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Case Report

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Avoiding surgery in patients with dementia: is it the correct management?

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ABSTRACT. Although hospitalization for dementia is increasing, Japanese doctors often refrain from surgeries considering dementia. A woman in her 80s diagnosed with Alzheimer's disease was admitted to hospital for cholelithiasis. Due to the avoidance of surgery, the inflammation was prolonged and therefore she was unable to eat. Later, she was discharged with central venous nutrition. The care burden on family resulted in her readmission to another hospital. Eventually, the inflammation was alleviated, and she was able to eat. However, it took a long time. In this study, we not only emphasize the risks but also focus on the benefits to postoperative rehabilitation. We also discuss about the benefits of invasive procedures in patients with dementia.

Keywords: General Surgery; Choledocholithiasis; Alzheimer Disease; Dementia.

EVITAR CIRURGIA EM PACIENTES COM DEMÊNCIA: É O MANEJO CORRETO?

RESUMO. Apesar do aumento de hospitalizações por demência, os médicos japoneses geralmente se abstêm de cirurgias ao considerar a demência. Uma mulher de 80 anos diagnosticada com doença de Alzheimer foi internada no hospital por colelitíase. O adiamento da cirurgia prolongou a inflamação e a deixou incapaz de comer. Ela foi forçada a receber alta com nutrição venosa central. A sobrecarga de cuidados para a família resultou em sua readmissão em outro hospital. Eventualmente, a inflamação foi aliviada e ela conseguiu comer. No entanto, levou muito tempo. Não devemos apenas enfatizar os riscos, mas também focar nos benefícios da reabilitação pós-operatória. Gostaríamos aqui de discutir e fornecer argumentos a favor de procedimentos invasivos em pacientes com demência.

Palavras-chave: Cirurgia Geral; Coledocolitíase; Doença de Alzheimer; Demência.

INTRODUCTION

The number of dementia cases is increasing rapidly in the aging society, and such patients are hospitalized in general wards for physical illness. We previously reported that 66% of patients admitted for surgery of proximal femoral fracture suffered from dementia in Japan[1]. Although hospitalizations for people with dementia are increasing, Japanese doctors often refrain from performing invasive surgeries, in consideration of dementia. Their opinions are as follows:

- Since postoperative rest is difficult, physical restraints are needed which may cause disuse syndrome,
- Dementia progresses and delirium can occur due to hospitalization and surgery, and
- Consent cannot be obtained from people with dementia. These were not evidence-based, but are examples of arguments.

In general, these views say, "We don't recommend surgery because we see the

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person, not the illness." While these perspectives are certainly not wrong, there is a concern that the risks and benefits are being assessed appropriately for each case. The acute care wards are structurally not intended for dementia patients. Therefore, we cannot deny a bias to avoid surgeries for dementia patients, considering the postoperative nursing problems (e.g., self-removal of IV drip, falls, difficulty in understanding medical instructions, and delirium).

Moreover, it is not obvious that people with dementia cannot consent to surgery. Their language dysfunction and judgment disabilities are highly variable. Some patients have difficulty in remembering but can understand the doctors' explanation and need for surgery. Now, the process of "listening to the person himself" is often ignored in the case of people with dementia in Japan. Previous discussion about the ability of dementia patients to consent is only related to informed consent on paper in most cases.

There are quite a few patients with dementia who are returned to their houses without surgery, even though their diseases indicate the need for surgery. These patients are followed up through home-visit medical care, but less is known about their subsequent process. If doctors in acute care hospitals knew what happens after discharge, they would likely make different choices in their treatment. In this article, we present a case who took a lot of time to recover from swallowing dysfunction because cholelithiasis cholangitis surgery was withheld, which prolonged the inflammation, increased the family burden, and led to the collapse of home care.

Patient information

Patient demographics: A woman in her 80s.

Diagnosis: Cholelithiasis cholangitis, Alzheimer's disease (AD).

Chief complaint: "I want to eat a normal meal."

Medical history: Artificial anus for ischemic enteritis (X–1 year).

Family composition: Husband, son, and daughter-in-law (same household). Daughter (separate household).

Cognitive function: Functional Assessment Staging of Alzheimer's Disease (FAST) -6.

Daily life independence level of the elderly with dementia: IIIa (in the Japanese scale): She has symptoms and behaviors that interfere with her daily life and difficulty communicating and requires nursing care, especially during the daytime.

Daily life independence level of the elderly with disabilities: C1 (in the Japanese Long-Term Care Insurance scale): She spends all day in bed and requires assistance with toileting, eating, and dressing, but turns over on her own.

The patient and her family provided written informed consent for the case details to be published. The Ethical Committee of the Kurihara Hospital approved the case details to be published.

Timeline

History of present illness

In September X, she was admitted to Hospital A for cholangitis and was treated conservatively with therapeutic suspension of feeding and antibiotics. After 10 days, hepatobiliary enzymes became normalized. However, she developed fever every time she resumed oral intake, and the inflammation may have been prolonged. Her doctor judged that there was no indication for choledocholithotomy and cholecystectomy. He permitted only a small amount of rice gruel in 3°. Therefore, her main nutrition was central venous hyperalimentation. She wanted to eat more, but aggressive treatment was not provided for her.

In October X, she left the hospital and made a home visit from Home Support Clinic B. She continued to develop fever at home but was willing to eat more. The daughter-in-law, who prepared all of the meals, could not decide what to serve and only provide a very small amount due to the fear of progression of the cholangitis. The daughter also had different views on food shape and volume, which was stressful for the daughter-in-law. Due to continued central venous nutrition, she was refused to use welfare services of day care and short stay admission. Since her son worked outside all day and her husband also required care, the daughter-in-law burned out providing care for the two. Under these stressful conditions, the daughter-in law showed depressive symptoms.

Clinical findings

In November X, the patient was admitted to Clinic C because the family could not care for her anymore.

Post-hospital course: The chief doctor continued to recommend a small amount orally because the patient exhibited an appetite. Initially, she continued to develop fever, which gradually became stable and stopped in mid-November X. However, she had not had any oral intake for almost 2 months. She exhibited a decrease in swallowing function due to disuse. Therefore, she needed dysphagia rehabilitation to allow her to ingest a solid diet again. After that, she stopped central venous nutrition in mid-December X and switched to a regular diet in January X + 1. Along with the increase in oral food, her strength and awakening improved, making it possible to ride on a wheelchair. In February X + 1, she

was transferred to the Long-Term Care Health Facility D for further rehabilitation (Figure 1).

Patient perspective

She herself really wanted to recover as taking food orally and receive surgical operation.

DISCUSSION

The prevalence of choledocholithiasis in the elderly is increasing in Japan due to westernization of eating habits and extension of the life span[2]. When acute cholangitis is complicated, the mortality is high. Therefore, the guidelines recommend that choledocholithotomy be performed after inflammation has improved[3].

According to the Japanese guidelines for cholelithiasis, this case corresponded to mild-to-moderate disease. After treatment with antibiotics, cholangiolithotomy and cholecystectomy were considered. But her doctor did not adopt surgical treatment. Consequently, the inflammation was prolonged and her feeding function was reduced by disuse syndrome, requiring long-term swallowing rehabilitation. Hospital A did not perform surgery because of the presence of dementia, in addition to being bedridden with an artificial anus. The risks of surgical treatment for people with dementia include:

- Disuse syndrome due to physical restraint and
- Postoperative cognitive dysfunction and delirium. In addition, the physicians find (three) difficulties in obtaining informed consent from dementia patients.

We can refute these opinions as follows:

- First, physical restraints are not always necessary for dementia patients. The consideration is based not only on patient factors but also on nursing circumstances such as the number of nurses and the night shift system. Surprisingly, 14.6% of the approximately 71,000 elderly inpatients in general wards received medical restraints in Japan. About 23,500 of these were dementia or suspected and received restraints at a rate of 44.5%[4]. It is unlikely that every restraint was valid or fully considered. Approaches for promoting restraint-free care in acute settings are currently being attempted in Japan. We should not only state that physical restraints worsen the activities of daily living (ADL) but also provide a good opportunity to think about "nursing without binding." The need for treatment itself should be considered separately.
- Second, cognitive decline due to surgery is well known as postoperative cognitive dysfunction (POCD)[5]. Notably, 10–15% of elderly people aged 60 years and over develop POCD, which

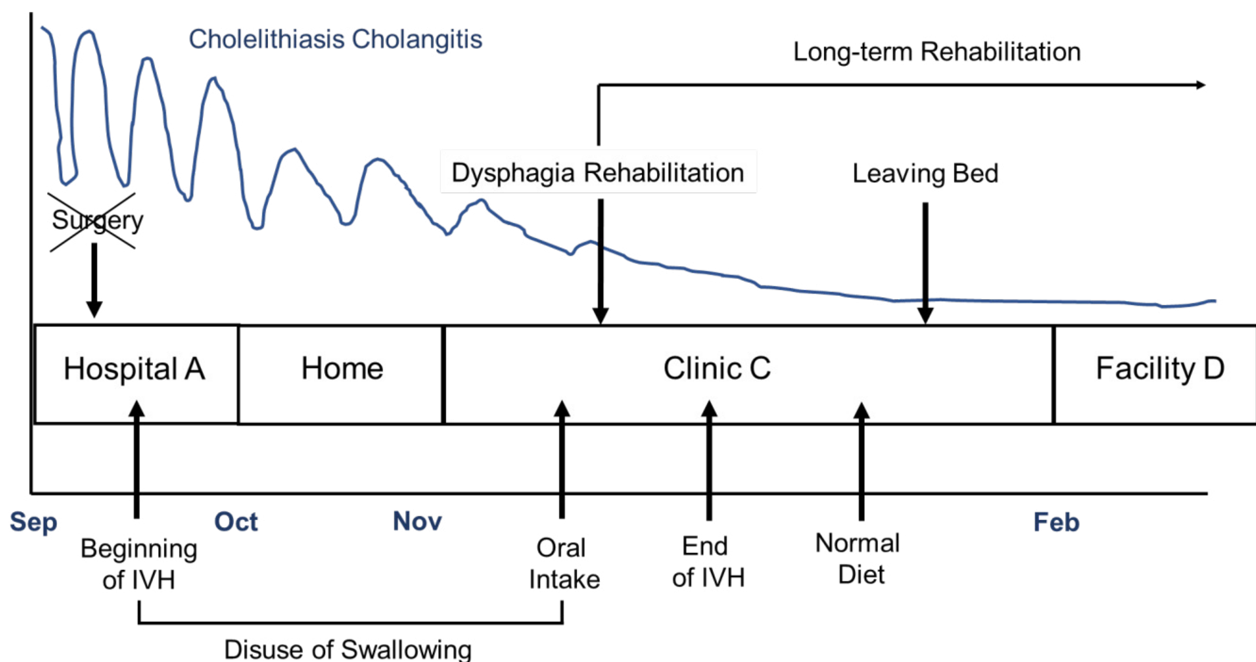

Figure 1. Clinical course and rehabilitation process. The avoidance of surgery resulted in prolonged cholangitis, very slow progress in oral intake, and long-term dysphagia rehabilitation.

lasts for 3 months or longer after major surgery, and it is associated with a long-term decrease in quality of life and an increase in mortality[5]. In addition, many studies indicate that old age and cognitive impairment are risk factors for postoperative delirium. The onset of POCD and delirium is influenced by multiple factors. Analysis and preventive intervention of these factors are indispensable in perioperative management. Since these complications can affect the postoperative course, they require coping and secondary prevention.

The common point of these two points is the fact that necessary and possible treatments are withheld from the patients due to the fact that perioperative management is difficult in the medical institutions. The deception lies in the fact that the withholding is explained as being "for the patient's sake"; the other way around. Is not this contrary to the Hippocratic Oath, which states, "I will take what I think will benefit the patient to the best of my ability and judgment, and I will never take what I know to be bad and harmful"? This statement assumes that the doctor will be prepared to administer all possible means of treatment. Meguro describes the role of the doctor in medicine as "two roles for one person." The first role of the doctor is that of a "soldier" who tries everything to save the patient. In contrast, he also plays the role of "chairman" who collects the opinions of the patient, family, and other caregivers to decide how far the treatment should be taken in reality[6].

Moreover, in such circumstances, the decision of a treatment plan based on the patient's will may be neglected, especially for people with dementia. In this case, the patient did not absolutely refuse surgical treatment. To achieve the goal of "becoming able to eat," the surgical explanation might have been accepted. Since she had sufficient appetite, she was receptive to postoperative rehabilitation. Even if the patient has severe dementia, it is desirable to listen to the will and reflect it in treatment policy. Even if the dementia patient's comprehension is flawed, there is an important therapeutic significance in directly listening to the patient's self-awareness and judgment of the situation. The patient's wishes can be reflected in the direction of treatment, as in the process at Clinic C. The patient's attitude toward life is valuable information that can be used to predict prognosis, postoperative care, and rehabilitation.

Importantly, withdrawing aggressive treatments may lead to secondary social problems for people with dementia. In areas that lack medical resources, patients who are not undergoing active treatment are not allowed to occupy hospital beds. For this reason, early discharge is unavoidable when patients are "physically" able to do so with medical visits. However, if they return home without adequate treatment, welfare services can be limited, as in this case. Outpatient services without a nurse are not available, especially if medical procedures are ongoing, such as central venous nutrition. Thus, the burdens are focused on the family caregivers, whose social, financial, and psychological losses are enormous. The withholding of invasive procedures could also lead to problems such as chronic pain and malnutrition, which, in turn, can also lead to delirium, higher caregiver burden, and immobility.

Although this case was not a palliative case and voluntarily did mention his hope that he would receive surgical operation although the surgeon hesitated for possible risks, we should also consider an importance of the palliative care approach, especially the well-established Physician Orders for Life-Sustaining Treatment (POLST)[7] decision to take or not surgical procedures should ideally be made in early stages of cognitive decline, but it may also be decided with a family reunion – but never by the doctor alone.

Although the surgeon did not consider cognitive recovery after anesthesia or surgery for the case, but the topic is important for surgery for older people. A recent review[8] summarizes the state of the relevant clinical science, including risk factors, identification and diagnosis, prognosis, disparities, outcomes, and treatment of perioperative neurocognitive disorders.

In this patient, the inflammation followed a protracted course without surgical treatment. During that time, the care burden was concentrated on the family, resulting in the collapse of long-term home care. Moreover, it took a lot of time and medical resources to recover the feeding function, including dysphagia rehabilitation. Due to "therapeutic nihilism" and medical economics, aggressive treatment for people with dementia tends to be restrained, although there is scientific evidence that prognosis in patients with dementia who underwent invasive procedures is worse[9]. However, we should not only emphasize the risks associated with the treatment but also focus on the benefits and positive factors that lead to postoperative rehabilitation, as well as the social resources available after discharge. We are required to make decisions based on more reasonable comparisons.

Authors' contributions. TK: conceptualization. YK: conceptualization. MS: methodology. KM: writing – original draft, writing – review & editing.

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