

กายวิภาคของระบบประสาทและหลอดเลือดในโธระโคคอซัล-อาเทอร์-เพอโฟเรทอะ-แฟล็บ
เพื่อประยุกต์ใช้ในการซ่อมแซมบริเวณพื้นผิวของร่างกายที่สูญเสียไป

นางสาวสำอาง วณิชชาพลอย

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาวิทยาศาสตรมหาบัณฑิต

สาขาวิชาวิทยาศาสตร์การแพทย์

คณะแพทยศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

ปีการศึกษา 2548

ISBN 974-53-2945-2

ลิขสิทธิ์ของจุฬาลงกรณ์มหาวิทยาลัย

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**NEUROVASCULAR ANATOMY OF THE THORACODORSAL ARTERY
PERFORATOR FLAP FOR RESURFACING BODY DEFECT**

Miss Samang Wanidchaphloi

**A Thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Science Program in Medical Science**

Faculty of Medicine

Chulalongkorn University


Academic Year 2005

ISBN 974-53-2945-2

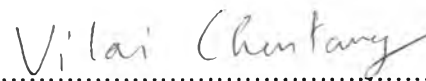
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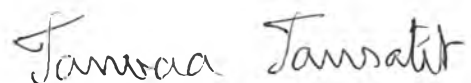
Thesis Title Neurovascular Anatomy of the Thoracodorsal Artery Perforator Flap for
Resurfacing Body Defect
By Miss Samang Wanidchaphloi
Field of study Medical Science
Thesis Advisor Associate Professor Tanvaa Tansatit, M.D.
Thesis Co-advisor Associate Professor Prayuth Chokrungrvaranont, M.D.

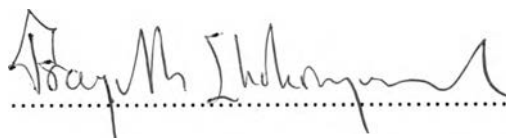
Accepted by the Faculty of Medicine, Chulalongkorn University in Partial Fulfillments of the
Requirements for the Master's Degree

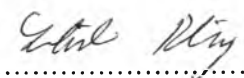

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477 48100 30: MAJOR MEDICAL SCIENCE

KEY WORDS: THORACODORSAL ARTERY/ PERFORATOR FLAP/ RESURFACING BODY DEFECT

SAMANG WANIDCHAPHLOI: NEUROVASCULAR ANATOMY OF THE THORACODORSAL ARTERY PERFORATOR FLAP FOR RESURFACING BODY DEFECT. THESIS ADVISOR: ASSOC. PROF. TANVAA TANSATIT, M.D. THESIS COADVISOR: ASSOC. PROF. PRAYUTH CHOKRUNGVARANONT, M.D., 50 pp. ISBN 947-53-2945-2.

Objective: To determine the neurovascular anatomy of thoracodorsal artery perforator (TAP) flap for design of the thoracodorsal artery perforator (TAP) flap for resurfacing body defect and other surgical procedures.

Materials and Methods: Sixty dissections of the thoracodorsal arterial system were carried out in a total of 30 preserved cadavers. The pattern of the thoracodorsal artery, nerve, cutaneous perforator of the lateral branch were studied and measured. Statistics were analyzed using SPSS computer program.

Results: All cadavers, the thoracodorsal artery divided into two branches at 5 cm below the dome of axilla: the medial or the horizontal branch and the lateral or the descending branch. The medial branch was 2.2 cm from the superior border of the muscle. The lateral branch was 1.7 cm from the lateral border of the muscle. The lateral branch of the thoracodorsal artery was an average 1.3 perforators per flap (76 perforators in 60 flaps). In 100 percent of dissections, the first perforator was always the largest from this vessel system. The first perforator which measured from the dome of the axilla to its origin was 7.8 and the penetrating site to the muscle was 9.8 cm distal to the dome of the axilla. In 13 of 60 dissections, the second perforator of the thoracodorsal artery arises 3.4 cm distal to the origin of the first perforator. The third perforator was found in 3 of 60 dissections, originated 3.0 cm from the take-off of the second perforator. The most perforators were observed to penetrate the muscle for a distance of 7 to 14 cm distal to the dome of the axilla and nearly the lateral border of the muscle. The direct cutaneous perforator originated directly from the thoracodorsal artery in 56 of 60 dissections and generally located 1.5 cm proximal to the bifurcation. The thoracodorsal nerve mostly laid lateral and superficial location to the artery.

Conclusion: Center of the flap designed should be placed range of 7 to 14 cm from the dome of the axilla. This results of this anatomic study have a direct impact on flap design and very useful in a wide variety of clinical applications.

Field of study Medical Science

Academic year 2005

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ACKNOWLEDGMENTS

I would like to express my gratitude to my advisor, Associate Professor Tannvaa Tansatit for his warm assistance, valuable suggestions and encouragement throughout this study. I wish to extend my sincere thanks to my co-advisor to Associate Professor Prayuth Chokrungruanont for his valuable suggestions and encouragement. I am very much obliged to Associate Professor Vilai Chentanez and Associate Professor Suthiluk Patumraj, thesis committees for their valuable discussion and suggestions.

I would also like to thanks to all staffs at Department of Anatomy, Faculty of Medicine, Chulalongkorn University for their facilitates and encouragement. Moreover, special thank to Miss Pasinee Sanguansit for her helpful and warm friendship.

Finally, great thank to my family for being very encouraging and concerning for my study.

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LIST OF ABBREVIATIONS

cm	=	centimeter
mm	=	millimeter
et al.	=	et alii
S.D.	=	Standard Deviation
TAP	=	Thoracodorsal Artery Perforator