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肝臟移植受贈者全方位照護新紀元

A New Era of Comprehensive Care for Liver Transplant Recipients

時 間：113 年 6 月 22 日(星期六) 13:30~17:30

地 點：臺北榮民總醫院 中正樓 10 樓一般外科會議室

主辦單位：臺北榮民總醫院外科部 移植外科

協辦單位：中華醫學會 113 年聯合學術研討會大會

13:20-13:30	Opening Remarks	陳正彥主任 Cheng-Yen Chen
	座長：劉君恕 教授 (Chin-su Liu)	
13:30-14:30	肌少症和術後加速康復(ERAS)在肝膽胰手術中的意義 – 什麼是真正的微創手術？ Significance of Sarcopenia and ERAS in HBP Surgery - What is real Mini-Invasive Surgery?	Pro. Toshimi Kaido 海道利実教授 (日本)
	座長：林釀呈 醫師 (Niang-Cheng Lin)	
14:30-15:00	如何穩定進行肝臟移植手術全期過程：以肝硬化生理學的觀點論述 How to Stabilize the Liver Transplant Peri-Operative Course: from the Aspect of Cirrhosis Physiology	陳正彥醫師 Cheng-Yen Chen
15:00-15:30	肝臟受贈者之加速康復：手術全期麻醉照護的二三事 Enhanced Recovery for Liver Recipient: What We Do for Perioperative Care	王審之醫師 Shen-Chih Wang
15:30-15:40	Panel Discussion	
15:40-16:00	Coffee Break	
	座長：陳正彥 醫師 (Cheng-Yen Chen)	
16:00-16:30	術後加速恢復療程(ERAS)營養照護在活體肝臟移植的應用與成效 Effect of Clinical Application of Enhanced Recovery After Surgery Nutrition Protocol on Recipients Undergoing Living Donor Liver Transplantation	吳柏珊營養師 Po-Shan Wu
16:30-17:00	肝臟移植術前術後復健 Rehabilitation for Liver Transplantation	張詠荃職能治療師 Yung-Chuan Chang
17:00-17:20	Panel Discussion	

Significance of sarcopenia and ERAS in HBP surgery: What is real mini-invasive surgery?

肌少症和術後加速康復 (ERAS) 在肝膽胰手術中的意義：什麼是真正的微創手術？

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Sarcopenia, characterized by a decline in skeletal muscle mass and muscle strength or physical activity, is now accepted worldwide as a new geriatric syndrome. Recent studies have identified significant associations between sarcopenia and poor outcomes of various diseases including liver diseases (1-3). This article reviews the significance of preoperative sarcopenia to liver surgery, particularly liver transplantation (LT).

How to stabilize the liver transplant peri-operative course : From the aspect of cirrhosis physiology

如何穩定進行肝臟移植手術全期過程：以肝硬化生理學的觀點論述

Cheng-Yen Chen

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Enhanced Recovery After Surgery (ERAS) is a multimodal surgical care approach aimed at achieving early rehabilitation for major surgical patients. Since its proposal by Kehlet et al. in 1997, the concept of ERAS was initially intended for colorectal surgery, and later established in this field. Since then, the concept of ERAS has been validated and further developed, being applied to solid organ transplantation. Despite explorations dating back to as early as 1990 when Kehlet et al. experimented with early extubation before formally introducing the concept of accelerated recovery in liver transplantation, yielding encouraging results, emphasis has been placed on the importance of anesthesia management for these patients.

Over the years, independent studies have confirmed the importance and effectiveness of other classic ERAS parameters, including preoperative nutrition, early mobilization, early feeding, and optimal pain management for liver transplant recipients. Combining considerations of all these parameters in classic large-scale ERAS methods for liver transplant patients, studies have employed multimodal approaches to evaluate ERAS in liver transplantation, focusing on measurable clinical endpoints. Results have shown significant reductions in hospital stay and improved postoperative recovery. Accelerated rehabilitation therapy can be safely applied to selected liver transplant patients, and its value merits further development.

The hopeful prospect of widespread application of ERAS in selected liver transplant recipients in the future is promising.

Enhanced recovery for liver recipient : What we do for perioperative care

肝臟受贈者之加速康復：手術全期麻醉照護的二三事

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Considering the dramatic hemodynamic changes during liver transplant, liver recipients are vulnerable to organ damage. The challenge to improve quality of perioperative care is how to integrate what we already know into practice. The principles we followed for liver transplant perioperative care are

1. Adequate hydration: We use stroke volume variation derived from arterial blood pressure waveform to guide our isotonic crystalloid hydration.
2. Avoid unnecessary anesthetic agents use: We use BIS index and surgical pleth index to guide our anesthetic agents use.
3. Avoid unnecessary blood product use: After years of experience in TEG-guided transfusion strategy, we now transfuse our patient only for uncontrollable bleeding.
4. Avoid postoperative opioid use: We use rectus sheath catheter for local anesthetic infiltration after liver transplant. Our result indicates this is an effective and uncomplicated way to decrease postoperative opioid use.

To further individualize perioperative care for every liver recipient, we investigate the information hidden beneath arterial blood pressure waveform. Currently we are able to show that richer variation of arterial waveform morphology correlates to better outcomes. Such correlation cannot be explained by blood pressure read outs. Our finding may provide a potential way toward delicate hemodynamic management to each liver recipient.

Postoperative Enhanced Recovery After Surgery (ERAS) nutritional support: Application and efficacy in living donor liver transplantation

術後加速恢復療程（ERAS）營養照護在活體肝臟移植的應用與成效

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Nutrition plays a crucial role in Enhanced Recovery After Surgery (ERAS) programs, as 9-44% of surgical patients suffer from varying degrees of malnutrition. Malnutrition increase the risk of postoperative infections, prolong wound healing, and extend length of hospital stay. Therefore, preoperative nutritional risk screening and assessment are essential elements. For those identified with malnutrition, preoperative nutrition support at least 7 days is recommended. Additionally, preoperative carbohydrate therapy is advised to improve insulin resistance.

Postoperatively, early oral intake within 24 hours is encouraged, along with prevention of nausea and vomiting. If oral intake is not feasible, enteral nutrition is preferred over parenteral nutrition. Case studies have shown that a well-designed ERAS nutritional care protocol can improve the nutritional status in malnourished patients undergoing living donor liver transplantation, increase preoperative weight, shorten intensive care unit stays, maintain postoperative weight, enhance postoperative muscle strength, and improve daily functioning.

Rehabilitation for liver transplantation

肝臟移植術前術後復健

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Liver transplant recipients may suffer from problems such as decreased cardiopulmonary endurance, insufficient muscle strength, limited mobility, bedridden, and dependence of daily life functions before and after the transplant operation.

The course will briefly introduce about assisting liver transplant recipients to safely transfer, progressively perform rehabilitation exercises, improve cardiopulmonary endurance, and appropriately select assistive devices to improve activity performance in pre-operative and postoperative stage. Additionally, improving the safety of home environment when discharged, and then rebuilding the independence of daily life functions to optimize the quality of life after transplantation.