

Figure 1

- A** : Recurrent desmoid tumor, that adhered to overlying skin, aggressively grew in the supraclavicular region. Keloid formation was also identified in the upper-chest scars of the past operations. Areas of Black arrows, at which there were no postoperative scar originally, indicate longitudinal growing region of the keloid.
- B** : Sagittal view of MRI demonstrated a desmoid deeply extended to the upper anterior mediastinum.

then resected episternum was returned after inactivation by liquid nitrogen (Figure 2D). Skin defect of the anterior neck was covered with the free radial forearm flap (Figure 2E, F). The patient refused our proposal of postoperative radiotherapy for prevention of further recurrence. Although there was no evidence of recurrence of the desmoid a year later, remarkable keloid formation was observed on the operative wound (Figure 3A, B).

DISCUSSION

Since radical resection of desmoid tumors in the head and neck region are frequently inoperable to the proximity to vital structures^{2,3}, postoperative radiotherapy is recommended as an important adjunct therapy^{3,4}. To date, no significant association between positive margins and recurrence has been verified, and it also remains unclear why some tumors continue to grow while others can be followed for long periods without any adverse sequelae³. These questions can be extrapolated with relationship between “keloids” and “hypertrophic scars”. Although both skin tumors are pathologically difficult to distinguish from each other,

their clinical features are quite different. Keloids generally show aggressive growth beyond the border of the original wound. Without postoperative radiotherapy, recurrence after surgical resection irrespective of its surgical margin invariably occurs. On the other hand, hypertrophic scars also show aggressive growth but remain inside of the border of the original wound. Postoperative radiotherapy is usually unnecessary after resection, and even spontaneous remission is sometimes identified during their follow-up. Desmoids seem to appear with each of these characters, that is, “keloid type” or “hypertrophic scar type”. When recurrence occurs beyond the surgical margin, after, the desmoid tumor is defined as “keloid type”, which requires radiation therapy. If no recurrence is identified postoperatively, the tumor is thought to be “hypertrophic scar type”. Although this case was considered to be “keloid type” with consideration of the past repeated recurrences, the patient refused our proposal of adjuvant radiotherapy. There was no recurrence a year after resection, but further recurrence would not be avoided.

Recent metabolic study of keloids and hypertrophic

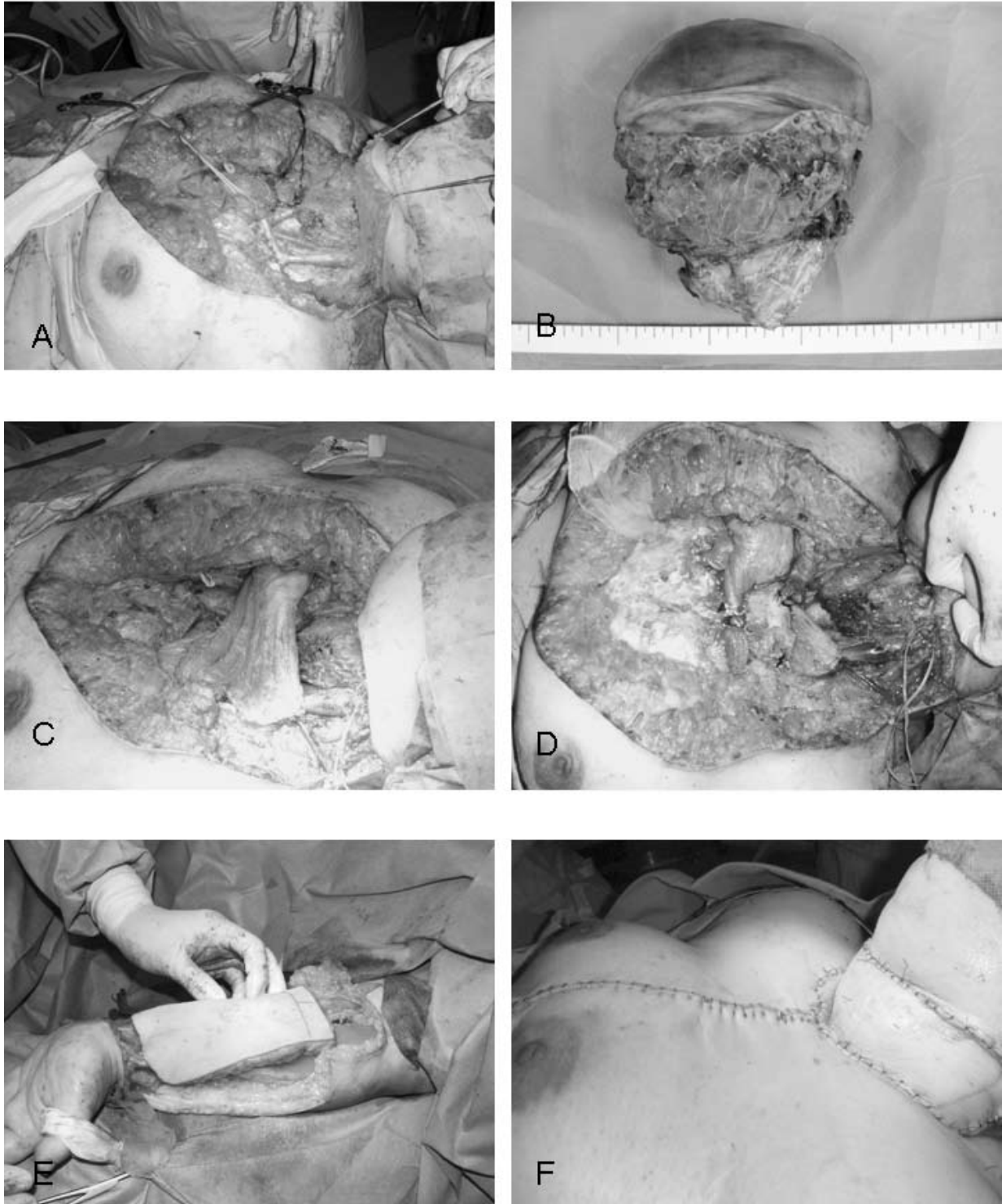


Figure 2

- A : Exposed brachicephalic trunk after desmoid resection with the overlying keloid and episternum.
 B : Resected desmoid.
 C : Brachicephalic trunk was exposed and covered with the rotated pectoralis major muscle flap.
 D : Episternum was once resected, and then returned after inactivation by liquid nitrogen.
 E : Harvest of the free radial forearm flap.
 F : Postoperative view.

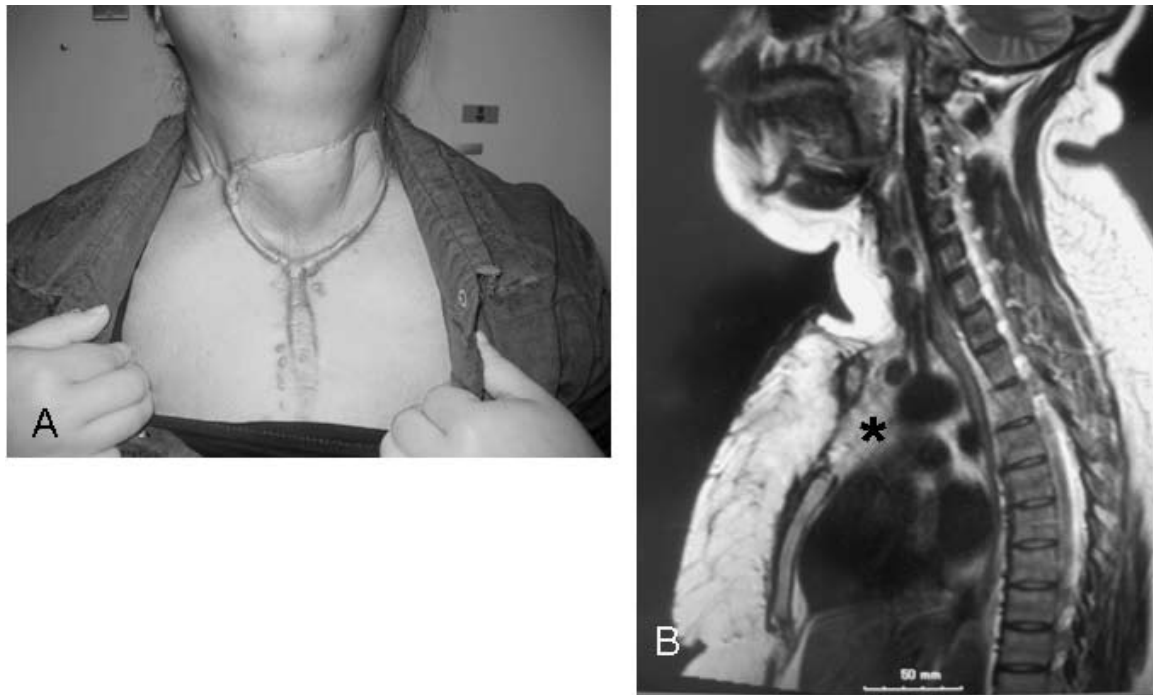


Figure 3

A year after operation,

A : Keloid formation with scar contracture is remarkable.

B : No recurrence on sagittal view of MRI. Asterisk indicates the rotated pectoralis major muscle flap.

scars using proton nuclear magnetic resonance (1HNMR) revealed that metabolite of keloid tissue includes more lactic acid, which reflects active anaerobic metabolism, than that of hypertrophic scar tissue⁵⁾. Usefulness of 1HNMR was also proved in distinguishing a malignant breast tumor from a desmoid mimicking a malignancy with detection of elevated levels of choline compound⁶⁾. Magnetic resonance spectroscopy may contribute to determining whether a desmoid is “keloid type” or “hypertrophic scar type”, and eventually helpful for decision making of adjuvant radiotherapy for desmoids.

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