

稿件編號：OO1	產前超音波診斷大腦導水管堵塞 Prenatal Ultrasound Imaging of a Case with Aqueductal Stenosis
臨時稿件編號： 0877	
論文發表方式： 口頭報告	Here we present a case with prenatally-diagnosed aqueductal stenosis.
論文歸類： 產科	A 41 years old woman has history of type 2 diabetes mellitus, Grave's disease, and antiphospholipid syndrome. Because of advanced age and poor ovarian reserve, she received in vitro fertilization with preimplantation genetic testing-aneuploidy. She conceived with a mosaic trisomy 21 embryo. Noninvasive prenatal testing found no trisomy 21, but decreased dosage of X chromosome was noted. After confirming that the baby is a boy, the patient decided not to have amniocentesis. A detailed anatomy scan at 20 weeks found bilateral ventriculomegaly, dilated 3rd ventricle, and absence of cavum septum pellucidum; normal corpus callosum and posterior fossa were identified. Fetal magnetic resonance imaging confirmed the diagnosis of aqueductal stenosis and also demonstrated shallow calcarine fissure, perieto-occipital fissure, and cingulate sulcus. The patient was referred to a pediatric specialist, and possibly poor outcome was informed. After detailed discussion, she decided to terminate this pregnancy. L1 syndrome was suspected, but she declined testing for L1CAM gene considering its high cost.

稿件編號：OO2	<p style="text-align: center;">可完全緩解復發性胎兒乳糜胸: OK-432 胸膜固定術 Total remission of recurrent fetal chylothorax by OK-432 pleurodesis</p>
臨時稿件編號： 0710	
論文發表方式： 口頭報告	<p>吳東穎¹ 彰化基督教醫院¹</p>
論文歸類： 產科	<p>Introduction: Chylothorax in neonates is a condition in which there is accumulation of lymphatic fluid (chyle) in the pleural cavity, which can cause respiratory distress. OK-432 pleurodesis is a treatment option for chylothorax that involves the injection of an immunostimulant (OK-432) into the pleural cavity, which causes inflammation and fibrosis, leading to adhesion of the pleural membranes and reduction of fluid accumulation.</p> <p>Case Report: A 37-year-old woman, G2P1 denied any systemic disease before. Fetal pleural effusion was noted at the local medical department at 19 weeks of gestation . She was referred to Dr. Chen OPD and thoracentesis was arranged. Laboratory investigations (Table 1) revealed lymphocyte predominant, fetal chylothorax was diagnosed . Sonography(Figure 1) revealed bilateral pleural effusion. OK-432 pleurodesis was arranged on 2020-7-24 at first time with one side(Figure 2). Mild hydrops was noted after the procedure at OPD follow up on 2020-07-30 .Therefore the second time OK-432 pleurodesis was arranged on 2020-07-31 with another side (Figure 2) . The third time OK-432 pleurodesis was arranged on 2020-08-07. OPD follow up on 2020-08-13 showed one side complete remission and another side partial remission with adhesion band visible under sonography. OPD follow up on 2020-08-20 showed bilateral minimal pleural effusion (Figure 3) . OPD follow up on 2020-08-27(pregnancy at 28+2 weeks) showed bilateral complete remission (Figure 4). She only accepted diet control with MCT oil and visited OPD with regular antenatal examination. Finally, she delivered at 37+4 weeks - status post vacuum extraction delivery of a male newborn, G2P2 on 2020-10-31 21:07 (body weights: 2590 gram, body length: 49 cm, Apgar score: 7'->9').</p> <p>Discussion: It is important to note that pleurodesis is not without risks and potential complications, including fever, pain, and pleural effusion recurrence, among others. Therefore, the decision to use OK-432 pleurodesis for the treatment of chylothorax in neonates should be made after careful consideration of the patient's overall clinical status and after weighing the benefits and risks of the procedure. In summary, we have documented a case of fetal chylothorax, in which pleurodesis by intrapleural injection of OK-432 was useful for the treatment of fetal chylothorax at an early gestational age</p> <p>Conclusion: In cases where the effusion has a significant effect on the patient's respiratory status, pleurodesis is often used as a definitive treatment option, as it can effectively reduce the amount of fluid in the pleural cavity. In your case, it appears that the patient had a complete remission of the condition after undergoing OK-432 pleurodesis, which is a positive outcome.</p>

稿件編號：OO3	通過全外顯子組序列對非免疫性胎兒水腫的產前診斷——單一機構的回顧性觀察研究
臨時稿件編號：0693	<p>Prenatal Diagnosis of Non-Immune Hydrops Fetalis by Whole Exome Sequence: A Retrospective Observational Study from a Single Institution.</p> <p>林祖薇¹ 吳琬如¹ 馬國欽² 李美慧² 張舜評² 張庭毓² 陳明^{1,2} 彰化基督教醫院婦產部¹ 彰化基督教醫院基因醫學部²</p>
論文發表方式：口頭報告	Prenatal diagnosis by whole exome sequence (WES) may help to identify chromosomal anomalies, metabolic, and neurologic diseases from other conventional etiologies such as intrauterine infection and structural anomalies. In addition, WES may guide the focused obstetric ultrasound examination and further treatment decision.
論文歸類：產科	<p>In our study, we retrospectively evaluated the value of WES on non-immune hydrops fetalis (NIHF) and subsequent pregnancy outcome in Changhua Christian Hospital. We performed WES for hydropic cases who had negative results for mandatory anatomic scan, virology test, karyotype analysis and chromosomal microarray analysis. From December 2019 to July 2022, a total number of twelve cases were enrolled and analyzed by WES due to the obscure cause of the pathology fluids. We used the American College of Medical Genetics and Genomics (ACMG) to classify those variants. Of the 12 fetuses, ten (83%) had definite molecular diagnosis, including three with musculoskeletal disorders (30%), three with lymphatic disorder (30%) and three with syndromic disorder (30%). All recurrent cases (2/2, 100%) and those who received fetal therapy (3/3, 100%) have definite molecular diagnosis. Two survived fetuses were diagnosed at first and third trimester, respectively. Three fetuses had neonatal death and seven couples terminated the pregnancies. Two novel founder variants were found (HSPG2 and BBS2). As a conclusion, WES is an effective tool to decipher genetic causes for NIHF cases in prenatal setting.</p>

稿件編號：OO4	2008-2018 年醫生性別等因素對剖宮產影響的變化趨勢：回顧性病例對照研究
臨時稿件編號： 0941	The trend of doctor gender and other factors influence on cesarean section from 2008 to 2018: A retrospective population-based case-control study 徐詠琳 ¹ 鄧光宏 ² 謝宗成 ² 丁大清 ¹ 花蓮慈濟醫院婦產部 ¹ 慈濟大學大數據教學研究暨統計諮詢研究中心 ²
論文發表方式： 口頭報告	Abstract
論文歸類： 產科	<p>Objective: Different factors may be associated with the decision-making on delivery mode. We explore the influence of the performing physician's gender and other factors, including different regions and incomes and hospital types, on the decision of delivery by C/S in 2008 and 2018 in this study.</p> <p>Methods: This is a population-based retrospective cohort study. The research included pregnant women between January 1, 2008, to December 31, 2008, and January 1, 2018, to December 31, 2018. Data was extracted from Taiwan National Health Insurance Research Database (NHIRD). A total of 49,665 women who delivered babies in 2008 and 2018 were found. Factors including patient characteristics (age, birth year, income-related amount insured, and geographic region of birth), physician gender, and hospital ownership were analyzed.</p> <p>Results: The physician gender in vaginal delivery was 13916 males and 2050 females. 3079 male and 444 female physicians were in the C/S group (Table 1). The C/S rate in women ≤ 34 and >34 years old was 14.8% and 30.2%, respectively. The C/S rate was 16.4% and 19.7% in 2008 and 2018, respectively. Female physicians were less likely to perform a cesarean section in 2008 when compared to male physicians, and the result was significant (odds ratio (OR): 0.762, 95% confidence interval (CI): 0.625-0.928). In 2018, female physicians were more willing to deliver by C/S (OR: 1.032, 95% CI: 0.899-1.185; OR: 1.446, 95% CI: 1.147-1.832 when compared to 2018). Maternal aged >34 had a higher C/S rate than those aged ≤ 34 in both 2008 and 2018. The C/S rate is higher in northern areas than in other areas (central less than northern in 2008, central and southern less than northern in 2018). The income level \geqNT\$45801 group was less C/S than the income level \leqNT\$28800 group in both 2008 and 2018. The private, not-for-profit hospital was less C/S than the public hospital in 2008.</p> <p>Conclusion: Physician gender, maternal age, hospital location, hospital types, and income level influence the C/S rate in Taiwan. Female physicians were more willing to deliver by C/S in 2018 than in 2008 when the interaction between time and gender was considered.</p> <p>Keywords: vaginal delivery; cesarean section; doctor gender; income; hospital; maternal age; income</p>

稿件編號：OO5	<p style="text-align: center;">生產方式與產傷關聯之回溯性研究</p> <p style="text-align: center;">The association between delivery mode and birth trauma: a retrospective cohort study</p>
臨時稿件編號： 0961	<p>張季涵¹ 丁大清¹ 花蓮慈濟醫院婦產部¹</p>
論文發表方式： 口頭報告	<p>Introduction</p> <p>Compared to the US (32.1% in 2021), Taiwan has a higher cesarean section rate (37.9% in 2021). Nevertheless, our hospital has a lower cesarean section rate than Taiwan C/S rate (26.4% in 2021) but higher operative vaginal delivery rate (20.9% in 2021). Whether the discrepancy of mode of delivery will affect the rate and different types of birth trauma was the aim of this study.</p>
論文歸類： 產科	<p>Objective</p> <p>To analyze the birth trauma in our hospital, including neonatal or maternal, and see if they are associated with different delivery modes (vaginal delivery, operative vaginal delivery, and cesarean section).</p> <p>Method</p> <p>We retrospectively analyzed the data of all singleton term deliveries in our hospital from January, 2020 to December, 2022. Demographic data were collected. We evaluated the relation between the mode of delivery, neonatal and maternal outcomes. Statistical analysis used SPSS software and $p < 0.05$ was considered statistically significant.</p> <p>Results</p> <p>Operative vaginal delivery has the highest birth injury rate (40.8% in 2021) among all delivery modes in our hospital. Among these birth injuries, the most common is cephalohematoma, followed by clavicular fracture and subgaleal hemorrhage. Subconjunctival hemorrhage develops most often at vaginal delivery without instrument assistant.</p> <p>Conclusion</p> <p>Different modes of delivery may lead to different types of birth injury. Operative vaginal delivery has a higher birth injury rate.</p> <p>Keywords: birth trauma; delivery mode; operative vaginal delivery; normal vaginal delivery; cesarean section</p>

稿件編號：OO6	<p style="text-align: center;">醫療中心不同工作模式的產科醫生的工作量</p> <p style="text-align: center;">The workload of obstetric doctors working in different modes at a medical center</p>
臨時稿件編號： 0915	<p>賴珮璇¹ 丁大清¹ 佛教花蓮慈濟醫院¹</p>
論文發表方式： 口頭報告	<p>Objective: The labor delivery , resulting in heavy workload and an irregular lifestyles of obstetric and gynecologic (OB-GYN) physicians. It has long been a concerning issue even under the scenario of dropped birth rates. We aimed to demonstrate the best mode for the work-life balance of obstetric physicians.</p>
論文歸類： 產科	<p>Materials and Methods: We retrospectively reviewed the medical charts of women admitted for delivery and the shift schedule of OB-GYN physicians in Hualien Tzu Chi Hospital from January 1, 2018, to June 30, 2018. The proposed mode of work were classified as the following: the traditional mode (patient designation), on-call mode, and the hospitalist mode. The number of deliveries performed by each OB-GYN physician and their total worked time for their shift were recorded. The differences in number of deliveries between the OB-GYN physicians were assessed using analysis of variance.</p> <p>Results: In total, 237 deliveries were recorded over 6 months. These deliveries were performed by four OB-GYN physicians named A to D. Significant differences in workload were noted between OB-GYN physicians working in the traditional mode and those in the on-call mode, but no significant differences were noted among those working in the hospitalist mode. All OB-GYN physicians worked an average of seven shifts, and no significant differences among them were noted.</p> <p>Conclusion: The hospitalist mode might be the optimal mode for OB-GYN physicians to achieve a favorable work-life balance if their original main jobs are obstetric practice.</p>

稿件編號：OO7	產前診斷頸椎脊膜膨出及預後
臨時稿件編號： 0745	The prenatal diagnosis and outcome of cervical meningocele 張藍心 ¹ 簡誌緯 ¹ 陳冠儒 ¹ 新北市立土城醫院 ¹
論文發表方式： 口頭報告	Introduction Myelomeningocele is the most common form of spina bifida, has an incidence of 2/1,000 births, predominantly has open lesions over lumbosacral lesions. Diagnosis is based on α -fetoprotein & early trimester imaging. Hydrocephaly is correlated with a low neuro-cognitive function while orthopedic, and urologic outcomes are also involved in life quality. Fetal surgery has evolved to improve perinatal outcome Cervical meningocele is an unique form of spinal dysraphism with diagnostic characteristic features, management and outcomes.
論文歸類： 產科	Material & methods Case report and case series review. Cervical meningocele accounts for only 1-5 % of neural tube defects. Classifications of the posterior midline malformations: type I - a fibrovascular or neuroglial tissue protruding from posterior surface of spinal cord attach to the sac wall, type II - an ependymal-lined cyst that herniates inside of a meningocele, representing a hydromyelic canal in connection with an outer cyst and type- III true meningoceles in which meningeal tissue herniates through the defect and the sac contains only CSF. Differential diagnosis: Cystic hygroma, hemangioma, dermoid cyst, hemangiolympangioma, scalp edema/cephalohematoma, epidermal scalp cyst and branchial cleft cyst mimicking a menigocele or meningomyelocele. Obstetrics findings : The gestation week of diagnosis were between 23-33 week. No family history. Size of meningocele usually enlarges slowly with gestation. The average size at were more than 5 cm at birth. The lesions arise from C1-T1. 50% cases had hydrocephaly. Cesaren section were preferred for prenatal diagnosed cases. In summary Proper preoperative investigation is mandatory to detect associated anomalies and exclude any other cause for neuro-development in later life, such as cord tethering. Long-term assessment and rehabilitation are required to evaluate the neuro-intelligence and motor development of the patient. Meningocele treatment remains challenging; thus, this rare scenario should be monitored with a multidisciplinary team and be more caution

稿件編號：OO8	懷孕婦女肌瘤與相關產科不良後果之關係 Relationship between uterine myomas and adverse obstetric outcomes
臨時稿件編號： 0979	吳孟芹 ¹ 台北榮民總醫院婦產部 ¹
論文發表方式： 口頭報告	Objective: The aim of this study was to investigate the association between uterine myomas in pregnant women and its adverse obstetric outcomes, including postpartum hemorrhage (PPH), dysfunctional labor, malpresentation, preterm premature rupture of membrane/premature rupture of membrane (PPROM/PROM). The different aspects of myomas including size and numbers were also investigated.
論文歸類： 產科	<p>Methods & Materials: A retrospective cohort study was based on data collected at Taipei Veterans General Hospital from 09/2021 to 08/2022. The inclusion criteria included all patients with ultrasound diagnosed myomas at any timepoint from “1 year before pregnancy, during pregnancy, and 1 year after delivery”. Exclusion criteria included patients without ultrasound images, patients with no myomas diagnosed under sonography, twins or multiple pregnancy and termination.</p> <p>The final study population consisted of 783 pregnancies. 116 pregnancies were diagnosed with ultrasound detected myomas, of which 73 patients delivered vaginally and 43 patients delivered via cesarean section. Myomas were not found in 667 patients of which 490 patients delivered via vaginally and 177 patients delivered via cesarean section. In the 116 pregnancies with myomas, 78 had small myomas (<5cm) and 38 with large myomas (≥ 5cm); 56 with single myoma and 60 with multiple myomas (number >1).</p> <p>Results: Comparing women with and without myomas, our study population showed a significantly higher rate of postpartum hemorrhage during vaginal delivery (10.9% versus 4.5%, p=0.023), cesarean section (38.9% versus 15.9%, p=0.034) and higher probability of PROM/PPROM (20.7% versus 13.2%, p=0.033).</p> <p>Having single vs multiple myomas, multiple fibroids had a significantly higher rate of postpartum hemorrhage in vaginal delivery (13.9% versus 4.5%, p=0.014) and PROM/PPROM (23.3% versus 13.2%, p=0.03). Large fibroids also showed a significantly higher rate of postpartum hemorrhage in vaginal delivery (21.1% versus 4.5%, p=0.001) and fetal malpresentation (18.4% versus 6.4%, p=0.005).</p> <p>Conclusion: We found that there is an association between uterine myomas with PPH, malpresentation, and PROM/PPROM. In contrast, no association was noted between uterine myomas and dysfunctional labor. However, due to the limited sample size and possible confounding factors, a larger sample size and adjusting confounding factors are needed to get more accurate and reliable results.</p>

稿件編號：OO9	澎湖離島地區空中後送 COVID-19 確診產婦現況探討 Discussion on the current situation of air transport of pregnant women diagnosed with COVID-19 in the outlying islands of Penghu
臨時稿件編號： 0692	
論文發表方式： 口頭報告	黃莊彥 ¹ 林鈺維 ² 國防醫學院三軍總醫院澎湖分院婦產科 ¹ 高雄榮民總醫院婦女醫學部 ²
論文歸類： 產科	<p>Background and purpose: The Penghu Islands are located in the Taiwan Strait. They are the only island counties in Taiwan. They consist of 90 islands. Due to their special geographical location, many clinical conditions need to rely on the air evacuation mechanism to send them to the island when the current medical conditions are insufficient. To facilitate follow-up treatment.</p> <p>The Penghu Branch of the Tri-Service General Hospital is the only regional hospital that delivers births in the county. According to statistics, the Penghu Branch of the Three General Hospitals has launched a total of 146 helicopter air evacuation mechanisms from 2020 to 2022, and there were 17 obstetric-related emergencies. 12.3% were delivered, of which 16 times were evacuated under 34 weeks of pregnancy and due to premature birth, accounting for 88.2% of all obstetric-related emergencies, and 1.4% of all newborns in three years (a total of 1067 newborns were born in the island county in three years).</p> <p>case report This case is a 32-year-old woman who was diagnosed with COVID-19 due to early uterine contraction combined with bleeding and cervical dilatation at 31 weeks of pregnancy. The factors to be considered in air evacuation are more complicated. And the accompanying medical staff, wearing a full set of protective clothing will inevitably affect the vision and mobility, and the negative pressure isolation transport cabin is used for this loading flight to facilitate the mission.</p> <p>Analysis results: The aircraft used for the air evacuation was a Leonardo AW169 helicopter, and the flight time was 47 minutes. There was no significant difference in the objective values of vital signs and blood test values before, during, and after the air evacuation (P>0.05).</p> <p>Results and conclusions: Negative-pressure isolation transport cabins for flight can prevent confirmed patients from spreading the virus to evacuation personnel and equipment during the transfer process, causing personnel infection and environmental pollution. However, due to the limited space of the isolation cabin, the layout of many instruments needs to be chosen , if considering the particularity of pregnant women, there are many equipment worth discussing whether to equip (mobile fetal heart rate monitor, hand-held ultrasound). Procedures and advance drills can increase the quality of on-site medical treatment.</p>

稿件編號：OO10	<p style="text-align: center;">王蟲縫法後子宮壞死的發生率和危險因子</p> <p style="text-align: center;">Uterine Necrosis after Uterine Compression Suture for Postpartum Hemorrhage: a Case-control Study and Systemic Review of Case Reports.</p>
臨時稿件編號：0682	
論文發表方式：口頭報告	<p>Background:</p> <p>Uterine compression sutures (UCSs) are an effective uterine-preserving method for patients with postpartum hemorrhage (PPH). One novel UCS, the “Nausicaa” technique, is especially helpful for avoiding hysterectomy in those with placenta accreta spectrum (PAS) disorders. Among various complications following UCSs, uterine necrosis is one of the rarest but most fatal late complications. However, the incidence and the predisposing factors of uterine necrosis remained unknown. Therefore, we aimed to assess the incidence and the risk factors of uterine necrosis after UCS for PPH.</p>
論文歸類：產科	<p>Method:</p> <p>This was a prospective case-control study in Taiwan during 2012-2022. Cases were women with uterine necrosis after receiving Nausicaa suture for PPH, and controls were those receiving UCS during the same period. The clinical characteristics and perioperative outcomes were compared between groups.</p> <p>Also, Pubmed, Embase, and Web of Science were searched by December 1, 2022, using key words: “uterine necrosis” and “postpartum hemorrhage”. Cases were considered eligible if the type of UCS, and the management of uterine necrosis were reported.</p> <p>Results:</p> <p>Of 142 women receiving Nausicaa suture, 105 (79%) women had PPH due to PAS disorder, and 9 (6.3%) developed partial uterine necrosis. We identified multiple risk factors for uterine necrosis, including severity of PAS, operation time, numbers of stiches applied for hemostasis, presence of bladder injury, utility of temporary occlusion balloon catheter, and application of uterine artery embolization. In contrast, the incidence of uterine necrosis was not significant related with multiple gestation, times of previous Cesarean section, history of uterine surgery, causes of PPH, or intraoperative blood loss. All cases with necrosis were treated conservatively with antibiotics, curettage, and drainage.</p> <p>In literature, 22 publications reported 26 eligible cases during 2002-2022. B-Lynch was used in 14 cases, Cho compression in 5 cases, and Nausicaa suture was applied in 2 cases. 19 (70%) women underwent hysterectomy eventually.</p> <p>Conclusion:</p> <p>Nausicaa suture is an effective uterine preservation method for patients with PPH of different causes, including PAS. Clinicians should be aware of the possibility of uterine necrosis after UCS, especially for those with identified risk factors. Despite the high incidence of hysterectomy after uterine necrosis in review, we found most cases can be treated conservatively.</p>

稿件編號：OO11	<p>胎兒內視鏡手術產前治療開放脊柱裂在台灣所面臨的難題與未來發展</p>
臨時稿件編號：0838	<p>The clinical trial of fetoscopic repair of myelomeningocele in Taiwan: the dilemma in prenatal decision-making</p> <p>劉子寧¹ 林孟萱¹ 黃惠鈺¹ 蕭勝文¹ 台北長庚醫院婦產科¹</p>
論文發表方式：口頭報告	<p>Introduction</p> <p>Myelomeningocele (MMC) is the most severe type of spina bifida with the incidence of 1.87 per 10,000 live births in Taiwan. Due to “two-hit” hypothesis that the exposure of nervous lesion to the amniotic fluid would worsen the neurological outcome, the early fetal surgery for MMC repair improves the postnatal outcome as the routine practice nowadays. However, Asian women and their families are more conservative and difficult to accept the defect before birth. Nearly all the pregnancy with fetal MMC choose termination without giving the chance of fetal surgery.</p>
論文歸類：產科	<p>Method</p> <p>As the first clinical trial of fetoscopic repair of MMC in Taiwan, we prospectively recruited 15 cases from 2020 to 2022. Fetal images including MRI and ultrasound were made for final diagnosis. The medical team faced the family members for non-direct consultation the possible outcome of fetal surgery. People who decided the fetal surgery, we offered percutaneous fetoscopic approach with 3 trocars. Biocellular patch was also studied with amniotic fluid stem cell / exosome culturing.</p> <p>Results</p> <p>During the 24 months period, 14 out of 15 cases (93%) decided to terminate the pregnancy from 18 to 26 weeks of gestational age. Several factors affected the decision were disabilities, morbidities, economic, social and psychological aspects. Although there are supportive groups for affected patients in Taiwan, the termination rate was still high among Chinese population. The first fetal surgery for MMC in Taiwan was one out these 15. The procedure went smoothly. The baby is 18 month-old without motofuction delay, and she can walk naturally. The amniotic fluid stem cell could grow well on the patch with high expression in CD73, CD90, CD105. Also exosome with CD9, CD63 positive was isolated in this co-culture.</p> <p>Conclusion</p> <p>We started the first fetoscopic repair of MMC in Taiwan with promising outcome, but we faced the high termination rate in Chinese population. Continuous social education for general people from media could be the important step. Adding amniotic fluid stem cell on the biocellular for MMC repair could help the healing process in the near future.</p>

稿件編號：OO12	<p>胎兒骨骼發育異常的產前診斷案例</p>
臨時稿件編號：0937	<p>Prenatal diagnosis of a fetus with X-linked bone dysplasia: a case report and review of literature</p> <p>陳智齡¹ 施景中¹ 李妮鍾¹ 台大醫院¹</p>
論文發表方式：口頭報告	<p>Osteopathia striata with cranial sclerosis is a rare X-linked skeletal dysplasia characterized by mainly by cranial sclerosis and longitudinal striation of long bones. Prenatal diagnosis of this disorder can be challenging due to limited clues and varying phenotypic presentation across different organ systems. Here we document one</p>
論文歸類：產科	<p>AMER1 mutation-related, prenatally diagnosed fetus with ultrasound-identifiable anomalies at second-trimester. The fetus was found to have bilateral fibular dysplasia, congenital heart defects, and macrocephaly around 22 weeks of gestation. Karyotyping and array CGH results were unremarkable. The use of whole exon sequencing for identification of underlying etiology was successful in this case, revealing a pathogenic variant in the AMER1 gene, inherited maternally. This experience expanded the knowledge of the disease to the prenatal stage, and made us more attentive to the dysmorphic cues that can be easily missed during genetic counseling.</p>

稿件編號：OO13	<p>孕期二氧化氮/細懸浮微粒 PM2.5 暴露與早產和低出生體重風險的關係：系統性文獻回顧與統合分析</p>
<p>臨時稿件編號： 0705</p>	<p>Risks of preterm birth and low birth weight and maternal exposure to NO2/PM2.5 acquired by dichotomous evaluation: a systematic review and meta-analysis <u>林宜萱</u>¹ 洪泰和² 陳佩鴻³ 董道興⁴ 徐婕⁵ 許德耀⁶ 萬國華⁷ 林口長庚紀念醫院婦產部¹ 台北長庚紀念醫院婦產科系，基隆長庚紀念醫院婦產科，長庚大學醫學系² 長庚大學呼吸治療學系³ 台州醫院循證醫學中心⁴ 長庚大學臨床醫學研究所⁵ 高雄長庚紀念醫院婦產部⁶ 台北長庚紀念醫院婦產科系，長庚大學呼吸治療學系，長庚科技大學嘉義分部呼吸照護系，明志科技大學環境永續與人類健康研究中心⁷</p>
<p>論文發表方式： 口頭報告</p>	<p>No consistent results from past studies have been found on the relationship between the effects of air pollutant exposure, preterm birth (PTB) and low birth weight (LBW) in fetuses. This study aimed to analyze the impact of high concentrations of air pollutants on the health outcomes of fetuses, especially regarding PTB and LBW. This study used keywords related to air pollutants, pregnancy, and birth outcomes, to search the literature within the databases of the Cochrane Library, PubMed, and Embase, which were published as of July 26, 2022. A total of 24 studies were included in this meta-analysis. This meta-analysis revealed that nitrogen dioxide (NO2) exposure throughout pregnancy was associated with an increased risk of PTB. Maternal exposure to PM2.5 (particulate matter sized less than 2.5 μm) during gestation was associated with the risk of LBW. The findings of this meta-analysis provide an important foundation for evaluating the relationship between exposure of air pollutants and fetal birth outcomes in countries with severe air pollution in the future.</p>
<p>論文歸類： 產科</p>	

稿件編號：OO14	<p>手術週數對接受胎兒鏡雷射治療之雙胞胎輸血症候群之預後之影響</p> <p>Effect of gestational age at fetoscopic laser photocoagulation on perinatal outcomes for patients with twin-twin transfusion syndrome</p>
臨時稿件編號：0721	<p>張芳瑜¹ 劉子寧¹ 張舜智¹ 趙安祥¹ 詹耀龍¹ 長庚林口總院¹</p>
論文發表方式：口頭報告	<p>Abstract: Purpose: To evaluate the effect of gestational age (GA) at the time of fetoscopic laser photocoagulation (FLP) for severe twin-twin transfusion syndrome (TTTS) on perinatal outcomes in a single center in Taiwan.</p>
論文歸類：產科	<p>Materials and methods: Severe TTTS was defined as a diagnosis of TTTS before the GA of 26 weeks. Consecutive cases of severe TTTS treated at our hospital with FLP between October 2005 and September 2022 were included. The evaluated perinatal outcomes were preterm premature rupture of membranes (PPROMs) within 21 days of FLP, survival 28 days after delivery, GA at delivery, and neonatal brain sonographic image findings within 1 month of delivery.</p> <p>Results: We included 197 severe TTTS cases; the mean GA at the time of FLP was 20.6 weeks. After the cases were divided into cases of FLP at an early (below 20 weeks) and late GA (more than 20 weeks), the early GA group was discovered to be associated with a deeper maximum vertical pocket in the recipient twin, a higher rate of PPRoms development within 21 days of FLP, and lower rates of survival of one or both twins. In the cases of stage I TTTS, the rate of PPRoms within 21 days of FLP is was; higher in the group that underwent FLP at an early GA than in group that underwent FLP at a late GA [50% (3/6) vs. 0% (0/24), respectively, p = 0.005]. Logistic regression analysis revealed that the GA at the time of FLP and cervical length before FLP is implemented are significantly associated with the survival of one twin and the incidence of PROM development within 21 days of FLP. The GA at the time of FLP, cervical length before FLP, and TTTS being stage III TTTS were associated with the survival of both twins after FLP. Neonatal brain image anomalies were associated with GA at delivery.</p> <p>Conclusions: FLP being performed at an earlier GA is a risk factor for lower fetal survival and PPRoms development within 21 days of FLP in cases of severe TTTS. Delaying FLP for cases involving stage I TTTS diagnosed at an early GA without risk factors, such as maternal symptoms, cardiac overload in the recipient twin or a short cervical length, may be considered but whether and how long of the length of delaying the FLP would improve the surgical outcomes may need further trials to answer.</p>

稿件編號：OO15	<p style="text-align: center;">使用 MicroRNA 陣列作為評估 COVID-19 疫苗功效的工具 Using MicroRNA Arrays as a Tool to Evaluate COVID-19 Vaccine Efficacy</p> <p>林宜樺¹ 林言頻² 沈靜芬³ 沈靜茹¹ 鄭兆珉² 高雄醫學大學附設中和紀念醫院婦產部¹ 國立清華大學生物醫學工程研究所² 國立成功大學醫學院附設醫院小兒部³</p>
臨時稿件編號： 0821	
論文發表方式： 口頭報告	<p>In order to solve COVID-19 pandemic, the entire world has invested considerable manpower to develop various new vaccines to temporarily alleviate the disaster caused by the epidemic. In addition to the development of vaccines, we need to also develop effective assessment methods to confirm vaccines' efficacy and maximize the benefits that vaccines can bring.</p>
論文歸類： 產科	<p>In addition to common evaluation methods, vaccine-specific and temporal expression of microRNAs have been shown to be related to vaccine efficacy or vaccine-associated diseases. In this article, we have introduced a microRNA-array-based approach, which could be potentially used for evaluating COVID-19 vaccine efficacy, specifically for pregnant women. As the mRNA in mRNA vaccines is decomposed by host cells within a few days, it is considered more suitable for pregnant women to utilize the method of vaccination during pregnancy. Moreover, pregnant women belong to a high-risk group for COVID-19, and there is currently no appropriate vaccine to newborns. Therefore, it's important to find improved tools for evaluation of vaccine efficacy in response to the current situation caused by COVID-19.</p>

稿件編號：OO16	孕婦接種新冠肺炎疫苗與季節性流感疫苗及百日咳疫苗之免疫性影響的先導性研究
臨時稿件編號： 0952	<p>Pilot Study for Immunogenicity of SARS-CoV-2 Vaccine with Seasonal Influenza and Pertussis Vaccines in Pregnant Women</p> <p>沈靜茹¹ 劉懿徵¹ 高雄醫學大學附設中和紀念醫院婦產部¹</p>
論文發表方式： 口頭報告	<p>Background: It is well known that the implementation of routine immunizations to prevent vaccine-preventable diseases has a significant impact on the health and well-being of infants, children, and pregnant women. We aimed to evaluate the influence of influenza, tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis (Tdap) vaccine on the immunogenicity of SARS-CoV-2 vaccine among pregnant women, the priority population recommended for vaccination.</p>
論文歸類： 產科	<p>Methods: We conducted a prospective study among pregnant women without previous SARS-CoV-2 infection in Taiwan. Maternal and umbilical cord blood samples at delivery were analyzed for the percentage of inhibition of neutralizing antibodies (NAbs) against the original strain, Delta, and Omicron variants of SARS-CoV-2 as well as the total antibody to the SARS-CoV-2 spike protein. We examined the association between different doses of SARS-CoV-2 vaccine in combination with influenza and Tdap vaccination, and two-dose SARS-CoV-2 vaccination with or without influenza and Tdap vaccines via a two-sample t-test. Results of $p < 0.05$ were considered to be statistically significant.</p> <p>Results: 98 pregnant women were enrolled in our study, with 32 receiving two doses of SARS-CoV-2 mRNA-1273 vaccine, 60 receiving three-dose of mRNA-1273, and 6 receiving one-dose of ChAdOx1 and two-dose of mRNA-1273. Twenty-one participants were immunized with SARS-CoV-2, influenza, and Tdap vaccines. Of these 21 individuals, there were no significant NAbs levels in maternal and cord blood samples against the Omicron variant, regardless of doses or type of SARS-CoV-2 vaccine. However, antibody responses against the wildtype and Delta variant were significantly lower in all maternal sera in the two-dose SARS-CoV-2 vaccine group. Among 32 women receiving two-dose mRNA-1273, significantly lower levels of NAbs in maternal sera were observed against the Delta variant and total antibody both in maternal sera and cord blood were observed in individuals receiving SARS-CoV-2 and influenza vaccine.</p> <p>Conclusion: This is the pilot study to demonstrate the effects of influenza and the Tdap vaccine on the immunogenicity of the SARS-CoV-2 vaccine among pregnant women. These results suggest that combination vaccination during pregnancy may result in immunogenic interactions.</p>

稿件編號：OO17	<p>探討慢性糖尿病產婦發生糖尿病酮酸中毒及相關周產期死亡率之預測因子 Predictors of diabetic ketoacidosis and associated perinatal mortality in pregnant</p>
臨時稿件編號： 0911	<p>women with pregestational diabetes mellitus 范祐豪¹ 陳治平¹ 王國恭¹ 陳宜雍¹ 王亮凱¹ 陳震宇*¹ 台北馬偕紀念醫院婦產部高危險妊娠學科¹</p>
論文發表方式： 口頭報告	<p>Objective: Diabetic ketoacidosis (DKA) during pregnancy is a life-threatening medical crisis for both mothers and fetuses. The aim of this study was to investigate the predictors of DKA and associated perinatal mortality in pregnant women with pregestational diabetes mellitus (PDM).</p>
論文歸類： 產科	<p>Methods: This was a retrospective cohort study of singleton pregnant women with PDM at a tertiary medical center from April 2000 to November 2022. Receiver operating characteristic (ROC) curve analyses were used to evaluate various variables between the mothers with and without DKA, and factors associated with perinatal mortality.</p> <p>Results: Of the 219 pregnant women with PDM enrolled, 21 were diagnosed with DKA, and 6 (28.6%) fetal deaths were noted. A higher level of HbA1c (8.45 ± 1.92 vs. 6.73 ± 1.01, $P = 0.001$) and LDL (152.86 ± 55.00 vs. 119.25 ± 36.17, $P = 0.012$), but a lower level of HDL (38.71 ± 9.84 vs. 57.96 ± 14.47, $P < 0.001$) were noted in the DKA group than in the non-DKA group. The areas under the ROC curve (AUCs) of HbA1C, LDL, and HDL were 0.79 (95% confidence interval (CI) 0.69-0.89), 0.68 (95% CI 0.53-0.84), and 0.87 (95% CI 0.80-0.94), respectively. Furthermore, a higher level of maternal potassium (5.77 ± 1.17 vs. 4.23 ± 0.55, $P = 0.022$) and a greater difference of anion gap (22.50 ± 4.46 vs. 15.17 ± 6.48, $P = 0.014$), but a lower maternal arterial pH (7.07 ± 0.09 vs. 7.20 ± 0.16, $P = 0.030$) and bicarbonate (3.90 ± 1.67 vs. 9.96 ± 4.48, $P = 0.001$) were associated with perinatal mortality. The AUCs of maternal potassium, anion gap, pH, and bicarbonate were 0.94 (95% CI 0.84-0.99), 0.87 (95% CI 0.70-0.99), 0.86 (95% CI 0.68-0.99), and 0.93 (95% CI 0.80-0.99), respectively.</p> <p>Conclusions: HbA1c and lipid profile are valuable predictors of developing DKA in pregnant women with PDM. Severe maternal hyperkalemia and acidosis are associated with perinatal mortality.</p>

稿件編號：OO18	<p style="text-align: center;">使用人工智慧預測孕期子癩前症風險 Using Artificial Intelligence to Predict Preeclampsia in Pregnancy</p>
臨時稿件編號： 0827	
論文發表方式： 口頭報告	<p>徐英倫^{1,2} 劉忠峰¹ 奇美醫院¹ 中山大學生物醫學研究所²</p>
論文歸類： 產科	<p>Introduction: The progression of artificial intelligence application in medical field develops vigorously and machine learning has been useful in prediction and diagnosis for a variety of diseases. In perinatology, machine learning method is core technique of several tools. This present study aimed to build up models using machine learning to predict preeclampsia development using hospital electronic medical record data. We included 19,842 pregnant women receiving antenatal care at Chi-Mei Hospital during 2015~2021. Maternal data were retrieved from electronic medical records larger than gestational age 10 weeks. The prediction outcome was preeclampsia development. The overall preeclampsia incidence rate was 2.4% (474 patients). We used gestational age, maternal age, maternal body weight, maternal diastolic pressure, systolic pressure, parity, fetus number, conceive method, serum HbA1c, urine glucose, urine protein, history of hypertension, history of DM, history of SLE, history of chronic kidney disease, history of previous preeclampsia, history of previous GDM and history of previous preterm labor as feature variables in prediction model. Stacking method, XGBoost method, random forest algorithm, MLP method, lightGBM method and logistic regression models were 0.947, 0.942, 0.941, 0.914, 0.907, and 0.87, respectively. The stacking method model had the best prediction performance with an accuracy and false positive rate of 0.872 and 0.128, respectively. The combined use of maternal factors and common antenatal laboratory data could effectively predict preeclampsia using machine learning algorithms.</p>