat complex carbohydrates rather than simple sugars
- Eat foods rich in vitamin C and calcium
- Eat easy-to-digest proteins
- Eat foods and prepared foods low in fat (approx. 30% fat and in some cases medium-length triglycerides)
- Raise the head of the bed 10 to 15 cm (use a wedge pillow), do not eat lying down. (Exception: dumping problems).

Table 5: Functional consequences of anemia

• Physical functioning
• Cognitive functioning
• Social functioning
• Emotional functioning
• Role functioning
• fatigue

B REHABILITATIVE MEASURES AIMING AT REDUCING PSYCHOLOGICAL PROBLEMS ("rehabilitation to combat resignation and depression")

Besides the tumour illness, which threatens the patient's life and very existence, the fear of social and occupational handicaps and post-gastrectomy symptoms with their nutritional problems in particular are often the cause of depression. They may be alleviated by proper dietary counselling.

Fears of progress and the uncertain future are frequent. It is the task of the physician and the psycho oncologist to deal with these fears. Medicinal support may be considered, but it cannot replace cognitive therapy.

Certain "disturbances in the state of health" such as resignation, depression, self-isolation, lack of motivation and loss of personal contacts are observed particularly frequently. Encouragement of compliance, coping and activation are chief tasks of psycho-oncological guidance. The basic attitude of resignation of affected persons must be overcome.

***Table:** Topics in health education for gastric cancer patients*

Prophylactic measures
• Adjuvant therapy: when and why is it needed, which therapy
• Prevention or reduction of chemotherapy / hormone / radiation therapy side effects
• Significance of follow-up examinations
• Recurrence: prophylaxis, signs and therapy in cases of recurrence
• Prognosis
• Significance of immune resistance
Nutrition
• Weight loss: causes and prevention
• Most common nutritional disorders
• Post-gastrectomy complaints
• Different forms of nutrition for the individual post-gastrectomy symptoms
• Is there a "cancer diet"?
• Healthy diet
Psychological aids
• Opportunities for relaxation – overcoming fears – depression – fatigue
• References to psychological assistance
• Dealing with family members
Social aids
• Information pertaining to legal protection measures for cancer patients
• Information pertaining to financial reductions
• Insurance – life insurance – granting of loans – loan payment
• Information on self-help groups – hospice – palliative wards
Vocational counselling and aids
• Occupational consequences
• Avoidance of certain types of work-related strain
• Measures and aids for successful vocational reintegration

C REHABILITATIVE MEASURES AIMING AT REDUCING SOCIAL PROBLEMS ("rehabilitation to combat the need for care")

The aim of these measures is to strengthen the patient's own resources and prevent the risk of a need for care, or at least reduce such a need. By these means, the patient's risk of requiring nursing care is to be eliminated or at least reduced. If independent care is no longer possible, appropriate nursing care must be provided.

It is often the case that some people (usually older) already have difficulty maintaining their household due to their advanced age; self-care at home is further endangered in many cases because of additional illness and therapy-related strain. Different forms of care assistance such as "meals on wheels", household assistance, nursing assistance, home nursing care and in some cases living in a nursing home or hospice program have to be organized with the participation of family members. It is necessary to provide contact addresses (self-help groups, counselling locations etc).

A subsequent *stay in a rehabilitation hospital* (AHB - hospital), directly following the standard hospital stay, is recommended for all patients in Germany. In Germany, there is a special mandatory disability insurance which is set up to meet the financial demands in the case of a patient's needing nursing care.

D REHABILITATIVE MEASURES AIMING AT REDUCING VOCATIONAL PROBLEMS ("rehabilitation to combat early retirement")

For "cured" gastric cancer patients there are numerous occupational limitations which result from post-gastrectomy symptoms. Vocational reintegration can be expected to take place more easily for patients following B1 partial resection than for gastrectomy patients. Limitations in ability to work, carry out a profession or occupation apply especially to those jobs which are associated with physical exertion.

Table: *Occupational strains which cured gastric carcinoma patients should avoid following total gastrectomy (R0).*

Limitations	Reason for limitation
Work requiring frequent bending over	risk of reflux esophagitis
Physically challenging work, no lifting or carrying heavy burdens	Low body weight, risk of reflux esophagitis
Jobs performed at great heights with the possibility of vertigo (for example, roofers)	Dumping symptoms with symptoms due to low blood sugar
Work requiring long-term concentration	Dumping symptoms with symptoms due to low blood sugar
Activities in the first six postoperative months	Relatively slow adaptation to altered food transit in the gastrointestinal tract
Activities associated with strong odors or caustic fumes	Provocation of vomiting, nausea and diarrhea
Night work and work in shifts not allowed	Lower stress tolerance
Work in which frequent breaks, not normally scheduled in the job, are possible	More frequent mealtimes necessary
Work as truck driver unsuitable	Frequent breaks not normally scheduled in the job are necessary, psychological and physical stress, risk of dumping syndrome with difficulty concentrating

For many patients following total gastrectomy, but also for partially resected patients, many activities requiring physical exertion are no longer possible, often due to weight loss and weakness alone. White collar workers on the other hand can more easily return to their respective occupations, although gastrectomy patients must be expected to have more difficulties with concentration. Total gastrectomy patients are not allowed to carry out activities involving frequently alternating, standing or bending positions due to the risk of reflux. The necessity of frequent mealtimes further limits the spectrum of potential occupations for gastrectomy patients.

In *gastrectomy patients under 50 years of age* with prognostically favourable forms of the illness, an attempt to change the workplace should be made if the former occupation involved physically strenuous activities. If a change of workplace is not possible, vocational reorientation should also be considered in young patients (< 43 years of age) with a favourable prognosis. Occupations involving only a small amount of physical exertion in service branches are to be favoured.

In partial resection patients, later adaptation can take place accompanied by an increase in physical performance. In this case, it is recommended that one waits approximately one year to make a socio-medical assessment in order to make a more accurate and realistic assessment of the patient's performance ability possible. A step-by step approach to resumption of work is advised.

HOW TO RETURN TO WORK

There are many questions to be answered: (which workplace-conserving measures are to be taken- including reintegration assistance, occupational and vocational support and vocational reorientation, as well as change of vocation - who is financially responsible, in which cases does a vocational reorientation make sense and can it be accomplished?). These questions are ideally answered for the cancer patient during his/her subsequent stay in an oncological rehabilitation clinic which – at least in Germany - works closely with retirement insurance and vocational advisors.

These rehabilitation clinics are obligated to counsel every cancer patient within working age and to provide vocational assistance if necessary. It is further required to issue a detailed statement in patient's final medical report which makes recommendations concerned with the ability of the gastric cancer patient to pursue his/her former occupation or if he/she is able to work at all, at which point he/she will be able to be fully or only partially employed, and which further means of vocational assistance should be considered/ implemented.

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