

出國報告（出國類別：開會）

2025 西班牙國際骨科暨創傷醫學會 (SICOT)心得報告

服務機關：高雄榮民總醫院/骨科部

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派赴國家：西班牙

出國期間：2025/09/2-2025/09/09

報告日期：2025/09/15

摘要

國際骨科醫學會(SICOT)為全球骨科醫學界三大學會之一，也屬於世界衛生組織(WHO)關聯機構，出席發表論文有助於醫學中心任務評鑑在國際醫療項目加分。

職於本次會議發表兩篇論文，其主要發現與結論如後: 1. 「Satisfactory Mid-Term Outcomes Justified The Application Of Dynesys Dynamic Stabilization System In Treating Lumbosacral Segments Needing Stabilization Without Fusion」，發現 Dynesys 動態穩定係統可穩定脊椎節段，作為融合術的輔助或臨時替代方法，用於治療需要穩定但無法有效預防鄰近不穩定的腰骶椎。此外，近 20% 的患者仍持續遭受背痛折磨，需要服用止痛藥 2. 「The Impact Of ASA Classification And Hemodynamic Instability On Causing Post-Operative Complications In Patients Undergoing Hip Fracture Surgeries」，發現合併症不可避免地會對 ASA 分級的確定產生不利影響。合併症的數量和 ASA 分級會協同增加髖部骨折手術患者的術後併發症。

關鍵字：Dynesys、fusion、stabilization、併發症、ASA 分級、血流動力學、hip fracture

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一、目的

國際骨科醫學會(SICOT)為全球骨科醫學界三大學會之一，其影響力相較於美國骨科醫學會(AAOS)、歐盟國家骨科暨創傷醫學會(EFORT)毫不遜色，因為該學會於世界五大洲輪流主辦年會，在骨科疾病的治療及手術極具影響力。不僅居於全球領先的地位，也屬於世界衛生組織(WHO)關聯機構，特別是新研發用品和器材上市時程常先於其他區域。會中將有世界各國骨科醫師及專家學者，能於會中發表論文有助本院骨科部聲望的提高，並學習新知。

二、過程

2025/09/02

114 年 9 月 02 日 19:00 由高雄出發，取道香港機場，因為現今尚無台灣直飛西班牙馬德里的航班，因此於瑞士蘇黎世國際機場接續轉機，前往西班牙馬德里，已經是 9 月 03 日上午九點。

2023/09/03

到達西班牙馬德里，住宿飯店安頓後，再前往國際會議中心。完成註冊報到手續，查閱電子版議程節目手冊，確認論文發表場地，實地檢視。

今日是正式議程的第一日。職參加重點主要是脊椎醫學的研討會，並且將於下午 16:15 做口頭報告發表「Satisfactory Mid-Term Outcomes Justified The Application Of Dynesys Dynamic Stabilization System In Treating Lumbosacral Segments Needing Stabilization Without Fusion」。



我們收集了 21 例接受 Dynesys 動態穩定係統治療的患者，並在術後至少 5 年進行了 X 光追蹤。我們評估了術前和術後的 MRI 和脊椎屈曲/伸展 X 光片。將門診止痛藥物與術前用藥進行比較，分為改善、維持和惡化。我們將藥物治療狀態定義為主要結局，將與 Dynesys 動態穩定係統相關的再次手術定義為次要結局。結果：在 21 例患者中，4 例患者術後繼續服用止痛藥。他們的追蹤 X 光片顯示鄰近關節不穩定或椎弓根螺釘位置錯誤。2 例患者最終接受了翻修手術。其餘 15 位患者報告了滿意的療效，SF-36 評分在最終追蹤中從 58 分提高到 81 分。2 例患者甚至在 MRI 上顯示退化椎間盤的再水化。結論：Dynesys 動態穩定係統可作為融合術的輔助或臨時替代手段，為需要穩定治療的腰骶椎提供脊椎節段的穩定，但無法證實其可有效預防鄰近節段的不穩定性。此外，近 20% 的患者持續遭受背痛困擾，需要服用止痛藥。

其他討論的主題如下，包含內視鏡微創手術技法研發、新式骨材研發、人工智慧電腦導航，及

各種微創手術器械研發。會議內容主要領域包括骨折，創傷、脊椎運動醫學、脊椎腫瘤醫學與感染治療、基礎研究。基礎研究包括骨材研發、生物力學、抗生素應用、基因與感染。從各種面向探討脊椎疾病及創傷的診斷和治療，各項專題討論均為實際臨床問題的研究和決策。

Date: **Wednesday, 3 September**

Time: **16:15 - 17:30**

Session Name: **Spine 2**

Session Room: **Berlin**

Moderators

- **Ghassan Elgeadi Saleh** (Spain)
- **Mubder AbdulRaheem Mohammed Saeed** (Iraq)

Programme

- **16:15 - 16:18**
Tahir Khaleeq (United Kingdom)
Assessment Of Urgent Investigative Images Transfer Effectiveness From Trauma And Orthopaedic To Neurosurgery Department: A Quality Improvement Project.
- **16:18 - 16:21**
Chien-Jen Maurice Hsu (Taiwan)
Satisfactory Mid-Term Outcomes Justified The Application Of Dynesys Dynamic Stabilization System In Treating Lumbosacral Segments Needing Stabilization Without Fusion

16:21 - 16:24
Evalina Burger (United States)
Range Of Horizontal Gaze Following Multilevel Posterior Cervical Fusion Across The Cervicothoracic Junction

16:24 - 16:27
Shun Ohmori (Japan)
Cerebrovascular Complications After Spine Surgery—Association With Antithrombotic Drug Discontinuation—

16:31 - 16:34
Arkadii Kazmin (Russia)
Range Of Motion And Spine Muscles Activity Assessment After Idiopathic Scoliosis Correction Using Fusion Or Dynamic Fixation With The Aid Biologically Active Communication Device

16:34 - 16:37
Md. Shah Alam (Bangladesh)
Modified Hybrid MIS-TLIF, What We Do?

16:37 - 16:43
Daniyar Yestay (Kazakhstan)
Computed Tomography-Guided Intraoperative Navigation In Children With Congenital Scoliosis Versus Fluoroscopy Methods

16:47 - 16:50
Arkadii Kazmin (Russia)
Anterior Scoliosis Correction (ASC) In Patients Over 40 Years Old: Results And Prognosis

16:50 - 16:53
Faraz Jamil Jamil (United Kingdom)
Adipocyte-Derived Stem Cells In The Treatment Of Spinal Cord Injuries In Animal Models: A Systematic Review.

16:53 - 16:56
Qasim Silman Ajmi (United Kingdom)
A Decision-Support Tool (DST)
AJMI Grading System For Cervical Myelopathy.

16:56 - 16:59
Jizheng Li (China)
The Application Of Uni-Portal Non-Coaxial Spinal Endoscopy Surgery(UNS)/Arthroscopic-Assisted Uni-Portal Spinal Endoscopy (AUSS) In Lumbar Interbody Fusion.

17:03 - 17:06	HISASHI CHIBA (Japan) A Cross-Sectional And Longitudinal Study Of The Relationship Between Radiographic Spinopelvic Alignment And Physical Function In A Community-Based Female Cohort In Japan
17:06 - 17:09	Satoshi Kato (Japan) Anterior Spinal Cord Decompression Via A Posterolateral Approach For The Treatment Of Ossification Of The Posterior Longitudinal Ligament In The Thoracic Spine
17:09 - 17:12	Naoki Igata (Japan) Is Preserving Inferior Half Of The Spinous Process Effective In Decompression Lumbar Surgery?
17:15 - 17:18	Osama Aldahamsheh (Jordan) Transforaminal Injections Of Platelet-Rich Plasma Compared With Steroid In Lumbar Disc Herniation With Radiculopathy: A Systematic Review And Meta-Analysis Of Randomized Control Trials
17:18 - 17:21	Qasim Silman Ajmi (United Kingdom) Predicate The Development Of Cauda Equina Syndrome Using AJMI Score.
17:21 - 17:24	tetsuya Kobayashi (Japan) Lumbopelvic Congruity, Pelvic Compensation, Or PI-LL Mismatch; A 7.7-Year Longitudinal Cohort Study Of Their Impact On ASD

2025/09/04

9 月 04 日早上 07:00 搭乘捷運前往國際會議中心，因應世界潮流的環保意識抬頭，實踐保護地球永續環境的理念，避免浪費紙張和增加垃圾量，會議相關資料都電子化，以 APP 方式提供。附有連結交通方式的路面電車和多線公車巴士。當然，便利的大眾交通運輸是成為受歡迎會議中心的必備條件。

職將於 09:11 發表第二篇論文「The Impact Of ASA Classification And Hemodynamic Instability On Causing Post-Operative Complications In Patients Undergoing Hip Fracture Surgeries」，

Thursday, September 4, 2025 1

Short Free Papers

Session time

08:45 10:30

Session title: Hip 3

Presentation title: The Impact Of ASA Classification And Hemodynamic Instability On Causing Post-Operative Complications In Patients Undergoing Hip Fracture Surgeries

[Detail](#)

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ADQUISICION DE ESPACIOS



我們從臨床資料庫中擷取數據，對 2020 年 1 月 1 日至 2021 年 12 月 31 日接受髖關節手術的患者進行回顧性研究。研究參數包括人口統計學特徵、術前 ASA 分級、麻醉方式、術中血流動力學穩定性、術後併發症。結果：在 602 例接受髖關節手術的患者中，15.61% 的患者出現了影響腦、肺、心臟、肝、腎功能的併發症。術後併發症與合併症數量及 ASA 分級有顯著相關（AOR=3.72，P<0.05；AOR=3.27，P<0.05）。然而，血流動力學變化與術後併發症之間並無顯著

相關性。討論：本研究中，除 ASA 分級較高外，合併症數量正向增加併發症的發生率。術中血流動力學不穩定並未導致術後併發症的顯著增加。及時妥善處理血流動力學不穩定可能是原因。結論：合併症不可避免地會對 ASA 分級的確定產生不利影響。合併症的數量和 ASA 分級協同作用，增加了髖部骨折術後併發症的發生率。

本日職參加的研習重點在於「髖關節手術相關併發症」如下。

Date: **Thursday, 4 September**

Time: **08:45 - 10:30**

Session Name: **Hip 3**

Session Room: **Madrid**

Moderators

- **Marco Ezechieli** (Germany)
- **Carlomagno Cardenas** (Spain)

Programme

- **08:45 - 08:48**
Ikram Nizam (Australia)
CAN VESSEL SPARING BIKINI ANTERIOR APPROACH REDUCE POST THA HETEROTROPIC OSSIFICATION? A SINGLE SURGEON EXPERIENCE OF 486 CASES.
- **08:48 - 08:51**
Markus Neumann (Germany)
One-Stage Revision Total Hip Arthroplasty For Polymicrobial Periprosthetic Joint Infection Leads To High Reinfection Rates By The Same Organisms At Mean 5 Year Follow-Up

08:51 - 08:54

Valeriy YURIEVICH Murylev (Russia)

What Are The Best Serum And Synovial Markers Combinations For PJI Examination Before Revision Hip Arthroplasty?

08:54 - 08:57

Rohit Ravindran Nair (United Kingdom)

DAIR With Absorbable Calcium Sulphate Beads Supplementation For Prosthetic Joint Infection: The Cumbrian Experience

09:01 - 09:04

Yaroslav Rukin (Russia)

Short-Term Intervals In Treatment Of The Hip Periprosthetic Infection

09:04 - 09:07

Mohamed Seddik Akermi (Tunisia)

Results Of De-Escalation In Femoral Stem Revisions

09:07 - 09:10

Kamran Hafeez (Pakistan)

Mortality Rates And Risk Factors For Mortality - In Patients Undergoing Surgery For Vancouver B Type Periprosthetic Fractures: Insights From A Single High-Volume Centre

09:10 - 09:13

Chien-Jen Maurice Hsu (Taiwan)

The Impact Of ASA Classification And Hemodynamic Instability On Causing Post-Operative Complications In Patients Undergoing Hip Fracture Surgeries

09:13 - 09:16

Mehmet Önüt (Türkiye)

THE EFFECT OF SUBCUTANEOUS FAT THICKNESS ON POSTOPERATIVE WOUND INFECTION IN PATIENTS UNDERGOING HEMIARTHROPLASTY FOR FEMORAL NECK FRACTURE

09:21 - 09:24

Savyasachi Chandrashekhar Thakkar (United States)

The Growing Burden Of Periprosthetic Fractures After Total Hip Arthroplasty: Identifying Overall Trends And At-Risk Groups

09:24 - 09:27

Amelia Rose Hutton (United Kingdom)

Perioperative Carbohydrate Supplementation Reduces Postoperative Wound Infections, Pressure Ulcers And Mean Length Of Stay For Adult Hip Fracture Patients: A Systematic Review And Meta-Analysis.

09:30 - 09:33	Ishmita Paul	Dislocation Rates In Total Hip Replacements Carried Out Through A Posterior Approach Using Small Heads
09:37 - 09:40	ALBA HERNÁNDEZ RUIZ (Spain)	REVISIÓN TOTAL HIP ARTHROPLASTY SURGERY WITH MODULAR FEMORAL STEMS. OUR CENTER'S EXPERIENCE
09:40 - 09:43	Faran Chaudhry (Canada)	Revision Total Hip Arthroplasty For Treating Periprosthetic Fractures Of The Hip With A Modular Tapered Stem
09:43 - 09:46	Muhammad Muneeb Umar (Ireland)	Accuracy Of Digital Templating In Uncemented Bipolar Hip Hemiarthroplasty
09:46 - 09:49	Kalaivanan Kanniyar (India)	Dorr A Failure, Is It Septic? Or Aseptic? Hip Joint Revision
09:53 - 09:56	Emilio Ferrari (Italy)	Evaluation Of Femoral, Acetabular, And Global Offset Restoration Following Hip Spacer Implantation In Staged Total Hip Arthroplasty Revision
09:56 - 09:59	SOMOK BANERJEE (India)	Recurrence Risk In Joint Retention And Replacement Treatments For Giant Cell Tumors Of Bone In The Proximal Femur - A Systematic Review With Meta-Analysis
09:59 - 10:02	Liam Dervy (United Kingdom)	Are Total Hip Arthroplasty Outcomes Worse In Patients With Ehlers-Danlos Syndrome? A Systematic Review And Subgroup Analysis
10:02 - 10:05	Kimihiko Oono (Japan)	Total Hip Arthroplasty After Curved Intertrochanteric Varus Osteotomy For Osteonecrosis Of The Femoral Head

本日職參加的研習重點在於「髋關節手術相關併發症」。在老年患者中，髋部骨折是常見的損傷，由於耗費大量醫療資源，已成為重大的公共衛生問題[1]。除了手術治療的巨額費用外，合併症通常會增加醫療費用。此外，合併症的進展會顯著增加照顧者或其家人的經濟負擔，使他們無法獨立生活[2]。目前，手術治療，包括內固定或關節置換，仍是治療方案的首選，以便盡快維持或恢復日常生活活動能力。由於髋部骨折患者的平均年齡較高，潛在疾病成為在整個手術治療過程中疊加麻醉或手術風險的不利因素[3]。在常見的潛在疾病中，心血管疾病被認為是住院死亡的主要原因，甚至是因心臟事件處理不當而導致的晚期死亡。根據心臟風險評估，調整圍手術期用藥、麻醉管理和圍手術期監護可能更有效。然而，如果患者未在正常住院時間內送至醫院，安排經胸超音波心臟檢查 (TTE) 檢查可能會延誤手術。另一方面，治療髋部骨折合併潛在疾病患者的常見策略是儘早手術，以降低潛在的發病率/死亡率。此外，據報導，早期手術除了縮短住院時間外，還有助於開展復健治療，從而獲得更好的功能預後。因此，我們旨在探討術前經胸超音波心臟檢查 (TTE) 檢查結果與隨後心臟事件發生的關係，以評估對接受髋部手術的老年患者安排術前 TTE 檢查的必要性。

印象中特別注意到的發表如後，有一篇「髋關節假體周圍感染的短期治療」自 2020 年起，收集 35 例短間隔（平均 14.8 ± 2.8 天）患者的治療結果和 54 例較長間隔（平均 155 ± 65.3 天）患者，以短間隔（2-3 週）的治療方案治療髋關節假體周圍感染。結論發現：將慢性髋關節假體周圍感染的兩期治療間隔縮短至 14.8 天，不會增加第二期治療後至少 12 個月的複發感染率和再手術率。還有一篇「皮下脂肪厚度對股骨頸骨折半髋關節置換術後傷口感染的影響」，採用前瞻性病例對照研究，分析 2024 年至 2025 年期間接受半髋置換術的 87 位患者。對術後 90 天內確診為傷口感染的患者 (n=17) 與傷口清潔的患者 (n=70) 收集體質指數 (BMI)、Charlson

合併症指數（CKI）、單核細胞/淋巴細胞、中性粒細胞/淋巴細胞、中性粒細胞/白蛋白、白蛋白水平、術前等待時間和傷口切口長度。並在未手術髖關節的兩個水平：髂前上棘（SIAS）和大結節（TM）測量皮下脂肪組織體積。結論發現：對於接受 CT 檢查制定治療計畫的患者，皮下脂肪組織體積與傷口部位併發症顯著增加有關。

都是對髖關節術後感染的診斷和治療有新見解的研究結論。

2025/09/05

職於 2025 年 9 月 5 日，星期五的議程如下：

45th SICOT ORTHOPAEDIC WORLD CONGRESS MADRID · SPAIN · 3-5 SEPTEMBER 2025 45th SICOT ORTHOPAEDIC WORLD CONGRESS MADRID · SPAIN · 3-5 SEPTEMBER 2025													
FRIDAY, SEPTEMBER 5th													
	Main AUDITORIUM (ground floor)	Room MADRID (1st floor - L)	Room ROMA (2nd floor - L)	Room PARIS (1st floor - L)	Room LONDRES (2nd floor - L)	Room BERLIN (1st floor - L)	Room AMSTERDAM (2nd floor - L)	Room BRUSELAS (4th floor - L)	Room MEXICO (1st floor - R)	Room BOGOTÁ (2nd floor - R)	Room PRENSA (1st floor - R)	Room MONTEVIDEO (2nd floor - R)	Room LA PAZ (2nd floor - R)
08:30-09:30	Knee Symposium 3	Hip Short Free Papers 5	Research Short Free Papers 2	Paediatrics Short Free Papers 3	Sports Med Short Free Papers 4	Disaster Relief	Miscellaneous Short Free Papers 1	ESSKA EHPA Case-Based ICL	Microsurgery Symposium 2	Emerging Technology Short Free Papers 2		Foot & Ankle Short Free Papers 3	Trauma Short Free Papers 4
09:30-10:30	Knee Symposium 4	Shoulder & Elbow Free Papers 3		ASAMI	Practice Management in Orthopaedics		SOFCOT			Miscellaneous Short Free Papers 2	APOA	Computers & Enabling Technologies	
10:30-11:00	Break - JAM 9 & 10 (JAM Areas located at the 3rd Floor)												
11:00-12:00	Wisdom from Orthopaedic Legends	Knee Short Free Papers 6	Spine Free Papers 5	Paediatrics Short Free Papers 4	Knee Short Free Papers 7	Orthopaedic Oncology Short Free Papers 2	Hip Short Free Papers 6	Spine Short Free Papers 6	Spine Short Free Papers 7	Infections Short Free Papers	Trauma Short Free Papers 5	Trauma Short Free Papers 6	Trauma Short Free Papers 7
12:00-13:00	PS 4: Richard Villar												
13:00-13:30	CLOSING CEREMONY												

職主要參加會議主題：脊椎和手術併發症。

脊椎手術成功率非可完全準確預測，任何手術皆有風險存在，脊椎手術風險及併發症發生率不可忽視，特別是高齡患者恢復較慢。

患者自身身體健康好壞和手術技術和術後照護經驗，決定風險高低。使用電腦輔助導航系統和各種形式的脊髓和神經監測可能有助於提高手術的精度和準確度。最新的手術技術進展包括通過微創螺釘植入手術以減少對人體的損傷以及使用生長激素，加速脊柱融合過程。

除了手術技術相關的併發症外，涉及腦、心臟、肺、肝和腎等主要器官的術中或術後醫療併發症仍然是決定脊椎手術結果的問題。尤其術前合併症、年齡較大和 ASA 分級較高是影響醫療併發症發展的重要因素，可能會損害手術結果。充分了解手術的利弊以後，與醫師共商決策，為手術做好充分準備後，將能獲得良好的手術結果，符合患者對手術的合理期待，恢復生活品質。

印象較深刻的其他專家發表如後，有一篇「探討與腰椎退化性滑脫 (LDS) 發生相關的脊椎骨盆形態特徵」。討論 451 例患者接受了 CT 掃描和站立全脊椎矢狀面 X 光攝影。測量 X 軸上的 SVA、PT、PI、LL、SS、L4 和 L5 傾斜度，以及 CT 上的 L34、L45 和 L5S 小關節方向 (FT)。結論發現：椎體傾斜度、PT 和低 FT 對滑脫有影響，但 FT 和傾斜度是滑脫部位和多發性椎間滑脫的重要因素。在治療腰椎或進行手術時，應考慮這些因素。另有一篇「脊椎疾病與損傷中的脊椎-骨盆固定」，對 74 例患有各種脊椎病變和創傷性損傷的患者（66 例採用 S2AIS 技術，8 例採用客製化植入物固定）進行脊椎-骨盆固定的結果進行了分析。結果發現：患者的長期追蹤期平均為 23.5 個月（6 至 48 個月）。在採用 S2AIS 方法固定的患者中，53 例（78.7%）在長期追蹤中未出現併發症，無需再次治療，且固定穩定。使用獨立支撐板固定，

5 例患者獲得長期穩定脊椎骨盆固定；3 例患者必須移除植入物。結論：使用 S2AIS 技術植入髂骨螺釘是脊椎骨盆固定的最佳方法，可實現可靠固定並將併發症降至最低。在無法使用傳統脊椎骨盆固定方法或技術難度較高的情況下，可使用客製化植入物進行固定。接有助於了解腰椎退化性滑脫 (LDS) 和脊椎骨盆形態特徵對於手術應用的癥結。

2025/09/06

因為原先安排回程銜接班機發生困難，因此今日於馬德里停留休息。

2025/09/07

因為西班牙馬德里國際機場無飛回台灣航班，因此啟程前往巴塞隆納，火車需搭乘約近三小時，因此於隔日 2023/09/08 方能搭上回台灣的班機。回到高雄已是 9 月 09 日晚上 21:30。

三、心得

1. 在會議期間後，遇到亞東醫院釋高上主任。彼此談起各自醫院年輕醫師對於出國參加學術會議欠缺熱情，雖然各醫院皆設有參加學術會議的獎勵措施，提升同仁士氣，網路活動發達後，人與人之間的實地互動反而減少了。
2. 參加國際性學術會議，最有價值的就是人與人之間的交流。不只是是投資報酬率相當高的學習活動，更能拓展自我視野，對專業領域水準提升極有幫助。
3. SICOT 屬於世界衛生組織(WHO)關聯機構，於本會議中發表論文有助提高本院骨科部聲望，也可增加高雄榮民總醫院的國際能見度。並且於醫學中心評鑑可獲得加分。

四、建議事項

1. 參加國際性學術會議，費用不低。出席歐美地區得國際性會議，包含註冊費、機票交通費、和膳宿費，動輒十數萬。畢竟預算名額有限，若有被核定補助的人員未能及時實現原先發表計畫，建議及早釋出予其他有需求人員。
2. 若院方經費有限，建議至少補助註冊費或機票交通費，擇一補助對未能獲得全額預算補助的同仁，仍具有鼓勵努力者的效果。

附錄

1. 出席證明
2. 簡報
3. 參加會議佐證照片

附錄 1





**45th SICOT
ORTHOPAEDIC
WORLD CONGRESS**
MADRID · SPAIN
3-5 SEPTEMBER 2025



Madrid, 3 - 5 September 2025

SICOT Executive Committee and the Scientific Programme Committee of the the 45th SICOT
Orthopaedic World Congress (OWC), held in Madrid - Spain, September 3 - 5, 2025

CERTIFIES THAT

the following oral paper has been accepted and presented as a Short Free Paper for the
Congress:

**The Impact Of ASA Classification And Hemodynamic Instability On Causing Post-Operative
Complications In Patients Undergoing Hip Fracture Surgeries**

Chien-Jen Hsu

Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan

Koen Khandekar

E. Hsu

K. Hsu



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the following oral paper has been accepted and presented as a Short Free Paper for the
Congress:

**Satisfactory Mid-Term Outcomes Justified The Application Of Dynesys Dynamic Stabilization
System In Treating Lumbosacral Segments Needing Stabilization Without Fusion**

Chien-Jen Hsu

Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan

Kenn Kaandorp

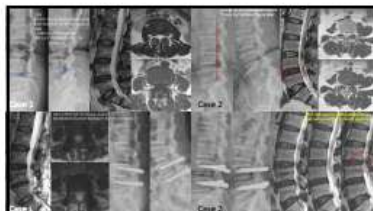
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附錄 2

Satisfactory Mid-term Outcomes Justified the Application of
Dynesys Dynamic Stabilization System
in Treating Lumbosacral Segments Needing Stabilization without Fusion

Chien-Jen Hsu MD
Department of Orthopaedics
Kaohsiung Veterans General Hospital



Conclusion

- Dynesys stabilization achieved favorable outcomes in treating lumbar spine degeneration but needing no fusion.
- Even though Dynesys might preserve the motion at the stabilized segments, adjacent segment degeneration also developed as the fusion procedure.
- Correspondence: msuricehsu1963@gmail.com

Introduction

➤ The goal of the Dynesys system

- Is to realign and restabilize **dynamically unstable segments**.
- supports a controlled range of motion by suppressing discovertebral dyskinesia (instability).

➤ Hypothesis

- Back pain or leg pain caused by instability or disc degeneration could be improved by Dynesys Dynamic Stabilization System
- primary outcome:** pain medication status
- secondary outcome:** re-operation related to Dynesys Stabilization System



Method

Inclusion criteria

Patients operated with Dynesys Dynamic Stabilization System (DS) between 2008 and 2017 with at least 5 years follow-up but excluding Using DS in Revision operation or for either infection-related or malignancy-related situations

Results

- 21 patients among 29 patients with radiographic follow-up longer than 5 years were enrolled for analysis of outcome.
- 15 patients reported satisfactory outcomes with SF-36 score improving from 58 to 81
- 4 patients continued to take pain medication postoperatively.
- 2 patients underwent revision operation eventually.

Discussion & Literature review

➤ **Comparable clinical and radiological results by either Dynamic stabilization or posterolateral fusion**

- Wang et al (2017):** 25 fusion / 23 Dynesys with comparable VAS, JOA, But significantly more radiologic ASD in Fusion group
- Lee et al (2016):** 22 Dynesys / 22 Fusion with comparable VAS, JOA but height lost ROM (3.24 ± 2.88°) at surgical segments in Dynesys group

➤ **Adjacent Segment Disease was not necessarily prevented by dynamic fixation**

- Yoon et al (2016):** Among 52 patients undergoing Dynesys fixation, 23 patients with ASD (29%) by 45 months postoperatively
- Hsu et al (2015):** Meta-Analysis of 17 studies with 1,086 patients: the Dynesys group showed significantly less ASD

➤ **Smaller Scenario of surgical complications**

- Wang et al (2017):** 23 studies with 1,046 patients with Dynesys dynamic stabilization system showed smaller complication rate than fusion procedure

The impact of ASA classification and hemodynamic stability on causing post-operative complications in patients undergoing hip fracture surgeries

Chien-Jen Bao MD
Department of Orthopaedics
Kaohsiung Veterans General Hospital

Result

Table 1. Multivariate Logistic Regression Analysis for Postoperative Complications

Factor	Effect of Postoperative Complications				
	OR	95% CI	P	OR	95% CI
Age (year)					
<65	1.00	1.00	1.00	1.00	1.00
65-74	1.12	0.88	0.43	1.01	0.78
≥75	0.98	0.71	0.94	0.91	0.70
CCI Number (1-4)					
1	1.00	1.00	1.00	1.00	1.00
2	1.12	0.88	0.43	1.01	0.78
3	1.99	1.40	0.001	2.70	1.91
4	4.78	3.27	0.000	6.59	4.59
MAP (mmHg) (10-14)					
10-14	1.00	1.00	1.00	1.00	1.00
15-19	1.12	0.88	0.43	1.01	0.78
≥20	1.99	1.40	0.001	2.70	1.91

OR: Odds Ratio; CI: Confidence Interval; MAP: Mean Arterial Pressure; CCI: Cardiac Complication Index.

Conclusion

1. Significant association of CCI Number and ASA Classification with postoperative complications.
2. The difference between intraoperative blood pressure and baseline is an issue deserving further studies for predicting postoperative complications.
3. Identifying patients at risk for postoperative complications is crucial in planning the best model of care for these patients.

Correspondence: maurkaiyu1963@gmail.com

Introduction

- > Except 20-30% of patients after hip surgeries incurring postoperative complications, one-year mortality rate was reported to be 12-20%.
- > Pre-operative ASA physical status and intraoperative hypotension were commonly supposed to be causative factors to develop medical complications.

Hypothesis

- > Patients with high ASA level are more likely to develop postoperative complications.
- > Patients with intraoperative hemodynamic instability had a higher rate of postoperative complications.

Result

Table 2. Multivariate Logistic Regression Analysis for Postoperative Complications

Factor	Effect of Postoperative Complications				
	OR	95% CI	P	OR	95% CI
Age (year)					
<65	1.00	1.00	1.00	1.00	1.00
65-74	1.12	0.88	0.43	1.01	0.78
≥75	0.98	0.71	0.94	0.91	0.70
CCI Number (1-4)					
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MAP (mmHg) (10-14)					
10-14	1.00	1.00	1.00	1.00	1.00
15-19	1.12	0.88	0.43	1.01	0.78

Material & Method

Table 1. Demographic Characteristics of Postoperative Complications

Factor	Number	Percentage
Age (year)		
<65	100	10.0
65-74	100	10.0
≥75	100	10.0
CCI Number (1-4)		
1	100	10.0
2	100	10.0
3	100	10.0
4	100	10.0
MAP (mmHg) (10-14)		
10-14	100	10.0
15-19	100	10.0

Discussion

- > More CCI to develop more postoperative complications (AOR=2.49, 7.81, 3.72).
- > Hsueh et al, 2021 Int J Surg: Patients with high CCI score were 1-41 times at higher risk of developing postoperative complications.
- > ASA III were 3.25 times at higher risk of developing postoperative complications as compared to ASA I.
- > Meyer et al, 2021 Orthopedics: ASA IV were at a higher elevated risk to suffer from heart failure than individuals with ASA I.
- > Intraoperative MAP decreases more than 20% relative to the baseline elevated the incidence of postoperative complications.
- > Vignaroli et al, 2021 Front Med: Intraoperative blood pressure decrease by 10% relative to the baseline could cause injury of heart muscles.

附錄 3



與其他與會的台灣骨科醫師合照