Background: The goal of this study was to determine the outcome in patients who underwent unsuccessful radial forearm flap and substituted by using reverse pectoralis major myocutaneous flap.

Objectives: Failure after oral reconstruction using free flap or other similar operations happens often, and their management remains a challenging problem for surgeons. This study analyzes the causes and the subsequent treatment of a free flap failure and consideration of a secondary flap reconstruction. Pectoralis major flaps have been the workhorse in oral and maxillofacial reconstruction till date. However, pectoralis major flaps also have disadvantages, including limitations regarding pedicle length and a lesser stable blood flow. Here we report on the use of a reverse pectoralis major myocutaneous flap, a technique modification with more stabilized blood flow.

Method: A 43-year-old male patient who had total radial forearm flap necrosis and substituted using reverse pectoralis major myocutaneous flap was observed.

Findings: No ischemia or congestion were observed after replacing the failed free flap with the reverse pectoralis major myocutaneous flap. And no post-operative complication such as hematoma, abscess, or fistula were observed.

Conclusion: After a free flap failure, surgeons should determine subsequent treatments. Surgeons should consider the need of a second flap and some modification to solve the problems, and analysis of the first flap failure should be noticed.

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