Mahidol University
Faculty of Medicine Ramathibodi Hospital

RAMATHIBODI JOURNAL OF SURGERY

2025

Volume 39
MARCH 2025
Number 33

TABLE OF CONTENTS

Introduction 01

Welcome message 02

Organising Committee 03

Conference Schedule 06

Abstract 09

Introduction

งานวิจัยแพทย์ประจำบ้าน ถือเป็นส่วนหนึ่งของการอบรมเป็นแพทย์ผู้เชี่ยวชาญในศัลยศาสตร์สาขาต่างๆ ด้วยเหตุผลตรงไปตรงมาว่า การเป็นผู้เชี่ยวชาญในความรู้สาขาใดก็ตาม ย่อมรวมไปถึงการมีความสามารถผลิตความรู้ใหม่ในสาขานั้นๆด้วย และการทำวิจัยก็คือการผลิตความรู้ใหม่ในแง่มุมของวิทยาศาสตร์ นั่นเอง

แต่การทำวิจัย เป็นมากไปกว่ากิจกรรมที่ทำขึ้นเพื่อตอบสนองข้อกำหนดของหลักสูตรฝึกอบรมผู้ที่ทำวิจัยอย่างจริงจังอาจมีมุมมองหรือโลกทัศน์ที่เปลี่ยนไปหรือแตกต่างไปจากคนปกติได้ เนื่องเพราะการทำวิจัยจะเน้นให้ผู้อบรม เข้าใจถึงประโยชน์และคุณค่าที่แท้จริงของงานวิจัย เข้าถึงข้อจำกัดต่างๆของขั้นตอนการผลิตความรู้ใหม่ มีประสบการณ์ในการทบทวนความรู้ที่มีอยู่ในปัจจุบัน ที่เกี่ยวข้องกับศาสตร์หนึ่งๆ ทำให้ทราบถึงขอบเขตของความรู้ที่มีอยู่ และดังนั้นจึงทราบถึงความไม่รู้ของวิชาการที่เกี่ยวข้อง ว่าลึกและกว้างเพียงใด การประกอบวิชาชีพของผู้อบรม จะเป็นไปอย่างระมัดระวัง เพราะจะไม่ไว้ใจหรือเชื่อคำกล่าวที่ไม่มีหลักฐานสนับสนุนเพียงพอ โดยประเมินได้ว่าหลักฐานที่อ้างถึงนั้น อาจไม่มีน้ำหนักแต่อย่างใด

ในทางปฏิบัติ ผลประโยชน์ที่ได้จากงานวิจัยที่ทำสำเร็จลุล่วงอย่างงดงาม นอกเหนือจากประโยชน์ในแง่การปรับเปลี่ยนโลกทัศน์แล้ว ยังนำไปสู่ความภาคภูมิใจของผู้อบรม ที่ได้รู้ว่าตนมีส่วนร่วมในการพัฒนาวิชาชีพไม่ว่าจะเล็กน้อย (หรือยิ่งใหญ่) เพียงใด อาจนำไปสู่การตีพิมพ์เผยแพร่ผลงาน ที่จะจารึกชื่อของตนไว้เป็นเวลานานตราบที่โลกของเครือข่ายอิเล็กทรอนิกส์ยังคงมีอยู่ เป็นที่ชื่นชมของลูกหลานและเหลน หรืออย่างน้อยที่สุด ก็ใช้เป็นพื้นฐานของการเลื่อนเงินเดือนในอนาคต การตีพิมพ์ผลงานนั้น ถือว่าเป็นจุดจบของการเริ่มต้นชีวิตของงานวิจัยชิ้นหนึ่งๆ ถ้าหากไม่มีการตีพิมพ์ ก็ต้องถือว่างานวิจัยได้ตายไปแล้วตั้งแต่คลอด

งานวิจัยของแพทย์ประจำบ้าน ภาควิชาศัลยศาสตร์ คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี มีคุณภาพอยู่ในชั้นแนวหน้าของสถาบันฝึกอบรมทั้งประเทศ เป็นที่ภาคภูมิใจของภาควิชาและคณะฯ ทั้งนี้เป็นเพราะความอุตสาหะวิริยะ และความกระตือรือร้นของแพทย์ประจำบ้านทุกคน แต่ที่ขาดเสียมิได้ ก็คือการสนับสนุน ความร่วมมือ และความยินยอมของอาจารย์ในภาควิชาฯทุกท่าน ที่ให้การวิจัยดังกล่าวเกิดขึ้นได้ และในหลายกรณีให้แพทย์ประจำบ้านเข้าร่วมโครงการวิจัยของอาจารย์เอง อีกทั้งยังกำกับดูแล และสั่งสอนวิธีการวิจัยให้แก่แพทย์ประจำบ้านเป็นอย่างดี จึงต้องขอขอบคุณแพทย์ประจำบ้านและขอบพระคุณอาจารย์ในภาควิชาฯทุกท่าน ที่ทำให้งานวิจัยของแพทย์ประจำบ้านในแต่ละปีจบลงได้ และประสบความสำเร็จอย่างสูง จนปรากฏเป็นผลงานที่นำเสนอในหนังสือเล่มนี้

ท้ายที่สุด ที่สำคัญไม่ยิ่งหย่อนกว่ากัน ก็คือ การสนับสนุนของท่านหัวหน้าภาควิชาศัลยศาสตร์ รองศาสตราจารย์นายแพทย์เฉลิมพงษ์ ฉัตรดอกไม้ไพร ที่เห็นความสำคัญของงานวิจัยของภาควิชามาตลอด และอดีตหัวหน้าภาควิชาศัลยศาสตร์ ศาสตราจารย์นายแพทย์กฤษฎา รัตนโอฬาร อาจารย์นายแพทย์สาธิต กรเณศ และศาสตราจารย์นายแพทย์วชิร คชการ ที่ให้งานวิจัยเป็นหนึ่งในเป้าหมายหลักสำหรับงานพัฒนาของภาควิชาฯ โดยให้การสนับสนุน และให้กำลังใจแก่ผู้เขียนและคณะกรรมการสนับสนุนงานวิจัย ตลอดเวลาที่ทำงานสนับสนุนการวิจัยให้แก่ภาควิชาฯ

รองศาสตราจารย์ภาณุวัฒน์ เลิศสิทธิชัย
ผู้แทนคณะกรรมการสนับสนุนงานวิจัยภาควิชาศัลยศาสตร์

welcome message

สารจากหัวหน้าภาควิชาศัลยศาสตร์

การทำวิจัยและการสร้างนวัตกรรมเป็นกระบวนการทางวิทยาศาสตร์ที่มีความสำคัญอย่างยิ่งในการพัฒนาสิ่งใหม่ๆ องค์ความรู้ อุปกรณ์หรือกระบวนการรักษาพยาบาลในผู้ป่วยศัลยกรรม และเกิดประโยชน์ในวงกว้างหากมีการตีพิมพ์หรือถ่ายทอดสู่สาธารณะเพื่อนำไปสู่การใช้ความรู้นั้นๆได้จริง

การสร้างผลงานวิจัยจึงเป็นหนึ่งใน learning & training objectives ที่จะทำให้ผู้เข้ารับการฝึกอบรมสามารถนำทักษะดังกล่าวไปใช้ในพัฒนาการเรียนรู้ นวตกรรมได้ตลอดการทำงานในอนาคต จึงได้รับการบรรจุในหลักสูตร ทุกหลักสูตรของศัลยศาสตร์เพื่อให้แพทย์ประจำบ้าน และแพทย์ประจำบ้านต่อยอด การนำเสนอองค์ความรู้ให้ผู้ฟังเข้าใจ และเกิดปัญญาในการพัฒนาองค์ความรู้ในระดับสูงขึ้น

ขอแสดงความยินดีกับผู้วิจัยทุกท่านที่ประสบความสำเร็จในการศึกษาวิจัยและนำเสนอ ไม่ว่าจะได้รับรางวัลหรือไม่ก็ตาม และทุกผลงานดีๆจะได้รับประโยชน์ทวีคูณ หากได้รับการเผยแพร่ในเวทีนานาชาติ หรือตีพิมพ์ในวารสารนานาชาติ อย่าได้หยุดเพียงแต่การนำเสนอในเวทีภาควิชาศัลยศาสตร์คณะแพทยศาสตร์โรงพยาบาลรามาธิบดีเท่านั้น

รองศาสตราจารย์ นายแพทย์เฉลิมพงษ์ ฉัตรดอกไม้ไพร
หัวหน้าภาควิชาศัลยศาสตร์
มีนาคม 2568

ORGANISING COMMITTEE

คณะกรรมการสนับสนุนงานวิจัยภาควิชาศัลยศาสตร์

ปีการศึกษา 2567

• รศ.นพ.ภาณุวัฒน์	เลิศสิทธิชัย	ประธานกรรมการ
• ศ.นพ.จุมพล	วิลาศรัศมี	กรรมการ
• รศ.พญ.ปิยนุช	พูตระกูล	กรรมการ
• ผศ.นพ.คชินท์	วัฒนะวงษ์	กรรมการ
• ศ.นพ.เอก	หังสสูต	กรรมการ
• ผศ.พญ.พรศรี	ธนะฉัตรชัยรัตนะ	กรรมการ
• ผศ.นพ.ปรมินทร์	ม่วงแก้ว	กรรมการ
• ผศ.พญ.ปกเกศ	ศิริศรีตรีรักษ์	กรรมการ
• นพ.ปริญญา	ลีลายนะ	กรรมการ
• ดร.นพ.กรกช	เกษประเสริฐ	กรรมการ
• นพ.สามารถ	ภูวไพรศิริศาล	กรรมการ
• นพ.ชวินธีร์	พุทธธนะพิทักษ์	กรรมการ

เจ้าหน้าที่ประจำหน่วยสนับสนุนงานวิจัยภาควิชาศัลยศาสตร์

• นางวรภรณ์	ศรียอดเวียง	นักวิทยาศาสตร์
• นางสาวญาดา	เพ็งสะและ	ผู้ช่วยวิจัย
• นางสาวทิฆัมพร	เหลืองวัฒนวิไล	ผู้ช่วยวิจัย
• นางสาววิจิตรา	มาแตง	เจ้าหน้าที่วิจัยและเลขานุการ
• นางสาวนิภาพรรณ	ชูหนู	เจ้าหน้าที่วิจัย
• นางสาวสุไรด๊ะ	อีซอ	เจ้าหน้าที่วิจัย
• นางสาวปัตตาเวีย	ช้อยเครือ	เจ้าหน้าที่วิจัย
• นางสาวนภัสสร	สุวรรณเทวะคุปต์	เจ้าหน้าที่วิจัย
• นางสาวชุติมน	เติมขวัญเจริญ	เจ้าหน้าที่วิจัย

RESIDENTS AND FELLOW

แพทย์ประจำบ้านและแพทย์ประจำบ้านต่อยอด
ภาควิชาศัลยศาสตร์ ที่จบการฝึกอบรม ปีการศึกษา 2567

แพทย์ประจำบ้าน

สาขาศัลยศาสตร์

- นายแพทย์สหรัฐ ปองมงคล
- นายแพทย์นินนาท ฟองสุภา
- นายแพทย์ธีรภัทร ศรีนา
- นายแพทย์พัฒนภักดิ์ รักชอบ
- นายแพทย์ฐากูร กงเพชร
- นายแพทย์ภัทรพล โชติสันต์
- นายแพทย์ณัฐคมน์ แก้วเภตรา
- นายแพทย์ปฐมพงศ์ ชิตเลิศ
- แพทย์หญิงพัชภรณ์ เสริมสาสน์รัตน์
- แพทย์หญิงพิมพ์ชนก รุ่งวรโสภิต
- แพทย์หญิงปาณิสรา ศรีสุวรรณนิเวศ
- แพทย์หญิงอรณิชา มากเกษม

สาขาศัลยศาสตร์ยูโรวิทยา

- นายแพทย์วรากร จิระจันทร์
- นายแพทย์กัญจน์ ปัญญาพินิจนุกูร
- นายแพทย์ธนกร ปัทมาวไล
- นายแพทย์ธรพล เศรษฐวงศ์
- แพทย์หญิงอรณิชา เพราะสุนทร

สาขากุมารศัลยศาสตร์

- แพทย์หญิงภาวิตา ธรรมโสภิต
- แพทย์หญิงวรัญญา วรรณธนาเลิศ

สาขาประสาทศัลยศาสตร์

- นายแพทย์อานุภาพ ภูไชยแสง
- นายแพทย์ธนกร จตุรสุวรรณ
- แพทย์หญิงวีรยา จริยานุภาเดชา
- นายแพทย์ยศกร เลิศไกร

สาขาศัลยศาสตร์ทรวงอก

- นายแพทย์อภิภัทร์ ธีรกุล
- นายแพทย์กุลธร คดีธรรม

RESIDENTS AND FELLOW

แพทย์ประจำบ้านและแพทย์ประจำบ้านต่อยอด
ภาควิชาศัลยศาสตร์ ที่จบการฝึกอบรม ปีการศึกษา 2567

แพทย์ประจำบ้าน

สาขาศัลยศาสตร์ตกแต่ง

- แพทย์หญิงชวิศา มาลีวรรณ
- นายแพทย์ธนภัทร ศรีสุวัฒน์
- แพทย์หญิงอมลิน ภมะราภา
- แพทย์หญิงเพ็ญศิริ แสนสามารถ

แพทย์ประจำบ้านต่อยอดปี 1

อนุสาขาศัลยศาสตร์เต้านมและต่อมไร้ท่อ

- แพทย์หญิงมนสินี สงวนแก้ว
- แพทย์หญิงกัลย์กมล ตามใจจิตร
- แพทย์หญิงวศินี แดงผ่องศรี

อนุสาขาผ่าตัดผ่านการส่องกล่องศัลยศาสตรทั่วไป

- แพทย์หญิงกฤษตินา สุรชัยดังถวิล
- นายแพทย์วุฒิพงษ์ สุจินดามณีชัย

อนุสาขาศัลยศาสตร์ตับ ตับอ่อนและทางเดินน้ำดี

- นายแพทย์สุขุม กอบเดช
- นายแพทย์อติวิชญ์ อัศวชัยสุวิกรม

อนุสาขาประสาทศัลยศาสตร์กระดูกสันหลังและไขสันหลัง

- นายแพทย์ไซดาน หะยีสะมะแอ

อนุสาขาศัลยศาสตร์ปลูกถ่ายอวัยวะ

- แพทย์หญิงสาคเรศ ทางเรือ
- นายแพทย์ศุภเสกข์ ภัทรวงศ์ไพบูลย์

แพทย์ประจำบ้านต่อยอดปี 2

อนุสาขาศัลยศาสตร์มะเร็งวิทยา

- นายแพทย์รัฐพล ธวัชพงศ์ธร
- แพทย์หญิงกนิษฐา เพิกโสภณ

อนุสาขาศัลยศาสตร์หลอดเลือด

- แพทย์หญิงพจนวรรณ สินสุวงศ์วัฒน
- นายแพทย์ชวลิต ติรพัฑฒ์
- แพทย์หญิงธัชพร บุญเสก

Conference schedule

27 MARCH, 2025

Athasit Vejjajiva Room, Queen Sirikit Medical Center,
Faculty of Medicine Ramathibodi Hospital

07.30 - 08.00	Registration	
08.00 - 08.10	Open ceremony By Head of Surgery Dept.	
08.10 - 08.20	Early Identification of Middle Meningeal Artery in Modified Craniotomy Using Sphenoparietal Keyhole Comparing with Craniotomy Using MacCarty Keyhole in Routine Fronto-temporal Craniotomy, Randomized Controlled Trial	นพ.ยศกร เลิศไกร Neuro
08.20 - 08.30	Comparison of hospital stay between microscopic approach and endoscopic approach for discectomy and lateral recess decompression: A retrospective study.	พญ.วีรยา จริยานุภาเดชา Neuro
08.30 - 08.40	Gamma-glutamyl transferase predicts jaundice clearance following kasai operation – A thai multicentre study	พญ.วรัญญา วรรณธนาเลิศ Ped
08.40 - 08.50	The optimal flow rate for continuous bladder irrigation in patients with gross hematuria	นพ.วรากร จิระจันทร์ Uro
08.50 - 09.00	Evaluating Inferior Alveolar Nerve Injury After Bilateral Sagittal Split Osteotomy Using Bicortical Screw Vs Miniplate	นพ.ธนภัทร ศรีสุวัฒน์ Plastic
09.00 - 09.10	Comparative study of Overactive bladder symptoms management with High-intensity Focused Electromagnetic stimulation Chair therapy and Mirabegron	นพ.ธนกร ปัทมาวไล Uro
09.10 - 09.20	Outcome comparison between traditional curettage and cotton swab technique for endoscopic transsphenoidal surgery of pituitary adenoma.	นพ.ธนกร จตุรสุวรรณ Neuro
09.20 - 09.30	Association of the timing in performing ERCP and overall complication in acute cholangitis, Ramathibodi hospital.	นพ.ฐากูร กงเพชร Gen
09.30 - 09.40	Can sanitary napkin improve healing of chronic venous ulcer compared with conventional gauze covering? : A randomized controlled trial	นพ.ธีรภัทร ศรีนา Gen
09.40 - 09.50	Impact of prostate shape ratio on perioperative bleeding and other perioperative outcomes of robotic assisted laparoscopic radical prostatectomy	นพ.ธรพล เศรษฐวงศ์ Uro

Conference schedule

27 MARCH, 2025

Athasit Vejjajiva Room, Queen Sirikit Medical Center,
Faculty of Medicine Ramathibodi Hospital

09.50 - 10.00	Importance of anticoagulant in venous thromboembolism prophylaxis for surgical patients	นพ.สหรัฐ ปองมงคล Gen
10.00 - 10.10	Significant associated risk factors in venous thromboembolism for surgical patients in Ramathibodi Hospital	พญ.พิมพ์ชนก รุ่งวรโศภิต Gen
10.10 - 10.20	Donor-site morbidity of rectus sheath sparing tram flap in breast reconstruction: A retrospective review	พญ.เพ็ญศิริ แสนสามารถ Plastic
10.20 - 10.30	Factor associated with perioperative major adverse cardiovascular events (MACE) of patient undergone non-cardiac vascular surgery	นพ.ภัทรพล โชติสันต์ Gen
10.30 - 10.40	Short term outcome of laparoscopic vs open hepatectomy in Ramathibodi hospital	นพ.พัฒนภักดิ์ รักชอบ Gen
10.40 - 10.50	A study of quality of life in end-stage renal disease patients undergoing different types of vascular access procedures at the division of vascular surgery, Ramathibodi hospital	นพ.ปฐมพงศ์ ชิตเลิศ Gen
10.50 - 11.00	Role of indocyanine green assist laparoscopic cholecystectomy compared with conventional laparoscopic cholecystectomy in Ramathibodi hospital: Randomized controlled trial	พญ.พัชภรณ์ เสริมสาสน์รัตน์ Gen
11.00 - 11.10	Parathyroid surgery in patients with secondary and tertiary hyperparathyroidism	พญ.ปาณิสรา ศรีสุวรรณนิเวศ Gen
11.10 - 11.20	Prospective Randomized Controlled Trial to evaluate effectiveness of Tranexamic Acid Irrigation on Perioperative Blood Loss During Mini-Percutaneous Nephrolithotomy	พญ.อรณิชา เพราะสุนทร Uro
11.20 - 11.30	An in vitro study of Microencapsulation of Human Parathyroid Cell	พญ.อรณิชา มากเกษม Gen
11.30 - 11.40	Patient characteristic and outcome after second kidney transplantation, single center experience	นพ.ณัฐคมน์ แก้วเภตรา Gen
11.40 - 11.50	Prevalence of and factors associated with intraductal papillary lesion, both of benign and malignant, in patients with nipple discharge undergoing mammary duct excision	นพ.นินนาท ฟองสุภา Gen

Conference schedule

27 MARCH, 2025

Athasit Vejjajiva Room, Queen Sirikit Medical Center,
Faculty of Medicine Ramathibodi Hospital

11.50 - 12.00	Overall 5-year survival rate and disease-free survival after segmentectomy versus lobectomy in patients with non-small cell lung cancer	นพ.กุลธร คดีธรรม CVT
12.00 - 12.10	Comparison of Robotic vs Laparoscopic Radical Nephroureterectomy with bladder cuff excision in Upper Urinary Tract Urothelial Carcinoma: A Retrospective Cohort Study	นพ.กัญจน์ ปัญญาพินิจนุกูร Uro
12.10 - 12.20	In Search of Aesthetic Nasal Profile in East Asians	พญ.ชวิศา มาลีวรรณ Plastic
12.20 - 12.30	Association between image-defined risk factor and surgical outcome and complication in abdominal neuroblastoma in Ramathibodi hospital	พญ.ภาวิตา ธรรมโสภิต Ped
12.30 - 12.40	5-year survival rate of Pediatric pulmonary metastatic sarcoma , Post-pulmonary metastasectomy in Ramathibodi Hospital, A retrospective study	นพ.อภิภัทร์ ธีรกุล CVT
12.40 - 12.50	The anatomical relation between Transverse-Sigmoid sinus and skull landmarks in 3D imaging study	นพ.อานุภาพ ภูไชยแสง Neuro
12.50 - 13.00	Risk Factors of Bottoming-out Deformity in Primary Breast Augmentation Patients in Ramathibodi Hospital: A Retrospective Study	พญ.อมลิน ภมะราภา Plastic
13.00 - 14.30	ปิดการประชุมฯ และรับประทานอาหารกลางวัน	

Abstract

"Early Identification of Middle Meningeal Artery in Modified Craniotomy Using Sphenoparietal Keyhole Comparing with Craniotomy Using MacCarty Keyhole in Routine Fronto-temporal Craniotomy, Randomized Controlled Trial"

Yossakorn Lertkrai, MD

Yossakorn Lertkrai,[1] Ake Hansasuta,[1] Sorayouth Chumnanvej,[1] Kriangsak Saetia,[1] Siriwut Pokanan,[1] Atthaporn Boongird [1]

[1] Neurological surgery unit, Department of surgery, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand

Background: The MacCarty keyhole has been considered the traditional surgical landmark for pterional craniotomy. The middle meningeal artery (MMA) is often torn during bone flap elevation due to its characteristic of piercing the sphenoid wing. To avoid cutting through the sphenoid wing, the sphenoparietal suture, which is anatomically correlated with the MMA, may be a useful landmark for pterional craniotomy.

Objective: To compare between the application of the traditional MacCarty keyhole and the alternative sphenoparietal keyhole for fronto-temporal (pterional) craniotomy in terms of the identification of middle meningeal artery (MMA) through the keyholes, as well as its preservation, blood loss during craniotomy, duration of craniotomy and aesthetic effect.

Methods: A randomized controlled trial (TCTR20250117006) was conducted from January 2022 to January 2025 to compare the data and clinical outcomes between two surgical techniques. Data analysis was performed using Program STATA with the Two-sample t test or Wilcoxon rank-sum (Mann-Whitney) test for quantitative variables and the Chi-square test or Fisher's exact test for categorical variables.

Results: Out of a total of 49 patients, 23 used the MacCarty keyhole and 26 used the sphenoparietal keyhole. As anticipated based on anatomical considerations, MMA could not be identified in any of the cases using the MacCarty keyhole, whereas it was identified in 13 cases (50%) using the sphenoparietal keyhole prior to craniotomy flap elevation (P <0.001). Blood loss during craniotomy for the sphenoparietal group [median 50 mL (10-400 mL)] was slightly less than in the traditional MacCarty group [median 100 mL (30-500 mL)]; (P =0.137). Craniotomy could be performed more rapidly using the sphenoparietal keyhole [10 minutes (7–27 minutes)] compared to the MacCarty keyhole [13 minutes (8–20 minutes)]; (P = 0.018), which corresponds with trends toward a smaller number of burr hole requirements in the sphenoparietal group compared to the MacCarty group. There was higher number of cases with unpleasant aesthetic outcome from skull defect in the MacCarty group [17 cases (73.9%)] than in the sphenoparietal group [12 cases (46.1%)]; (P =0.048).

Conclusion: The sphenoparietal keyhole is superior to the traditional MacCarty keyhole for routine fronto-temporal craniotomy in terms of a higher chance of early MMA identification, avoiding cuts into the sphenoid wing, less blood loss during craniotomy, faster craniotomy performance, fewer burr hole requirements and better aesthetic outcome.

Keyword: Sphenoparietal keyhole; MacCarty keyhole; Pterional craniotomy; Fronto-temporal craniotomy; Middle meningeal artery; MMA

Abstract

> Comparison of hospital stay between microscopic approach and endoscopic approach for discectomy and lateral recess decompression: A retrospective study.

Weeraya Jariyanupadecha, MD

Weeraya Jariyanupadecha[1], Kriangsak Saetia[1]

[1]*Neurological surgery unit, Department of surgery, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand*

Objective: For lateral recess stenosis or herniated nucleus pulposus (HNP), the traditional surgery is microscopic surgery, which requires an one to two inches incision. However, there is a alternative surgery that uses only small incision and an endoscope to perform the surgery. Because of smaller incision, resulting in fewer scars and allowing the patient to return to their daily activities faster. However, there is currently only some comparative studies to determine which method is better. The risks of both types of surgery include pain, blood loss, wound infection, the possibility of nerve and spinal cord injuries, and spinal instability requiring further spinal fixation.

Methods: A retrospective analysis of prospectively collected data was conducted on 180 consecutive patients with single level lateral recess stenosis or herniated nucleus pulposus. Patient demographics, operative details, complications, and recurrent disease were reviewed. Outcomes were quantified using hospital stay, the amount of pain medication that patients requested for additional injections after surgery, the intraoperative blood loss and operative time, the preoperative and postoperative leg motor power, the success of the surgery, the complications and recurrence of the disease at 1 year.

Results: A total of 95 patients underwent uniportal endoscopic and 85 underwent microscopic with a follow-up period of 12 months. The endoscopic group experienced a significantly fewer estimated blood loss ($p = 0.001$) and fewer complications ($p = 0.048$). Both groups experienced significant improvements in leg motor power ($p < 0.001$), but the endoscopic group required significantly more operative time ($p = 0.001$).

Conclusions: Uniportal endoscopic and microscopic result in similar improvement of leg motor power for single level lateral recess stenosis or herniated nucleus pulposus, while the endoscopic approach demonstrates fewer estimated blood loss and a favorable rate of complications.

Keywords: endoscopic spine surgery; lateral recess stenosis; herniated nucleus pulposus; microscopic spine surgery; discectomy; lateral recess decompression

Abstract

> Gamma-glutamyl transferase predicts jaundice clearance following kasai operation – A thai multicentre study

Varanya Wantanalert, MD

Varanya Wantanalert[1],Ampaipan Boonthai[1], Pornthep Tanpowpong,[2] Dolrudee Aroonsang[3], Jiraporn Khorana,[4] Paul D. Losty[1,5]

1Division of Pediatric Surgery, Department of Surgery, Faculty of Medicine Ramathibodi Hospital, Bangkok, Thailand

2Division of Gastroenterology and Enterology, Department of Pediatrics, Faculty of Medicine Ramathibodi Hospital, Bangkok, Thailand

3Division of Pediatric Surgery, Department of Surgery, Faculty of Medicine Srinagarind Hospital, Khon Kaen, Thailand

4Division of Pediatric Surgery, Department of Surgery, Faculty of Medicine Chiangmai University, Chiangmai, Thailand

5Institute of Systems Molecular and Integrative Biology University Of Liverpool, UK

Background: Gamma-glutamyl transferase (GGT) is a biomarker of liver function and may provide evidence of obstructive bile flow after Kasai Procedure (KP).

Objectives: We report the utility of GGT to monitor success of KP in a multicentre study

Methods: Medical records of Biliary Atresia (BA) patients undergoing Kasai operation during 2004 - 2022 in 3 Thailand hospitals were examined. Patient demographics, GGT level(s) at pre-operative and postoperative day(s) (POD) 7, 30, 60, 90, 120 were recorded. Total bilirubin (TB) , symptom(s) of liver cirrhosis 6 month after Kasai and number of patients needing liver transplant are analyzed.

Results: 56 BA patients (46% male: 54% female) had mean age diagnosis 71.7±26.8 days and mean age at operation 77.4±26.4 days. Pre-operative mean GGT was 887±822 mg/dL. Twenty three of 56 cases (41%) failed to become jaundice-free (TB≥2mg/dL) 6 months after Kasai. There was no difference(s) between age operation (76.4±22.9 days jaundice-free vs 78.7±31.2 days jaundice; p=0.75) or (76.4±22.9 days jaundice-free vs 78.7±31.2 days jaundice; p=0.75) steroid use (76.4% jaundice-free vs 73% jaundice; p=0.3) including post-operative complications (73.7% jaundice-free vs 68.2% jaundice; p=0.69) comparing groups. Jaundice patients had higher PELD score at 6 months (12.3±10.9 vs -0.2±6.5; p= 0.03) and cirrhosis vs jaundice-free cohort (100% vs 47.1%; p <0.05). Sixty eight percent BA jaundiced patients required early liver transplant vs 25% jaundice-free (p < 0.05). Those with jaundice at 6 months had higher percentage (%) difference(s) (ΔGGT) between pre-operative and 1-month GGT (61% jaundice vs 49% jaundice-free; p= 0.04), 2-month GGT (70% jaundice vs 50% jaundice-free; p <0.05), 3-month GGT (73% jaundice vs 61% jaundice-free; p <0.05) - (Figure 1) We found moderate correlation(s) between ΔGGT at 2 months and jaundice (TB≥2mg/dL) at 6 months (r =0.37; p= 0.05)

Conclusions: GGT profiling is predictive of jaundice clearance after Kasai operation. We recommend GGT biomonitoring to promote early referral to liver transplant centres.

Abstract

“The optimal flow rate for continuous bladder irrigation in patients with gross hematuria”

Varagorn Jirajan , MD

V. Jirajan, W. Viseshsindh

Division of Urology, Department of Surgery, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand

Introduction: Acute urinary retention (AUR) due to clot retention in the bladder is a common complication in patients with gross hematuria. Currently, the standard approach for preventing acute urinary retention caused by clot retention in the bladder is continuous bladder irrigation (CBI). However, there is no standardized protocol for determining the appropriate irrigation flow rate in patients with gross hematuria. Therefore, this study aims to investigate the effects of different flow rates of continuous bladder irrigation (CBI) on varying levels of urine color intensity in patients with gross hematuria.

Objective: This study aims to investigate the effects of different flow rates of continuous bladder irrigation (CBI) on varying levels of urine color intensity (hematuria grading) in patients with gross hematuria. Additionally, we want to evaluate the incidence of acute urinary retention, assess pain scores, and monitor changes in hemoglobin levels and blood electrolyte concentrations in these patients during continuous bladder irrigation (CBI). Furthermore, the study will compare urine hematocrit levels and urine dipstick analysis tests with varying degrees of urine color intensity.

Material and methods: This observational study enrolled 75 patients with gross hematuria undergoing continuous bladder irrigation (CBI) at Ramathibodi Hospital urology outpatient department and surgical ward from 1st May 2023 to 31st December 2024. Participants were assessed with hematuria grading, pain score, urinalysis, urine hematocrit, complete blood count, blood electrolytes, and coagulogram before CBI. A 22 Fr 3-way Foley catheter was inserted, and manual irrigation was performed to remove clots. CBI was administered for 2 hours at a fixed rate, based on the observed intensity of urine color and clinical judgment. Hematuria grading, pain scores, and complications such as acute urinary retention were monitored. Post-CBI evaluations included complete blood count and blood electrolytes.

Results: From the study of 75 participants that met inclusion and exclusion criteria, the average optimal continuous bladder irrigation rate was found to be 896.7 ± 582.8 mL/hr. (range: 100–3000). When analyzed according to hematuria grading before initiating continuous bladder irrigation, the average optimal continuous bladder irrigation rates for hematuria grading levels 1, 2, 3, 4, 5, 7, 8, and 10 were as follows: Level 1 (n=24): 667 ± 385.6 mL/hr. (range: 100–1500),Level 2 (n=14): 821.4 ± 699.1 mL/hr. (range: 100–2750),Level 3 (n=11): 1021.4 ± 765.8 mL/hr. (range: 235–3000),Level 4 (n=8): 1054.1 ± 532.2 mL/hr. (range: 450–2000),Level 5 (n=3): 1666.7 ± 763.8 mL/hr. (range: 1000–2500),Level 7 (n=2): 850 ± 495.0 mL/hr. (range: 500–1200),Level 8 (n=3): 916.7 ± 76.4 mL/hr. (range: 850–1000),Level 10 (n=2): 1550 ± 636.4 mL/hr. (range: 1100–2000).In this study, regardless of the continuous bladder irrigation rate used, none of the patients experienced acute urinary retention due to clot retention. There were slight changes in the hemoglobin level and electrolyte levels before and after continuous bladder irrigation. However, these alterations were not clinically significant. Regarding pain associated with the use of continuous bladder irrigation, the pain score showed no statistically significant correlation with the rate of continuous bladder irrigation (p-value = 0.730). The analysis of urine analysis and urine hematocrit in relation to urine color revealed several key findings. For urine analysis, finding >20 RBC/HPF was the most common result across all urine colors. Patients with lower hematuria grading (level 1–2) showed mixed findings in urine analysis. For higher hematuria grading (level 3–10), most patients had >20 RBCs/HPF. For urine hematocrit, the data shows a clear trend with higher hematuria grading is associated with higher urine hematocrit levels, while lower hematuria grading is associated with lower urine hematocrit levels. The Pearson Chi-Square Test revealed a chi-square value of 129.1648 with 56 degrees of freedom and a p-value of 0.000, indicating a statistically significant association between urine hematocrit levels and hematuria grading. Additionally, Cramer's V value of 0.4960 suggests a moderate to strong association between the two variables.

Conclusion and benefit: This study provides evidence-based guidance on optimal CBI rates for managing gross hematuria, tailored to hematuria severity. The findings suggest that higher hematuria grading requires higher CBI rates, but the absence of acute urinary retention in all patients raises questions about the necessity of high-rate CBI when manual irrigation is effective. Additionally, CBI is a well-tolerated, safe, and effective intervention for managing gross hematuria, with minimal pain and no clinically significant laboratory changes. The strong association between hematuria grading and urine hematocrit levels supports using visual analog scales and urine hematocrit as tools for objective assessment. These insights can enhance the efficacy, safety, and cost-effectiveness of CBI, ultimately improving patient outcomes.

Abstract

“Evaluating Inferior Alveolar Nerve Injury After Bilateral Sagittal Split Osteotomy Using Bicortical Screw Vs Miniplate”

Thanaphat Srisuwat, MD

Thanaphat Srisuwat, Kachin Wattanawong

Division of Plastic Surgery, Department of Surgery, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand

Background: Postoperative sensory disturbances are a common concern following bilateral sagittal split osteotomy (BSSO). The choice between miniplate and bicortical screw fixation may influence nerve recovery, but comparative data remain limited.

Objective: This study aimed to compare sensory recovery between miniplate and bicortical screw fixation after BSSO.

Methods: This randomized controlled trial included patients undergoing BSSO for mandibular advancement. Participants were randomly assigned to receive either miniplate fixation (Group M) or bicortical screw fixation (Group B). Sensory function was assessed using fine touch, cold, hot, pressure, visual analog scale (VAS) for subjective sensation, and two-point discrimination (2PD) at the lower lip and chin at multiple postoperative time points (1 week, 2 weeks, 1 month, 3 months, and 6 months). Statistical analysis was performed using appropriate tests, including independent t-tests and Fisher’s exact test for 2PD.

Results: A total of 26 patients (12 in Group M, 14 in Group B) completed the study. Across all sensory modalities, no statistically significant differences were observed between miniplate and bicortical screw fixation at 6 months:

- Fine touch: Lower lip (4.40 ± 0.82 [M] vs. 4.19 ± 1.05 [B], p = 0.45), chin (4.35 ± 0.88 [M] vs. 3.75 ± 1.06 [B], p = 0.07).
- Cold sensation: Lower lip (4.70 ± 0.57 [M] vs. 4.44 ± 0.89 [B], p = 0.29), chin (4.65 ± 0.67 [M] vs. 4.19 ± 0.83 [B], p = 0.07).
- Hot sensation: Lower lip (4.15 ± 1.26 [M] vs. 3.69 ± 1.45 [B], p = 0.31), chin (4.41 ± 1.17 [M] vs. 3.25 ± 1.53 [B], p = 0.11).
- Pressure sensation: Lower lip (4.45 ± 0.69 [M] vs. 4.44 ± 0.73 [B], p = 0.96), chin (4.43 ± 0.75 [M] vs. 4.00 ± 0.82 [B], p = 0.19).
- VAS scores: Lower lip (8.70 ± 1.24 [M] vs. 7.94 ± 2.59 [B], p = 0.40), chin (8.70 ± 1.34 [M] vs. 7.43 ± 2.19 [B], p = 0.04).
- Two-Point Discrimination (2PD): Lower lip (Median = 5, IQR: 4–5 [M] vs. Median = 4, IQR: 4–5 [B], p = 0.482), chin (Median = 5, IQR: 4–5 [M] vs. Median = 4, IQR: 4–5 [B], p = 0.134).

No patient experienced permanent complete sensation impairment. There is also no significant difference in hospital stay, operative time, blood loss, and total drain output.

Conclusion: Miniplate fixation demonstrated a trend toward better early sensory recovery, particularly in fine touch and temperature perception at the chin. However, none of the differences reached statistical significance, and long-term sensory outcomes were comparable between groups, reaching near normal sensation at 6 months. These findings suggest that fixation choice may have a limited impact on long-term sensory recovery in BSSO patients.

Abstract

“Comparative study of Overactive bladder symptoms management with High-intensity Focused Electromagnetic stimulation Chair therapy and Mirabegron”

Thanakorn Pattamawalai, MD

Thanakorn Pattamawalai, Pokket Sirisreetreerux

Division of Urology, Department of Surgery, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand

Introduction: Overactive bladder is the clinical symptoms characterized by primary symptoms of urinary urgency, combined with urinary frequency and nocturia, with or without urge incontinence, without other pathology. This condition has widely impact on the patients and affects both health and quality of life. Management of overactive bladder symptoms are depend on severity of symptoms. However, medical therapy has some adverse effects and more medical cost.

Objective: The aim of this study was to evaluate the efficacy of High-intensity Focused Electromagnetic stimulation (HIFEMs) Chair therapy compare with mirabegron in treatment of overactive bladder.

Material and methods: From October 2023 to June 2024, we prospectively collected data from 39 Thai patients underwent treatment for overactive bladder in Ramathibodi Hospital. Individual patient were treated with HIFEMs therapy or mirabegron. Clinical outcome and questionnaire, including urinary symptoms of frequency, nocturia, urgency and urge incontinence and questionnaires of ICIQ-OAB and ICIQ-Qol, were quantifined with univariated analysis ($P<0.05$).

Results: There were 39 patients met the inclusion and exclusion criteria. The patients in both group had similar baseline characteristic and urinary symptoms (Table 1). At 2 month after treatment, the HIFEMs group significantly reduce storage symptoms (frequency symptom before treatment, 1 mo, 2 mo and after finishing treatment 3 mo: 14, 6, 6 and 6 respectively (Figure 1), frequency of nocturia before treatment, 1 mo, 2 mo and after finishing treatment 3 mo: 3, 2, 2 and respectively. (Figure 2) Urrgency and urinary incontinent stmptoms improvement. (Figure 3,4) Regarding quality of life, ICIQ-OAB qol score significantly decrease ICIQ OAB Qol Total score before treatment, 1 mo, 2 mo and after finishing treatment 3 mo: 111.3, 73.6, 70.2 and 63.4 respectively (Figure 5). HIFEMs has some report of minimal side effect of dizziness and muscle strain. The patients have no significant difference in complications between 2 groups. (Table 3)

Conclusion: HIFEMs chair has been proved to be an effective treatment modality for OAB patients with minimal adverse events. It provides alternative option for OAB patients who do not want to be treated with medication. However, further study with more number of patients is suggested.

Abstract

> “Outcome comparison between traditional curettage and cotton swab technique for endoscopic transsphenoidal surgery of pituitary adenoma.”

Thanakorn Jaturasuwon, MD

Thanakorn Jaturasuwon, Ake Hansasuta, Wasawat Muninthorn,
Division of Neurosurgery, Department of Surgery, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand

Objective: Endoscopic transsphenoidal surgery (ETSS) has become the standard approach for managing pituitary adenomas, including the extracapsular dissection technique. Recent meta-analyses and systematic reviews have evaluated the effectiveness and safety of using a cotton swab for extracapsular dissection in ETSS. However, no direct comparison has been made between the traditional curettage technique and the cotton swab technique. This study aims to address this gap.

Methods: A retrospective review was conducted on patients who underwent ETSS for pituitary adenomas between 2009 and 2020. Patients were divided into two groups: one operated on using the traditional curettage technique and the other using the cotton swab technique. Inclusion criteria included patients with histologically confirmed pituitary adenomas who had undergone ETSS with at least five years of follow-up. Data on preoperative, intraoperative, and postoperative clinical and radiographic assessments were collected and analyzed.

Results: A total of 314 patients underwent ETSS between 2009 and 2020, with 268 in the control group (traditional curettage) and 136 in the cotton swab group. Preoperative characteristics were similar between groups. Intraoperative CSF leaks were significantly higher in the cotton swab group (73.9%) than in the control group (38.2%) ($p<0.05$), but postoperative CSF leaks were slightly lower (3.7% vs. 8.1%), though not statistically significant. The cotton swab group had significantly fewer redo ETSS procedures and less left visual acuity worsening (20.7% vs. 30.7%). Postoperative MRI showed no residual tumor in 16.0% of the cotton swab group versus 5.9% in the control group ($p<0.05$). The percentage of tumor removed along the anterior-posterior axis was also higher in the cotton swab group (47% vs. 34%) ($p<0.05$). No deaths or vascular injuries occurred.

Conclusions: The cotton swab technique for extracapsular dissection in ETSS for pituitary adenomas demonstrated significant advantages over the traditional curettage technique. The cotton swab group had a lower rate of redo ETSS and less left visual acuity worsening, while achieving a higher rate of complete tumor removal and a greater percentage of tumor resection along the anterior-posterior axis. These findings suggest that the cotton swab technique is a viable alternative to the traditional curettage technique, offering potential benefits in surgical outcomes. However, a prospective randomized controlled trial would be the best way to confirm these results, but in practical terms, it would be difficult to conduct.

Abstract

"Association of the timing in performing ERCP and overall complication in acute cholangitis, Ramathibodi hospital."

Thakul Kongpeth, MD

Thakul Kongpeth , Somkit Mingphruedhi, Narongsak Rungsakulkij, Paramin Muangkaew, Pongsatorn Tangtawee, Wikran Suragul, Watoo Vassanasiri

Department of Surgery, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand.

Background: Cholangitis is an emergency condition which could become life-threatening. Mortality rate could be up to 10%. Early endoscopic retrograde cholangiopancreatography (ERCP) in 24 hours could decrease 30-day mortality, but early ERCP complications over different periods of time has remain unclear. This study aims to compare overall complications after performing ERCP at different periods of time(> 24 hours, 24-48 hours and >48 hours after diagnosed with acute cholangitis.

Method: This retrospective cohort study compared overall complications in patients diagnosed with acute cholangitis who had undergone ERCP at <24 hours, 24-48 hours and >48 hours group. Data from January 1, 2012 to January 1, 2022 at Ramathibodi Hospital were retrospectively reviewed. Patient demographics were compared using chi-square and Wilcoxon rank-sum tests. Overall complications, 30-day mortality, Re-admission in 30 days, Duration in ICU and LOS, Operation time and intra-operative findings(Cannulation attempts, CBD size, Cause of cholangitis)were analyzed by using standard deviation.

Results: Among 238 acute cholangitis patients who underwent early ERCP, complications occurred in 70 patients(29.4%). There was no significant difference between patient demographics, LOS and duration in ICU and CBD size in the three groups.The average time of complication is 38 hours after diagnosed. Complications were found in >48hr group 25 cases(28.4%), 24-48hr group 23 cases(33.33%) and <24hr group 22cases(27.2%). Thirty-nine patients(16.4%) had increase severity of cholangitis. Only 1 patient died in the 24-48hr group. There were 3 patients in 30-day mortality and 28 patients were re-admission in our study. Operation time in <24 hr group (65 min), 24-48hr group (60 min) and >48hr group (50 min)

Conclusion: Based on our study delaying ERCP more than 24 hours and severe grading of cholangitis were increases the risk of complications. However, early ERCP required more operative time than delay ERCP.

Keywords: Acute cholangitis; ERCP; Overall complication.

Abstract

Can sanitary napkin improve healing of chronic venous ulcer compared with conventional gauze covering? : A randomized controlled trial

Teerapat Srina, MD

Teerapat Srina, Suthas Horsirimanont.
Department of Surgery, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand

Background: Venous leg ulcers (VLUs) are the most common lower extremity ulcers which characterize by a long period of treatment, high recurrent rate, and interfere with the quality of life. The pathophysiologies of VLUs are venous hypertension and chronic inflammation. The active inflammatory cells produce proteolytic enzymes such as matrix metalloproteinases (MMPs), collagenase, and elastase, resulting in delayed wound healing. The sanitary napkin consists of super absorbent polymers (SAPs) which can reduce the concentration of proteinase, inhibit bacterial growth, and absorb excessive fluid. We aimed to evaluate whether the sanitary napkin improves wound healing.

Methods: A randomized controlled trial was conducted at vascular wound clinic, Ramathibodi hospital between January 2019 to December 2020 and between June 2022 to April 2024. The VLUs participants were randomized wound dressing into sterile sanitary napkin group (intervention) and gauze group (control). Wound healing rate, PUSH score, frequency of dressing change, pain, odor, patient satisfaction, and adverse events were compared between the two groups.

Results: There were 56 patients included in this study which 27 patients were in the sanitary group and 29 patients were in the control group. Baseline wound area in sanitary napkin group trended to be larger than gauze (6.39 vs 3.99 cm2, P=0.33). Overall complete healing in the sanitary napkin group and gauze group in 12 weeks were not significantly different (40.7% vs 37.9%, P=0.999). There was no statistically significant difference in wound area reduction, PUSH score, frequency of dressing change, pain, odor, patient satisfaction, and adverse events.

Conclusion: Sanitary napkins and gauze dressing were not different in wound healing of VLUs.

Abstract

"Impact of prostate shape ratio on perioperative bleeding and other perioperative outcomes of robotic assisted laparoscopic radical prostatectomy"

Tarapon. Setthawong, MD

T. Setthawong, W. Kongchareonsombat

Division of Urology, Department of Surgery, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand

Introduction: Robotic assisted laparoscopic radical prostatectomy (RARP) has been increasingly used for prostate cancer surgery in Thailand. There are studies compared the prostate volume and perioperative complications but in the detail of prostate shape ratio is tended to be one of the impact factors. Therefore, this study aimed to compare the prostate shape ratio and perioperative complications.

Objective: We determined the impact of prostate shape ratio on perioperative bleeding and other perioperative outcomes of robotic assisted laparoscopic radical prostatectomy.

Material and methods: From January 2017 to December 2022, we reviewed the records of 160 patients who have pre-operative MRI for measurement prostate shape ratio (Width/Length) and underwent robotic assisted laparoscopic radical prostatectomy at Ramathibodi hospital. The primary outcome was perioperative bleeding. The secondary outcomes included perioperative blood component used, perioperative injury and operative time.

Results: 160 patients met the inclusion criteria. Patients who have prostate width/length<1 (group 1) has 82 patients and who have prostate ratio width/length>1 (group 2) have 78 patients. Group 2 had higher intraoperative blood loss (median 300ml $p<0.001$). There was no significant in perioperative blood component used, perioperative injury and operative time between two groups.

Conclusion: In robotic assisted laparoscopic radical prostatectomy, higher prostate shape ratio (Width/Length>1) is associated with more intraoperative blood loss but not different in other perioperative outcomes.

Keywords: Prostate cancer, Robot assisted laparoscopic radical prostatectomy, Prostate shape ratio, Perioperative bleeding, Perioperative complications.

Abstract

“Importance of anticoagulant in venous thromboembolism prophylaxis for surgical patients”

Saharath Pongmongkol, MD

Saharath Pongmongkol, Nutsiri Kittitirapong, Piyanut Pootracool, Wiwat Tirapanich, Sopon Jirasiritum, Surasak Leela-Udomlipi, Suthas Horsirimanont, ChaowanunPornwaragorn, Gorawee Tepsamritporn

Department of Surgery, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand

Background: Venous thromboembolism (VTE) is a serious condition that can lead to significant morbidity and death. Despite the implementation of preventive measures, the Caprini risk stratification system, many high-risk surgical patients at Ramathibodi Hospital still do not receive adequate anticoagulation therapy due to concerns about bleeding complications.

Objectives: To address this issue, a retrospective cohort study was conducted to evaluate the effectiveness and safety of anticoagulation therapy in preventing VTE in high-risk surgical patients.

Method: This study analyzed surgical patients at Ramathibodi Hospital between September 2022 and September 2023 who were identified as high-risk for venous thromboembolism (VTE) based on a Caprini score equal or greater than 5. Patients were categorized into two groups: those not receiving pharmacological prophylaxis (934 cases) and receiving anticoagulant (82 cases). The primary outcome was the incidence of VTE, and the study also compared the rates of post-operative bleeding complications among the groups.

Result: This study found the incidence of VTE in high-risk patients was not significantly different between two groups, 12(1.28%) in non-anticoagulant group vs 0(0%) in the group receiving anticoagulant [p = 0.614]. Patients who received intraoperative heparinization had higher events of bleeding complication, major bleeding in 54/122 cases (44.2%). After excluding those with intraoperative heparinization, the bleeding complications were not significantly different between the two groups. Minor bleeding incidence is 83(8.89%) vs 8(9.76%) [p = 0.791] and major bleeding is 23(2.46%) vs 2 (2.44%) [p = 0.999]

Conclusion: This study demonstrates that using anticoagulants for VTE prophylaxis does not effectively reduce the incidence of VTE events and shows no significant increase in bleeding complications. However, the findings are limited in their generalizability due to the small sample size and low incidence of VTE observed. Further research with larger sample sizes is needed to determine the optimal VTE prevention strategies for individual patients.

Abstract

“Significant associated risk factors in venous thromboembolism for surgical patients in Ramathibodi Hospital”

Pimchanok Roongwarasopit, MD

Pimchanok Roongwarasopit, Nutsiri Kittitirapong
Department of Surgery, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand

Background: Venous thromboembolism is a serious condition that may result in significant morbidity and mortality, especially in postoperative patient. Although VTE incidence following surgery in Thailand is low (3.6%), the associated in-hospital mortality remains high at 17%. To mitigate the risks of VTE, standardized risk assessment tools, such as the Caprini Risk Assessment Score are widely used to guide the implementation of prophylactic measures. However, the complexity of these tools often leads to inaccuracies in risk stratification.

Objective: The primary aim of this study is to identify key risk factors that are significantly associated with the development of symptomatic VTE in postoperative patients at Ramathibodi Hospital. Based on these findings, the study intends to propose a simplified effective risk assessment tool for clinical use.

Materials & Methods: A retrospective case-control study was conducted on surgical patients who underwent risk assessments using the Caprini score enrolling 82 participants in Ramathibodi hospital: 42 cases with a confirmed diagnosis of VTE (DVT and/or PE) and 42 controls matched by age, gender and operative time. Data on potential risk factors including patient demographics, surgical procedures, comorbidities, and postoperative outcomes were collected through medical records between November 2019 and July 2023. Multivariable logistic regression analysis was performed to determine specific risk factors contributed most significantly to the development of symptomatic VTE (DVT and PE).

Results: After propensity score matching, significant differences between cases and controls were observed in several risk factors. Patients with a history of obesity (BMI ≥ 25), and patients who were received PRC ≥ 2 units had a significantly higher risk of VTE (multivariate p-value = 0.020, and p = 0.041, respectively). Additionally, platelet count was significantly higher in VTE patients, as patients with platelet count > 100,000 were at higher risk to develop VTE. (multivariate p-value = 0.015)

Conclusions: The results of this study suggested that obesity, higher platelet counts and receiving more packed red cell components are significant risk factors for VTE. By these results leading to an improving revised VTE risk assessment scores of Ramathibodi hospital, which aims to reduce the incidence of imprecise evaluation in VTE risk contributing to decrease in VTE incidence and VTE related complications.

Abstract

Donor-site morbidity of rectus sheath sparing tram flap in breast reconstruction: A retrospective review

Pensiri Sansamart, MD

Pensiri Sansamart, Sarayuth Damrongwongsiri
Division of Plastic and Maxillofacial Surgery, Department of Surgery, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand

Background: The transverse rectus abdominis myocutaneous (TRAM) flap has been widely used for autologous breast reconstruction for over severaldecades. While it provides reliable soft tissue coverage, donor-site morbidity remains a significant concern, particularly regarding hernia formation, abdominal bulging, postoperative pain, and aesthetic outcomes. Conventional TRAM with mesh reinforcement aims to reduce these complications, while the rectus-sparing TRAM technique preserves muscle integrity to potentially improve functional and aesthetic results. This study compares the donor-site morbidity associated with these two techniques to guide surgical decision-making and optimize patient outcomes.

Methods: A retrospective cohort study was conducted on patients who underwent breast reconstruction using TRAM flaps at Ramathibodi Hospital between 2009 and 2020. Patients were categorized into two groups:
1.Conventional TRAM flap with mesh reinforcement
2.Rectus sheath sparingTRAM flap
Data were collected from electronic medical records, including demographic factors (age, BMI, comorbidities), oncologic details (cancer stage, radiation, and hormone replacement therapy) and postoperative outcomes. The primary outcome measures included the incidence of donor-site hernia and abdominal bulging.
Secondary outcomes assessed included pain, sensory deficits, and aesthetic concerns based on clinical evaluations and patient-reported outcomes. Statistical analyses were performed to compare complication rates and identifypotential risk factors.

Results: Atotal of 49 patients were included, with 17 in the conventional TRAM with mesh group and 32 in the Rectus sheath sparing TRAM. The incidence of hernia was 17.7% (3 from 17) in the mesh group versus0% in the rectus-sparing group(p= 0.022). Abdominal bulging occurred in 23.5% (4 from 17) of patients with mesh reinforcement compared to 6.3% (2 from 32) in Rectus sheath sparing(p = 0.037). Patients in the rectus-sparing group reported lower postoperative pain scores and higher satisfaction with abdominal contour.No significant differences were observed in surgical site infections or seroma formation between groups**.**

Conclusion: The Rectus sheath sparing TRAM technique without mesh demonstrates comparable or reduced donor-site morbidity relative to conventional TRAM with mesh, particularly in reducing hernia risk and improving abdominalaesthetics. These findings suggest that preserving rectus sheath integrity may enhance postoperative recovery while maintaining reconstructive efficacy. Further prospective studies are warranted to validate these findings and refine reconstructive approaches in breast cancer patients.

Abstract

> Factor associated with perioperative major adverse cardiovascular events (MACE) of patient undergone non-cardiac vascular surgery

Pattarapon Chotisun, MD

Pattarapon Chotisun, Piyanut Pootracool, Suthas Horsirimanont, Nutsiri Kittitirapong, Chaowanun Pornwaragorn, Gorawee Tepsamrithporn

Division of Vascular Surgery, Department of Surgery, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, 10400, Thailand

Background: Perioperative major adverse cardiovascular events (MACEs) are associated with the morbidity and mortality of patients undergoing noncardiac vascular surgery. It is thus essential to understand the risk factors associated with such complications to aid the preoperative and postoperative care of such patients.

Objectives: To identify factors associated with perioperative major adverse cardiovascular events in patients undergoing noncardiac vascular surgery of Ramathibodi hospital.

Materials and Methods: This work involved a retrospective study of patients who underwent noncardiac vascular surgery at the Department of Vascular Surgery, Faculty of Medicine, Ramathibodi Hospital, Bangkok, Thailand from 2011 to 2020, aimed at analysing the risk factors associated with MACEs perioperatively and within 30 days postoperatively after undergoing noncardiac vascular surgery (perioperative MACEs). The patients were classified into two groups: those with and those without perioperative MACEs. The obtained data were subjected to univariate and multivariate analyses.

Results: The study findings were as follows. There were 1,169 patients, 740 (63.3%) of whom were male, with a mean age of 69.59 years. Overall, 152 patients (13%) had perioperative MACEs. The risk factors identified by univariate analysis as being associated with such complications included age [odds ratio (OR), 1.02 (95% CI, 1.01–1.04); P<0.001], history of congestive heart failure (4.1, 2.03–8.28; P<0.001), atrial fibrillation (1.67, 1.03–2.70; P=0.035), chronic kidney disease stage 4 (3.47, 1.71–7.02; P<0.001), white blood cell count (1.06, 1.03–1.09; P<0.001), albumin level (0.92, 0.9–0.95; P<0.001), left ventricular ejection fraction (0.96, 0.94–0.97; P<0.001), American Society of Anesthesiologists risk classification (ASARC) 4 (2.59, 1.74–3.85; P<0.001), intraoperative red blood cell transfusion (2.6, 1.82–3.7; P<0.001), intraoperative blood loss (1.00, 1.00–1.01; P<0.001), abdominal aortic aneurysm surgery (4.54, 1.37–14.91; P=0.013) and major amputation (7.66, 2.19–26.81; P<0.001). Meanwhile, multivariate analysis identified ASARC >3 (2.19, 1.33-3.59; P=0.002), serum albumin level (0.93, 0.90-0.97; P<0.001), intraoperative blood loss (1.00; 1.0001-1.0005; P=0.002) and left ventricular ejection fraction (0.96; 0.94-0.98; P<0.0001).

Conclusions: MACEs were associated with risk factors such as blood albumin level, left ventricular ejection fraction, intraoperative blood loss and American Society of Anesthesiologists risk classification >3. Medical teams should assess such risk factors in patient undergoing major vascular surgery to help reduce the incidence of perioperative MACEs.

Abstract

Short term outcome of laparoscopic vs open hepatectomy in Ramathibodi hospital

Pattanapak Rakchob, MD

Wikran Suragul, Pattanapak rakchob, Somkit Mingphruedhi, Narongsak Rungsakulkij, Paramin Muangkaew, Pongsatorn Tangtawee, Watoo Vassanasiri

Department of Surgery, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand.

Background: Laparoscopic liver resection has gained widespread acceptance and is increasingly regarded as a safe and efficacious approach for both benign and malignant hepatic lesions. Prior investigations have reported comparable oncological outcomes between minimally invasive and open hepatectomy. This study aimed to evaluate and compare the short-term surgical outcomes of laparoscopic versus open hepatectomy at Ramathibodi Hospital.

Objectives: To compare the pathological outcome and complications of laparoscopic versus open hepatectomy.

Methods: This retrospective cohort analysis included all patients who underwent either laparoscopic or open liver resection in the Hepatopancreatobiliary (HPB) Department at our institution between January 1, 2022, and May 31, 2024. Collected variables included patient demographics, preoperative indocyanine green retention at 15 minutes, cirrhosis status, surgical approach, operative time, estimated intraoperative blood loss, frequency and volume of intraoperative and postoperative packed red blood cell transfusions, Pringle maneuver duration, postoperative complications (including bile leakage), histopathological findings, morbidity, mortality, and length of hospital and ICU stay. Statistical analyses were performed to compare outcomes between the laparoscopic and open cohorts.

Results: A total of 234 patients met inclusion criteria, 21patients was excluded. comprising 150 undergoing open hepatectomy and 63 undergoing laparoscopic hepatectomy. Baseline characteristics, including age, gender, BMI, and ICG R15, were comparable between groups. Cirrhosis was more common in the laparoscopic group (28.1% vs. 17.1%; p=0.06). The laparoscopic cohort demonstrated a 9.52% conversion rate to open surgery. Operative times did not differ significantly (p=0.67), whereas laparoscopic procedures yielded significantly lower intraoperative blood loss (355.53 mL vs. 665.24 mL; p=0.001) and a decreased requirement for postoperative PRBC transfusions (2.17% vs. 14.81%; p=0.004). However, the laparoscopic approach was associated with a longer median Pringle maneuver time (80.87 min vs. 59.15 min; p=0.008). No statistically significant differences were noted in resection margins, bile leakage rates, morbidity, 90-day mortality, hospital length of stay, or ICU stay.

Conclusion: Laparoscopic hepatectomy represents a safe and effective alternative to open hepatic resection, providing reduced intraoperative blood loss and lower postoperative transfusion without compromising short-term surgical or oncological outcomes.

Abstract

“A study of quality of life in end-stage renal disease patients undergoing different types of vascular access procedures at the division of vascular surgery, Ramathibodi hospital”

Patompong Chidlerd, MD

Patompong Chidlerd, Gorawee Tepsamrithporn, Surasak Leelaudomlipi, Wiwat Tirapanich, Sopon Jirasiritum, Piyanut Pootracool, Suthas Horsirimanont, Nutsiri Kittitirapong, Chaowanan Pornwarakorn

Department of Surgery, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, 10400, Thailand

Background: Hemodialysis necessitates the creation of a vascular access, typically established through an arteriovenous fistula (AVF), arteriovenous graft (AVG), or tunnel-cuffed catheter (TCC). Although AVF is generally considered the optimal choice, it is susceptible to failure, which can result in pain and a reduced quality of life.

Objectives: This study seeks to compare the quality of life among patients utilizing these various vascular access methods and to examine the factors influencing it

Materials & Methods: This prospective cohort study aims to compare the quality of life among end-stage renal disease patients aged 18 years and older who underwent their first vascular access procedure (AVF, AVG, or TCC) at the Division of Vascular Surgery, Ramathibodi Hospital. Data will be collected from medical records and the SF-36 quality of life questionnaire before surgery, 2 weeks, and 3 months post-surgery. Collected data from July 2022 to December 2024

Results: A total of 46 participants were included in this study: 15 (32.6%) with AVF, 17 (36.9%) with AVG, and 14 (30.4%) with TCC. Age and BMI differed significantly between groups. [Age, Median(IQR): AVF 57(36) vs TCC 81(21) vs AVG 44(37), p-value 0.010] [BMI, Mean(±SD): AVF 22.3(±3.30) vs TCC 23.24(±4.27) vs AVG 28.16(±6.72), p-value=0.005] In operative details, there is no statistical significant was observed between route of anesthesia, reinterventions and complication. Analysis of complications and reintervention by age showed a higher prevalence among the elderly group (≥ 75 years old). However, no statistically significant differences were found between the three groups. When converted each item in SF-36 into eight quality of life aspect, Preoperatively, patients with AVF demonstrated significantly higher vitality (VT) and physical function (PF) scores compared to those with TCC or AVG. [VT, Median(IQR): AVF 55(15) vs TCC 50(20) vs AVG 48(15), p-value=0.041] [PF, Median(IQR): AVF 55(30) vs TCC 15(20) vs AVG 43(75), p-value=0.008]. However, two weeks postoperatively, patients with TCC exhibited significantly higher vitality scores [VT, Median(IQR): AVF 50(10) vs TCC 60(15) vs AVG 50(30), p-value=0.05]. At three months post-surgery, no significant differences were found among the groups.

Conclusion: The findings of this study indicate that patients with AVF dialysis access exhibited superior preoperative health, particularly in terms of vitality and physical function. However, a temporary reversal was observed two weeks post-surgery, with TCC patients demonstrating improved vitality. The long-term impact of dialysis access type on health outcomes, as assessed at three months post-surgery, did not reveal significant differences among the three groups. These results suggest that while the choice of dialysis access may influence early postoperative recovery, its long-term effects on overall health may be less pronounced. The analysis showed no significant association between complications and reintervention across the three groups. Elderlypatients undergoing fistula surgery had higher rates of complications, particularly infections and occlusions, leading to frequent reoperations

Abstract

“Role of indocyanine green assist laparoscopic cholecystectomy compared with conventional laparoscopic cholecystectomy in Ramathibodi hospital: Randomized controlled trial”

Patchaporn Sermsartrat, MD

Patchaporn Sermsartrat, Pongsatorn Tangtawee

Department of Surgery, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, 10400, Thailand

Background: Acute cholecystitis is a commonly diagnosed condition, and laparoscopic cholecystectomy (LC) is the gold standard treatment, unless the patient's condition is deemed unsafe for major surgery. One of the most serious complications associated with LC is bile duct injury (BDI), particularly in cases where the critical view of safety (CVS) is difficult to identify or when performed by less experienced surgeons. Various techniques have been proposed to mitigate this risk. Indocyanine green (ICG) has emerged as a potential alternative that may reduce the risks, but its benefits and protocols remain unclear. This study aims to investigate this issue.

Method : Patients who undergo LC were randomly assigned to ICG group or non-ICG group using closed envelopes. Primary outcome is post operative complication. Secondary outcome are time to CVS, conversion rate, length of stay (LOS) and operation time. Data analysis was conducted using the STATA program.

Result: A total of 40 volunteers were enrolled in the study (21 in non-ICG group and 19 in ICG group). The majority of participants were female. General characteristics between the groups did not differ (P = 0.025). There were no complications reported in the non-ICG group, while one case (5.3%) of ICG group was converted to open cholecystectomy, although this was not statistically significant (P = 0.475). Timing to identify the CVS and overall operating time were faster in the non-ICG group, but again, these were not statistically significant (P = 0.322; P = 0.143). The median length of stay was the same for both groups (3 days, P = 0.253).

Conclusion: The use of ICG may aid in identifying the CVS during laparoscopic cholecystectomy, but the clinical benefit remains uncertain, potentially due to the low enrollment number and low complication rates. Some surgeons reported increased confidence when utilizing ICG. Future research focusing on surgeon confidence during training or in complex LC cases is warranted.

Abstract

“Parathyroid surgery in patients with secondary and tertiary hyperparathyroidism”

Panisara Srisuwannives, MD

Panisara Srisuwannives[1], Thongchai Sukarayothin[1], Hathaikarn Nimitphong[2]

1Division of Breast and Endocrine, Department of Surgery, Faculty of Medicine, Ramathibodi Hospital, Mahidol University.

2Division of Endocrinology and Metabolism, Department of Medicine, Faculty of Medicine, Ramathibodi Hospital, Mahidol University.

Background: Secondary hyperparathyroidism and tertiary hyperparathyroidism are prevalent diseases associated with morbidity and mortality in chronic renal disease patients. There are several alternatives for treatment both medical therapy and surgery. Parathyroid surgery is indicated for those who failed conventional therapy. Total parathyroidectomy with autotransplantation (TPTX +AT group), Total parathyroidectomy without autotransplantation (TPTX group), and subtotal parathyroidectomy (SPTX group) remain controversial for which is the best surgical method.

Objectives: To compare outcome of three different surgical choices for parathyroidectomy in patients with secondary and tertiary hyperparathyroidism. This would be benefit for selecting optimal methods for the future; reduce morbidity and mortality.

Method: A single center retrospective medical record review of total parathyroidectomy, with or without auto-transplantation and subtotal parathyroidectomy from 1 December 2010 to 31 December 2023 performed.

Result: All 344 patients included in study were operated for renal hyperparathyroidism during from 1 December 2010 to 31 December 2023. Two hundreds and thirty-nine patients (69%) were operated with SPTX, 28(8%) for TPTX, and 77(22%) received TPTX+AT. The preoperative parathyroid hormone levels were markedly high in all groups without significant difference.For overall complications, 6(7.79%) patients in the total parathyroidectomy with auto-transplantation (TPTX +AT) were required reoperation for persistent hyperparathyroidism resistant to nonoperative treatment more than subtotal parathyroidectomy group and total parathyroidectomy without auto-transplantation group (SPTX 6.72% and TPTX+AT 3.57%). Nine (3.9%) patients of SPTX group experienced recurrent hyperparathyroism more than other groups.

Conclusion: The subtotal and total parathyroidectomy with or without autotransplantation were practical procedures for patients with rHPT. The best surgical procedure is still unclear. Further prospective, randomized controlled trials with higher statistic power are needed to comparative these three surgeries for the long-term outcome and safety.

Abstract

“Prospective Randomized Controlled Trial to evaluate effectiveness of Tranexamic Acid Irrigation on Perioperative Blood Loss During Mini-Percutaneous Nephrolithotomy”

Ornnicha Prohsoontorn, MD

Ornnicha Prohsoontorn,[1] Premsant Sangkum,[1] Wisoot Kongchareonsombat,[1] Yada Phengsalae,[2] Chinnakhet Ketsuwan [1]

1Division of Urology, Department of Surgery, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, 10400, Thailand

2Research Unit, Department of Surgery, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, 10400, Thailand

Introduction: Mini percutaneous nephrolithotomy (Mini-PCNL) has comparable stone clearance rates to standard percutaneous nephrolithotomy (PCNL) which is the gold standard surgical treatment for large renal kidney stones. A smaller sheath size causes less renal trauma but it limits the available working channel in the meanwhile. The visual field is the key to success so it will become more challenging with the bleeding.

Objectives: To evaluate the effectiveness and safety of 0.1% tranexamic acid in irrigation fluid for reducing blood loss during mini-percutaneous nephrolithotomy (mini-PCNL).

Materials and methods: We conducted a study on 40 patients scheduled for mini-PCNL, and they were prospectively randomized into two equal groups. In the experimental group, the irrigation fluid was supplemented with 0.1% tranexamic acid. Conversely, the controlled group received distilled water added to the irrigation fluid during surgery. Operative data were recorded, which included hemoglobin decrease, blood loss, operative duration, irrigation fluid volume, hospital stay length, blood transfusion needs, mini-PCNL complications, and tranexamic acid side effects.

Results: Baseline parameters were comparable between the two groups. The fall in hemoglobin and total blood loss in the tranexamic group was significantly lower than in the placebo group (0.52 vs. 1.52 gm/dL, 91.75 vs. 169.00 mL, respectively, $p < 0.05$). Operative time and hospital stay of the tranexamic group were significantly lower compared to the placebo group ($p < 0.05$). The amount of irrigation fluid used, complete stone clearance rate, and blood transfusion were lower in the tranexamic group, without statistical significance. No adverse events related to the administration of tranexamic acid were noted.

Conclusion: It was found that 0.1% tranexamic acid in irrigant fluid is safe and significantly reduces perioperative blood loss and the requirement for blood transfusion during mini-PCNL.

Abstract

An in vitro study of Microencapsulation of Human Parathyroid Cell

Ornicha Makkasem,MD

Ornicha Makkasem, Ronnarat Suvikapakornkul

Department of Surgery, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, 10400, Thailand

Background: The incidence of permanent hypoparathyroidism following surgery for both the parathyroid and thyroid glands is reported to range 0-3% of cases. This leads to an impact on the patient's quality of life, increased hospitalization rates, and higher healthcare costs.Parathyroid allotransplantation is the definitive treatment for permanent hypoparathyroidism. A significant obstacle of this method is the host's immune system on the transplanted parathyroid tissue. To overcome this problem microencapsulation of parathyroid cells is a promising method. Cell microencapsulation in hydrogel is a process in which cells or tissues are enclosed in a semi-permeable membrane to prevents the immune system from attacking the cells

Objectives: We describe hydrogel microencapsulation of human parathyroid cells using alginate microfiber. Cell viability, cell growth, and parathyroid hormone production of microencapsulated cells were evaluated

Materials & Methods: Parathyroid cells were cultured and isolated. We produced cells encapsulated in hydrogel microfibers. Alginate lyase-loaded PLGA nanoparticles (NPs) and parathyroid cells were encapsulated into the alginate hydrogel microfibers. The microfluidic laminar flow method was employed to fabricates the cell encapsulated microfibers via an aqueous two-phase system (ATPS)
The structure of alginate microfibers will be then characterized by scanning electron microscope (SEM). Cell viability and PTH secretion of hydrogel microfibers were evaluated in vitro for 21 days compare with monolayer cell culture

Result: Encapsulated parathyroid cells in hydrogel can be cultured and proliferated inside hydrogel microfiber over 21 days. However, the amount of in vitro PTH secretion from encapsulated cells was significantly lower than monolayer culture cell

Conclusion: Cell encapsulated hydrogel microfibers foundational process that can be further developed for the treatment of patients with hypoparathyroidism in the future.

Abstract

“Patient characteristic and outcome after second kidney transplantation, single center experience”

Nuttakhom Kaewpaetra,MD

Bundit Sakulchairungrueng, Goragoch Gesprasert, Nuttakhom Kaewpaetra

Division of Vascular Surgery, Department of Surgery, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, 10400, Thailand

Background: Second kidney transplantation offers a renewed chance of survival and improved quality of life for individuals with end-stage renal disease whose first transplant has failed. However, this complex procedure presents unique challenges, and understanding the factors associated with successful outcomes is crucial for optimizing patient care and graft survival.

Objectives:

1. To study the survival rate of transplanted kidneys and patients after receiving a second kidney transplant.
2. To study the factors affecting the survival of transplanted kidneys and patients after receiving a second kidney transplant.
3. To study the characteristics of patients undergoing second kidney transplantation.
4. To study the waiting time for a second kidney transplant.

Materials and Methods: This retrospective study investigated the factors influencing graft and patient survival rates following a second kidney transplant. Data were collected on all patients receiving a second kidney transplant at our center between January 1, 1997, and December 31, 2022. Factors analyzed included patient demographics, cause of end-stage renal disease (ESRD), donor type, ischemic time, early graft function, rejection episodes, immunosuppressive regimen, and post-operative complications.

Results: Fifty-nine patients were included in the study, with 49 (83%) experiencing successful graft function and 10 (17%) experiencing graft loss. A history of a first-living donor kidney transplant was associated with improved second-graft survival in both living and deceased donor groups (p=0.044). The absence of delayed graft function was significantly associated with improved second graft survival (OR 6.5, 95% CI 1.27-33.20, p=0.024). The median dialysis vintage was approximately three years.

Conclusions: The results of this study suggest that a history of a living donor in the first kidney transplant and the occurrence of delayed graft function in the second kidney transplant significantly affect both graft and patient survival.

Abstract

> Prevalence of and factors associated with intraductal papillary lesion, both of benign and malignant, in patients with nipple discharge undergoing mammary duct excision

Ninnat Fongsupa,MD

Ninnat Fongsupa, Panuwat Lertsithichai

Department of Surgery, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand, 10400

Background : Nipple discharge is a common symptom in women, with a prevalence of 5–12%. It is the third most frequently reported breast-related complaint. Nipple discharge is classified as either physiologic or pathologic, with intraductal papillary papilloma being a common cause of pathologic discharge. These lesions can be benign or malignant. Diagnostic approaches, including mammary duct excision, are crucial in cases where imaging or biopsy is inconclusive. While international studies show the prevalence of intraductal papilloma, duct ectasia, and breast cancer as common causes, data specific to Thailand remain limited. Understanding the prevalence and factors associated with these lesions can improve diagnostic and treatment strategies.

Objective : To determine the prevalence of intraductal papilloma in patients with nipple discharge undergoing mammary duct excision.
To identify factors associated with the occurrence of intraductal papilloma.

Materials and methods : This retrospective study analyzed medical records and surgical logs of female patients aged 18 years or older who underwent mammary duct excision at Ramathibodi Hospital from January 2009 to August 2024. Data included demographic characteristics, clinical findings, imaging results (mammography and ultrasound), and pathological diagnoses. Descriptive statistics were used to calculate prevalence. Chi-square tests and logistic regression were employed to identify factors associated with intraductal papilloma.

Results : Among 208 female patients who underwent mammary duct excision, intraductal papilloma were identified in 55.77% (116/208). Cancer was diagnosed in 11.54% (24/208), including invasive cancer in 3.37% (7/208). Age, hypertension, dyslipidemia, and taking oral contraceptive pills is not risk factors for intraductal papilloma. But diabetes is protective factor for intraductal papilloma (OR = 0.24, p = 0.016). In ultrasound and mammogram, finding mammary duct dilatation is associated with intraductal papilloma (OR = 1.88, p = 0.045).

Conclusion : This study demonstrates a prevalence of intraductal papilloma in patients undergoing mammary duct excision for nipple discharge. Mammary duct dilatation is associated with intraductal papilloma. These findings provide critical insights into diagnostic and management strategies, with potential to improve patient outcomes.

Abstract

> Overall 5-year survival rate and disease-free survival after segmentectomy versus lobectomy in patients with non-small cell lung cancer

Khunthorn Kadeetham, MD

Khunthorn Kadeetham, Montien Ngodngamthaweesuk, Narongrit Kantathut, Piya Samankatiwat, Piya Cherntanomwong, Parinya Leelayana, Siam Khajarern

Division of Cardiothoracic Surgery, Department of Surgery, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand, 10400

Objectives: Anatomical lobectomy has always been the standard operative treatment of early-stage non-small cell lung cancer. However, there have been emerging evidences suggesting that a sub-anatomical resection, such as segmentectomy, may yield the same treatment results, even in patients with higher-stage non-small cell lung cancer. This study aimed to compare overall 5-year survival rate and disease-free survival between lobectomy and segmentectomy in patients with non-small cell lung cancer.

Methods: The retrospective study included 380 patients who underwent surgery for non-small cell lung cancer at Ramathibodi Hospital between 1st January 2016 and 31st December 2020. Of 380 patients, 307 patients underwent lobectomy, while the other 73 patients underwent segmentectomy. Operative, admission, and follow-up data were collected from electronic medical records. Missing data were collected by telephone calls to patients or their relatives in deceased cases. Overall and disease-free survival were analyzed.

Results: Median overall 5-year survival time after lobectomy and segmentectomy seemed to be different but not statistically significant (18.5 months versus 5.8 months, p = 0.127). Median disease-free survival time after lobectomy and segmentectomy was also similar (8.6 months versus 4.5 months, p = 0.511). Two deaths occurred during perioperative period, one from lobectomy group due to acute massive pulmonary embolism (0.3%) and the other from segmentectomy group due to acute exacerbation of chronic obstructive pulmonary disease with respiratory failure (1.4%).

Conclusion: Lobectomy and segmentectomy result in similar overall 5-year survival rate and disease-free survival between these two comparison groups. Therefore, segmentectomy may be a potential alternative for operative treatment of non-small cell lung cancer. However, a larger and randomized-controlled trial may be needed to further validate these results.

Abstract

“Comparison of Robotic vs Laparoscopic Radical Nephroureterectomy with bladder cuff excision in Upper Urinary Tract Urothelial Carcinoma: A Retrospective Cohort Study”

Kan Panyapinitnugoon, MD

Kan Panyapinitnugoon, Kittinut Kitvikai

Division of Urology, Department of Surgery, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand

Introduction: The best bladder cuff management technique for upper tract urothelial carcinoma (UTUC) is still controversial. There were few data published regarding to outcome and technique for robotic assisted nephroureterectomy (RANU). Our institute offered RANU for UTUC and considered to be an alternative standard treatment for our patients.

Objective: The main purpose of the study was to compare the perioperative outcomes between single-docking RANU, Laparoscopic nephroureterectomy with laparoscopic bladder cuff excision (LNULBCE), and Laparoscopic nephroureterectomy with open bladder cuff excision (LNUOBCE) for UTUC. The secondary purpose was to compare the oncological outcomes between the three different operative techniques.

Patients and Methods: The study was conducted at Ramathibodi hospital during Jan 2013 to July 2024. UTUC patients were categorized into three groups based on operative technique including RANU, LNULBCE, and LNUOBCE. The data were collected retrospectively for perioperative and oncological outcomes, and analyzed using STATA software.

Results: For overall 125 patients, 36 patients were in RANU group, 43 patients were in LNULBCE group, and 46 patients were in LNUOBCE group.Perioperative outcomes were favored to RANU group over LNULBCE and LNUOBCE groups including blood loss (100ml vs 150ml vs 250ml, p-value 0.00), Length of stay (7days vs 8days vs 8days, p-value 0.102), and pain score (3.1 vs 4.9 vs 5.7, p-value 0.00). Margin status was 8.3% vs 7% vs 17.4%, P-value 0.28 on RANU, LNULBCE, and LNUOBCE groups. 5-years bladder recurrence free probability were 71.87% vs 64.90% vs 35.29%, p-value 0.013 and 5-years local recurrence free probability were 100% vs 87.95% vs 97.50%, p-value 0.183 on RANU, LNULBCE, and LNUOBCE groups respectively.

Conclusion: The RANU is an alternative effective technique for distal ureterectomy with bladder cuff excision in UTUC. It provides superior perioperative outcomes and equivalent oncological outcomes compared with LNULBCE and LNUOBCE technique. However, further randomized controlled study and larger sample size may be needed to confirm the operative outcomes.

Abstract

“In Search of Aesthetic Nasal Profile in East Asians”

Chawisa Maleewan, MD

Chawisa Maleewan, Ajchariya Sarovath, Thiti Tantitham

Division of Plastic and Maxillofacial, Department of Surgery, Faculty of Medicine, Ramathibodi Hospital, Mahidol University

Objective: While the aesthetics of the Caucasian nose have been extensively described in textbooks, the ideal aesthetic characteristics of the Asian nose remain undescribed. Therefore, the purpose of this study was to determine the aesthetic nasal profile in the East Asian population.

Methods: A prospective survey was carried out to evaluate preferences for the optimal nasal profile, including radix location, nasal projection, and tip rotation. Eight volunteers (4 women and 4 men) served as models and were photographed. Raters (n=138), including professionals (n=65) and laypersons (n=73), evaluated a series of computer-manipulated photographs and rated their preferences. The primary outcome was the preferred aesthetic nasal parameters. Differences between professionals and laypersons were subsequently compared.

Results: With the eyes in a horizontal gaze, both groups preferred the radix location to be positioned between the pupil and upper lash line. Preferred tip projection was 0.85-0.9 of the ideal Caucasian projection in females and 0.9-0.95 in males. The preferred nasolabial angle was 100°-105° in females and 95°-100° in males.

Conclusions: Aesthetic nasal preferences in East Asians, when compared to Caucasians, favor a lower radix location, a more obtuse nasolabial angle, and a less projected nasal tip.

Abstract

“Association between image-defined risk factor and surgical outcome and complication in abdominal neuroblastoma in Ramathibodi hospital”

Bhavita Thamsopitt, MD

Bhavita Thamsopitt, Thitiporn Junhasavasdikul, Suwadee Eng-Chuan, Pornsri Thanachatchairattana

Division of Pediatric Surgery, Department of Surgery, Faculty of Medicine Ramathibodi Hospital, Bangkok,

Background: Image-Defined Risk Factors (IDRFs), part of the International Neuroblastoma Risk Group Staging System, are crucial for assessing surgical complexity and guiding management in neuroblastoma patients. Patients with positive IDRFs often received neoadjuvant therapy. However, it remains unclear which specific IDRFs impact surgical outcomes and complications. Moreover, as IDRFs change following chemotherapy, it is still inconclusive whether at diagnosis or post-chemotherapy IDRFs are associated with surgical completeness and complications.

Objectives: This study aimed to evaluate the relationship between IDRFs and completeness of resection and complications and to identify specific IDRFs influencing surgical outcomes and complications in pediatric abdominal neuroblastoma patients treated at Ramathibodi Hospital.

Materials & Methods: This retrospective study included pediatric neuroblastoma patients treated at Ramathibodi Hospital from January, 2003 to August, 2023. Two pediatric radiologists assessed IDRFs for both diagnostic and preoperative CT imagings and made agreement IDRFs. The mean IDRFs and each IDRF were compared in patients with complete and incomplete tumor resection, and those with complications and without complications.

Result: 50 patients who received neoadjuvant therapy were included. Patients with incomplete resections or with complications had significant higher IDRF scores at the time of diagnosis than those with complete resection or without complications. Infiltrating the porta hepatis and/or the hepatoduodenal ligament detected at the time of diagnosis was the risk factor for incomplete excision (p-value 0.006; OR 7.7). After receiving neoadjuvant therapy, overall IDRFs decreased from 4.1+2.67 to 1.62+ 1.74. Patient with complications had significantly higher post-chemotherapy IDRF than those without complication (p-value 0.0197). Overall survival rate in this cohort was 60%. Patient with progression of disease had more incomplete resection than complete resection significantly (p = 0.04). Patient who received complete surgery did not correlated with complications.

Conclusion: IDRFs at the time of diagnosis strongly predicted surgical completeness and complications. Neoadjuvant chemotherapy effectively reduced IDRF scores; post-chemotherapy IDRFs correlated with complications only. Infiltrating the porta hepatis and/or the hepatoduodenal ligament detected at the time of diagnosis was only risk factor for incomplete resection. Complete tumor removal in neuroblastoma should be considered to avoid disease progression.

Abstract

“5-year survival rate of Pediatric pulmonary metastatic sarcoma , Post-pulmonary metastasectomy in Ramathibodi Hospital, A retrospective study”

Apipat Dhirakul, MD

Apipat Dhirakul, Montien Ngodngamthaweesuk, Pongpak Pongpitcha, Suradej Hongeng

Division of Cardiothoracic Surgery, Department of Surgery, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand, 10400

Introduction: To report Post pulmonary metastasis survival of sarcoma after metastasectomy, which is a standard operative treatment for lung metastatic sarcoma, in pediatric patients treated at Ramathibodi hospital. This study aimed depict 5 years survival rate compare between anatomical resection group and non-anatomical resection group. Others relevant prognostic factors were also analyzed in this study

Method: This report is a retrospective study,which includes twenty-seven sarcoma with pulmonary metastasis pediatric patients, age under 20 years-old, who underwent surgical pulmonary metastasectomy in Ramathibodi hospital from 1 Jan 2007 to 31 Dec 2019. Endpoint of this study was overall survival using the Kaplan and Meier method and evaluated with log-rank test. Others potential associated factors were analyzed by univariate using the Cox regression model and independent risk factors were expressed.

Results: 27 patients diagnosed pulmonary metastatic sarcoma and underwent pulmonary metastasectomy in Ramathibodi hospital. The overall survival were 34 % at 3 year and 12.6 % at 5 year with overall disease free interval of 8.6 month. The data shows no significant difference between any approach or type of resection. Older age patient demonstrated a statistically significant association with an elevated risk of recurrence (P=0.046), with a hazard ratio of 1.12.

Conclusion: Any type of resection and approach for pulmonary metastasectomy for pulmonary metastatic sarcoma result in similar survival rate and disease-free interval outcome. Moreover we found that age of patients effect the survival rate

Abstract

“The anatomical relation between Transverse-Sigmoid sinus and skull landmarks in 3D imaging study”

Arnupap Puchaisang , MD

Arnupap Puchaisang , Siriwut Pokanan

Neurological surgery unit, Department of surgery, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand

Objective: This study aimed to investigate the anatomical relationship between the transverse-sigmoid sinus complex and external skull landmarks, particularly focusing on the digastric point (DP) and the asterion line. The study validated the DP–asterion line as a reliable reference for identifying the vertical segment of the sigmoid sinus and examined variations between both sides.

Method: An experimental radiologic study was conducted using 51 three-dimensional (3D) computed tomography (CT) scans with contrast, obtained from patients older than 15 years at Ramathibodi Hospital. Volume-rendering techniques were applied to identify the asterion, the digastric point, the transverse-sigmoid sinus junction, and the vertical segment of the sigmoid sinus. Measurements were taken at the proximal, mid, and distal portions relative to the DP–asterion line. An independent t-test was used to evaluate the distance from the DP–asterion line to the sigmoid sinus.

Results: The line connecting the asterion and the digastric point serves as a reliable landmark for locating the vertical segment of the sigmoid sinus on both sides. Measurements were 12.9 mm proximally, 15.2 mm at the midpoint, and 18 mm distally, with the right sigmoid sinus being significantly larger than the left in most cases.

Conclusion: The DP–asterion line is a key surface landmark for planning a retrosigmoid approach, helping to avoid inadvertent injury to the transverse-sigmoid venous sinus.

Keywords: Transverse-sigmoid sinus, Asterion, Digastric point, 3D imaging, Retrosigmoid craniotomy, Skull landmarks

Abstract

“Risk Factors of Bottoming-out Deformity in Primary Breast Augmentation Patients in Ramathibodi Hospital: A Retrospective Study”

Amalin Pamarapa, MD

Amalin Pamarapa, Surawej Numhom

Division of Plastic and Maxillofacial Surgery, Department of Surgery, Ramathibodi Hospital, Mahidol University

Background: Breast augmentation is one of the most commonly performed cosmetic procedures, but it’s not without complications. One of the more frequent issues is implant malposition, particularly bottoming-out deformity, where the implant descends below its intended position over time. This study looks at potential risk factors for early implant displacement, focusing on patient characteristics, implant selection, and the progression of bottoming-out deformity postoperatively.

Methods: We conducted a retrospective review of 124 patients who underwent primary breast augmentation at Ramathibodi Hospital from 2016 to 2020, categorizing them into two groups: No detection (n=83) and Detection (n=41), based on whether implant displacement was noted. We analyzed factors such as age, BMI, implant volume, incision type, breastfeeding history, and lowering IMF. Statistical analyses, including logistic regression, were performed to identify risk factors contributing to implant malposition.

Results: Breastfeeding was significantly associated with early implant displacement (p=0.003), while other factors such as age, BMI, implant volume, implant profile, and lowering IMF showed no significant correlation. The median time to detection was 4.3 months, with IMF scar migration increasing the most in the first 12 months. Logistic regression suggested that breastfeeding might contribute to early implant detection (OR=2.59, 95% CI: 0.97-6.86, p=0.056)

Conclusion: Bottoming-out deformity remains a common concern in breast augmentation surgery, with prior breastfeeding could be a potential risk factor. This highlights the importance of careful patient selection, implant choice, and surgical technique to minimize complications. Future research should focus on refining predictive models and optimizing surgical strategies to enhance long-term outcomes and patient satisfaction.

DOWNLOAD

Abstract and slides of the presentations

MORE **ABOUT US**

Department of Surgery, Faculty of Medicine
Ramathibodi Hospital, Mahidol University

Phone
02201-1315

Email
surgeryrama@gmail.com

Website
www.rama.mahidol.ac.th/surgery

Facebook
www.facebook.com/Surgery.Rama