Reviewer's report

Title: The Creation of New Rotation Arc to the Rat Latissimus Dorsi Musculo-cutaneous Flap with Delay Procedures

Version: 2 Date: 28 September 2003

Reviewer: Geoffrey G Hallock

Reviewer's report:

General
The authors have developed a "reverse" latissimus dorsi musculocutaneous flap in the rat, incorporating a small cutaneous paddle that overlies the dominant pedicle near the axilla and remains nourished by the muscle that remains attached at its distal origin. Surgical vascular delay is accomplished by division of the dominant thoracodorsal vessels, followed by flap elevation at various later times. Chemical vascular delay was achieved using Nitroderm TTS. Either approach resulted in greater flap viability by day 5 when compared to controls where neither method of delay had been used.

Discretionary Revisions (which the author can choose to ignore)

1. Greater detail in explaining the figures would be beneficial to the reader so that referral back to the text is not imperative.
2. Table #2 I presume refers to the mean percentage of flap survival after a given delay period. A caption should be included to explain this.

Minor Compulsory Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. Background: the latissimus dorsi muscle can be used as a "free flap" but should not be used "freely."
2. Background: the thoracodorsal artery is a branch of the subscapular artery, not the scapular.
3. Discussion: many of the statements on the history of the theory of the delay phenomenon are not relevant to the results observed, and could be deleted or stated more concisely to shorten the manuscript.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. Unfortunately, musculocutaneous perforators from the thoracodorsal artery to the overlying skin in the rat can be highly variable, making this unreliable as a musculocutaneous flap according to some authors (see Ref.#1,2. below). If true, if by chance a given skin paddle had no inflow from a perforator, this flap irrespective of the delay period or method would undergo necrosis; and could significantly alter the results if this study were to be repeated by others. These authors need to explain how they confirmed the presence of a musculocutaneous perforator in each of their flaps as utilized, which would better authenticate their results.

References:

Advice on publication: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: A paper whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Declaration of competing interests:

none