

News Release

Title

Less-invasive, R1 surgery gives good results for abdominal wall desmoid

Key Points

- Surgical treatment for desmoid tumor is acceptable for abdominal wall development
- Good results can be obtained even with R1 surgery for abdominal wall desmoid
- R1 surgery for abdominal wall desmoid is minimally invasive and therefore requires less reconstructive surgery

Summary

A research group consisting of Yoshihiro Nishida, a professor at the Department of Rehabilitation, Nagoya University Hospital, and Tomohisa Sakai, an assistant professor at the Department of Orthopedic Surgery, has been working on desmoid, an intractable intermediate tumor, only for the development of the abdominal wall. For the first time in the world, They have reported that surgical treatment is acceptable and that R1 surgery (tumor positive on the surgical margin) gives good results.

Desmoid is a proliferative tumor of (myofibroblast-like cells) that does not metastasize, but is highly locally invasive, and patients suffer from joint dysfunction, paralysis, pain, etc. depending on the site. Surgical treatment has not been selected in recent years due to the extremely high recurrence rate after surgery. However, it has been reported that postoperative results are good due to extensive resection (R0 surgery) only for abdominal wall development. For the first time, Nagoya University discovered that R1 surgery achieved good results as well as R0 surgery. R1 surgery was performed on 15 patients with abdominal wall desmoid. By performing R1 surgery, the fascia of the abdominal wall can be preserved, eliminating the need for major reconstructive surgery. Even so, postoperative recurrence was extremely good with only one case (6.7%).

The standard concept of surgery for tumors is that the postoperative recurrence rate of R0 surgery is lower than that of R1 surgery. However, it has been suggested that R1 surgery can achieve the similar results as R0 in abdominal wall desmoids, which may significantly change the concept of tumor surgery. It is necessary to increase the number of cases for analysis, but since the recurrence rate can be suppressed by minimally invasive surgery, it is considered to be of great benefit to patients.

The results of this research were published in the international scientific journal "Scientific Reports" (electronic version dated September 29, 2021 UK time).

Research Background

Desmoid is an intermediate tumor in which (muscle) fibroblast-like cells proliferate, and although it does not metastasize, it is highly locally invasive. Symptoms vary depending on the

site of occurrence, such as pain, range of motion limitation, nerve palsy, and swallowing disorder, causing ADL / QOL disorders. In the past, extensive resection was the main treatment, but due to the higher recurrence rate (20-60%) than malignant tumors, the treatment policy has changed from surgery to follow-up and drug treatment. However, it has been reported that the recurrence rate after surgery is low for abdominal wall development, and surgery is acceptable. While, most of the reports from overseas are aimed at R0 surgery (the tumor is not exposed when the excised cross section is examined under a microscope), and since the postoperative defect becomes large, reconstructive surgery is performed in almost all cases.

Unlike malignant tumors, there are a number of reports that there is no significant difference in the postoperative recurrence rate between R0 and R1 surgery for desmoid. We report similar results at our hospital. Combining the two evidences that the postoperative results of abdominal wall desmoids are good (aiming for R0 surgery overseas) and that there is no significant difference in the results of R0 and R1 surgery for desmoids, we hypothesized that postoperative results would be good even after R1 surgery for abdominal wall desmoids.

Since 2009, we have been prospectively performing R1 surgery for desmoid, which is a rare tumor, especially for abdominal wall development, and we have been aiming to eliminate the need for reconstruction by preserving the fascia of the abdominal muscles. The purpose of this study is to clarify that good postoperative results can be obtained even with R1 surgery, which is a minimally invasive surgery, for the abdominal wall desmoid.

Research Results

Surgery is still being performed on abdominal wall desmoid with a wide surgical margin. The purposes of this study are to clarify the treatment results of less-invasive, fascia preserving surgery for patients with abdominal wall desmoid, and to propose a new treatment modality. Since 2009, 34 patients with abdominal desmoid have been treated in our institution. Among them, as a final treatment modality, 15 (44%) were successful with AS, 15 were subjected to less-invasive surgery, and 4 methotrexate and vinblastine treatment. The clinical results of less-invasive surgery were clarified. In the surgical group, although the surgical margin was all microscopic positive (R1), only one patient (6.7%), who has the S45F mutation type of CTNNB1, showed recurrence, at a mean follow-up of 45 months. There were no patients with familial adenomatous polyposis (FAP)-related desmoid in this cohort. Only two patients (13%) required fascia lata patch reconstruction after removal of the tumor. In patients with non FAP-related abdominal wall desmoid, less-invasive, fascia preserving surgery is recommended as a favorable option as active treatment.

Research Summary and Future Perspective

The results of this study suggest that R1 surgery gives good results for abdominal wall desmoid. However, the first treatment option is wait and see. It is necessary to increase the number of cases to raise the level of evidence of the outcome of R1 surgery, and compare it with

wait and see and low-dose anticancer drug treatment (methotrexate + vinblastine). It is also necessary to carry out patient-based QOL evaluation as well as tumor control rate.

In addition, R1 surgery for abdominal wall desmoid has not yet been prospectively performed overseas. We believe that it is important to disseminate this surgical method through DTRF (Desmoid Tumor Research Foundation), which is an international joint research organization for desmoid.

Publication

Less-invasive fascia-preserving surgery for abdominal wall desmoid

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