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POSTER PRESENTATIONS

POSTER PRESENTATIONS

[PP-01]

A newborn with encephalocele and Dandy-Walker variant

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Dandy-Walker variant (DWv) is a congenital anomaly characterized by hypoplasia of the cerebellar vermis, cystic dilation of the fourth ventricle and a normal-sized posterior fossa. It is commonly associated with other brain malformations in most cases. Its association with occipital encephalocele is rare. Encephalocele is a diverticulum formation of brain tissue outward from a defect in the calvarium. It is a rare defect of the neural tube. A female infant was born at 37 weeks of gestation. Fetal magnetic resonance imaging (MRI) at 23 weeks of gestation demonstrated an anomaly of the central nervous system, described as an occipital encephalocele. On physical examination performed after birth, the patient had an encephalocele cyst of approximately 4 centimeters in the occipital region and a cleft lip. Additionally, postnatal MRI showed a cystic area with septation associated with the fourth ventricle, hypoplasia of the cerebellar vermis, and dilation of the lateral ventricle. These findings were considered as DWv. Encephalocele cyst was excised and duraplasty was performed at one day old. One month after birth, the patient had hydrocephalus. A cystoperitoneal shunt was performed. In the postoperative term, there was no wound defect. Growth in the head circumference stopped after the surgery. The coexistence of DWv and encephalocele is extremely rare and should be followed up multidisciplinarily because of the additional anomalies that may accompany it.

Keywords: Encephalocele, Dandy-Walker variant, hydrocephalus, congenital

[PP-02]

After acute ischemic stroke: Returning to normal life

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A 61-year-old male with a history of rheumatoid arthritis presented to the emergency department with acute onset facial drooping and left-sided weakness. The patient, who had no history of antiplatelet or anticoagulant use, was routinely taking Methotrexate, plaquenil, and folate. Upon evaluation, he was conscious and oriented, exhibiting 1/5 muscle strength in the left upper and lower extremities and motor aphasia. Brain computed tomography (CT) and CT angiography revealed occlusions of the right internal carotid artery and right middle cerebral artery, leading to a diagnosis of acute ischemic stroke. Intravenous tissue plasminogen activator was administered, followed by a successful thrombectomy. During digital subtraction angiography, thromboaspiration was performed and a carotid stent was placed in the right internal carotid artery. A follow-up diffusion-weighted magnetic resonance imaging at 24 hours demonstrated a deep branch infarction in the right middle cerebral artery territory with concomitant hemorrhage. A brain CT scan confirmed hemorrhage in the infarct area. Due to the bleeding, the initial treatment with acetylsalicylic acid (ASA) 100 mg and clopidogrel 75 mg was modified to only clopidogrel 75 mg. Upon regression of the hemorrhage on subsequent brain CT, ASA 100 mg was reintroduced. The patient was subsequently transferred to the neurology clinic, where he was found to be conscious, cooperative, and oriented, with 4/5 muscle strength in the left upper and lower extremities, but with limited verbal response. This case highlights the complexities involved in the management of acute ischemic stroke with associated hemorrhage and emphasizes the need for individualized treatment strategies.

Keywords: Acute ischemic stroke, IV tPA, thrombectomy, thrombolytic

POSTER PRESENTATIONS

[PP-03]

Artificial intelligence in studies related to programmed cell death protein PD-L1 in non-small cell lung cancer

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Non-small cell lung cancer (NSCLC), the most common subtype of lung cancer, accounts for approximately 85% of all cases. Significant advances are being made in the diagnosis and treatment of NSCLC, especially with the help of molecular translational research. Programmed cell death ligand 1 (PD-L1) is an important cell surface protein that plays a central role in many types of cancer. It is considered the gold standard predictive biomarker for immunotherapy selection in advanced NSCLC patients. In clinical studies, protein profiling and immunofluorescence methods are promising for routine PD-L1-related tests and advances in this field have been accelerating with the help of artificial intelligence (AI). Machine learning (ML), a subset of AI, is defined as a method of analyzing sample data with a target task, parsing this data into predictive models and clustering it on its own, and then analyzing it by the computer. As the most used method for predicting efficiency and analyzing multi-omics data, ML has been one of the promising developments in evidence-based medicine. Many prediction models based on ML algorithms are used today due to the development and widespread use of digital images. Research shows that AI has made progress in early diagnosis and screening of NSCLC and in evaluating immunotherapy effectiveness and prognosis. It is anticipated that future research and AI methods will advance the diagnosis and treatment of NSCLC even with a single marker.

Keywords: Non-small cell lung cancer, immunotherapy, PD-L1, artificial intelligence (AI), machine learning (ML)

[PP-04]

Levodopa-carbidopa intestinal gel treatment as an alternative to oral therapy in Parkinson's disease

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Aims: Parkinson disease is one of the most common disorders in the world. It is primarily distinguished by its motor symptoms, including bradykinesia, rigidity, and resting tremor.

Methods: In advanced Parkinson disease, the progressive multisystem nature of the disease becomes apparent. The motor and non-motor symptoms worsen, affecting the quality of life negatively. After getting treatment with oral levodopa, treatment-related complications such as motor fluctuations and dyskinesia are possible. Oral treatment options become less effective due to problems with oral absorption and associated dopamine pulsatile stimulations. This is why using device-aided therapies such as levodopa-carbidopa intestinal gel (LCIG) can be beneficial alternatives.

Results: LCIG is advantageous against absorption problems because the gel suspension is directly infused into the jejunum. LCIG also reduces both motor and non-motor fluctuations. Patients who have problems with nocturnal fluctuations, troublesome dyskinesia, and severe "off" times can benefit from LCIG. Evidence from different studies suggests that LCIG improves both motor and non-motor symptoms across multiple systems, improving the quality of life and lessening the caregiver burden.

Conclusions: Aside from the risks of the percutaneous gastrostomy, the downside of this treatment is usually device-related. Taking care of the device can raise problems during daily life activities. However, patients report that their quality of life is overall improved. However, the patients still need to be supervised during the treatment. In conclusion, LCIG therapy is advantageous in several aspects for advanced Parkinson disease; however, studies are ongoing.

Keywords: Intrajejunal, levodopa-carbidopa intestinal gel, Parkinson disease, motor symptoms, non-motor symptoms

POSTER PRESENTATIONS

[PP-05]

Stem cells in pancreatic cancer: The key to treatment resistance and relapse

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Aims: Pancreatic cancer (PC) is a severe public health problem due to its difficulty in early diagnosis and rapid metastasis. It is also highly resistant to chemotherapy and radiotherapy. However, a study has shown that one of the main factors leading to chemotherapy resistance in PC is cancer stem cells (CSCs) that express cell surface markers such as CD44, CD24, and epithelial-specific antigen. Additionally, these cells possess self-renewal and differentiation capabilities.

Methods: Recently, Feng et al. conducted a study to develop new strategies for the treatment of pancreatic ductal adenocarcinoma (PDAC) and to understand the epigenetic-based molecular mechanisms controlling CSCs. Accordingly, the inhibition of the BRD9 protein, a critical chromatin regulator in maintaining the stemness of pancreatic CSCs, significantly reduced tumorigenesis in mouse models and eliminated CSCs in tumors from PC patients. Thus, BRD9 has strong potential as a novel therapeutic target in PDAC treatment.

Results: Another study by Ferguson et al. found that SMARCD3, a SWI/SNF complex subunit, was highly expressed in pancreatic CSCs. However, stage-specific deletion of SMARCD3 in mice increased the sensitivity of established tumors to chemotherapy and, therefore, improved patient survival. This study revealed that SMARCD3, an epigenetic regulator, could be a potential therapeutic target for PC.

Conclusions: Identifying specific CSC markers in PC and elucidating the signaling pathways, epigenetics, and other molecular mechanisms that maintain these cells will enable the development of new and effective treatment strategies to suppress tumor growth and prevent relapse.

Keywords: Pancreatic cancer, cancer stem cell, relapse, treatment strategies

[PP-06]

Approach to chemical eye injuries: A case report

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Aims: Chemical eye injuries are emergencies that threaten vision. The extent of damage depends on factors such as chemical concentration, pH, quantity, exposure duration, and type and timing of the first intervention. Chemical injuries can be caused by acid and alkali substances. Ammonia, lime from alkalis, hydrochloric acid, and sulfuric acid from acids are the most common. Alkaline substances penetrate tissues rapidly due to hydroxyl ions, primarily damaging the anterior segment. Acids denature proteins, affecting corneal epithelium and stroma layers. Acid injuries are more common due to their affordability. Many acids are used in industry, cleaning, and, as a current issue, hate crimes. Acidic injuries may lead to corneal epithelial necrosis, limbal vascular occlusion, limbal stem cell loss, delayed epithelial healing, ulcers, and corneal perforation. Correct intervention by emergency physicians is crucial for good visual prognosis and complication prevention. This involves eyelid opening, eye movement, and irrigation with at least 2 liters of saline solution for 30 minutes and particle removal. Substances like lime that react with water are exceptional. Buffering agents for alkaline/acids may be applied. Subsequently, a detailed ophthalmological examination is required, including eyelids, conjunctiva, corneal transparency, and epithelialization. Visual acuity, intraocular pressure, and anterior chamber inflammation should be assessed. The detailed recording of the examination is considered important from a medicolegal perspective. Treatment options include artificial tears, topical antibiotics for epithelial damage, topical corticosteroids for inflammation and oral antibiotics. Debridement, bandage contact lenses, and growth factor-rich cord blood can stimulate corneal epithelialization, while vitamin C supplementation may aid corneal healing. In severe cases, advanced ophthalmological interventions such as lid surgery, stem cell transplantation, and corneal transplantation may be necessary. Our purpose in this case report was to emphasize the importance of early interventions in chemical eye injuries.

Case presentation: A 41-year-old female presented with nitric acid exposure resulting in chemical trauma. She received water irrigation at the scene and saline eye wash was performed with 3L saline for 30 minutes in the emergency department. Examination revealed a normal left eye and right eye exhibiting hyperemic conjunctiva, limbal necrosis, and total epithelial defect in the cornea. Visual acuity was worse than 1/10 bilaterally. Epithelial debridement was performed, followed by topical antibiotics and corticosteroids, artificial tears, and vitamin C. By the second week, epithelial healing was achieved. The patient's cornea was transparent at the 10th-month follow-up.

Conclusions: This case underscores the critical role of early and accurate intervention in chemical eye injuries ranging from simple irritation to organ and function loss.

Keywords: Chemical eye injury, acidic injury, corneal damage

POSTER PRESENTATIONS

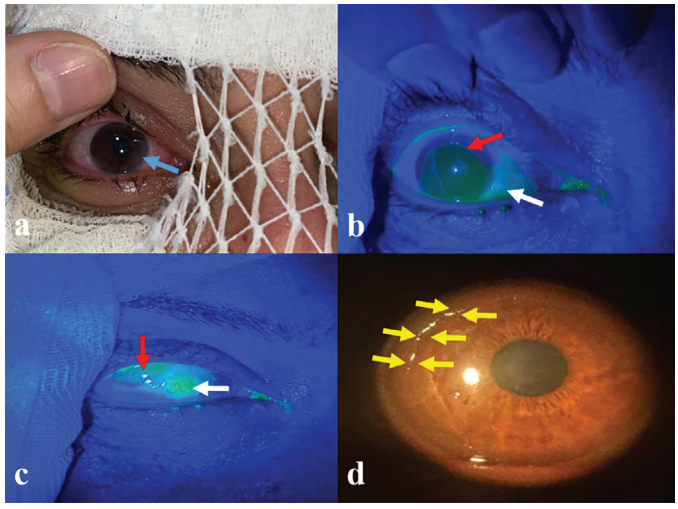

Figure 1. (**a**) After washing, local examination reveals eyelash burns, conjunctival hyperemia, and epithelial edema in the cornea (blue arrow). (**b**) Before treatment, conjunctival (white arrow) and corneal epithelial damage (red arrow) are observed under fluorescein staining and blue light filter. Yellow color uptake indicates damage. (**c**) Conjunctival damage (white arrow) and corneal epithelial damage (red arrow) are observed. (**d**) Before treatment, the biomicroscopic photograph shows the temporal border of corneal epithelial defect (the area within the yellow arrows)

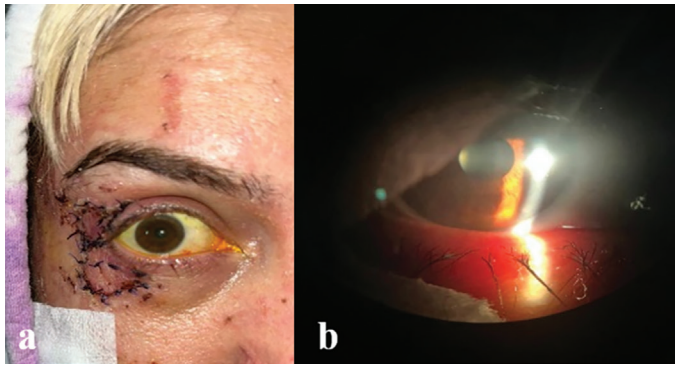

Figure 2. (**a**) Photograph at the second week of treatment, (**b**) photograph of the healed anterior segment at the second week of treatment

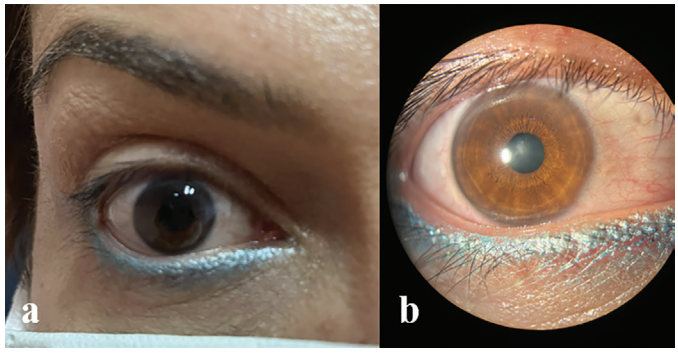

Figure 3. (**a**) The patient's photograph at the 10th month post-chemical injury, (**b**) the anterior segment photograph of the eye at the 10th month post-chemical injury

[PP-07]

Artificial intelligence in pathology practice

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Artificial intelligence (AI) is revolutionizing pathology by enhancing diagnostic accuracy and efficiency. AI integration in pathology addresses interobserver variability, ensuring consistent and rapid processing of pathology specimens. Beyond diagnosis, AI predicts prognosis and patient outcomes, showing superior performance in various studies. For instance, AI has improved cancer detection accuracy by 7.3%, especially in small specimens, and in prostate cancer, AI algorithms match or exceed the diagnostic capabilities of senior pathologists, reducing the need for second opinions by up to 40%. In gastrointestinal diseases, AI achieves the same accuracy as pathologists in complex biopsy analyses. Additionally, AI-assisted immunohistochemistry staining shows a high correlation with pathologist scoring, with Spearman correlation coefficients of 0.88 and 0.90. AI's accuracy in diagnosing and classifying brain tumors reaches up to 88%, and in screening cervical cancer using whole slide images, AI attains 93.5% specificity and 95.1% sensitivity compared to trained pathologists. Despite these advancements, challenges remain in the clinical implementation of AI in pathology. The need for large datasets and storage space poses financial challenges for institutions. Data privacy, comprehensive validation, and avoiding over-reliance on automated systems are crucial to addressing ethical concerns. Ongoing education and training for medical staff are essential for effective adaptation to AI technologies. As AI evolves, it promises to significantly impact pathological services, leading to improved patient care and outcomes and reducing diagnostic times. The future of AI in pathology is promising, contingent on overcoming these challenges in the coming years.

Keywords: Digital pathology, oncopathology, artificial intelligence, machine learning, anatomic pathology

POSTER PRESENTATIONS

[PP-08]

The use of virtual reality applications in managing symptoms related to chemotherapy: A systematic review

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Aims: At the beginning of the 21st century, cancer has become one of the most common causes of death worldwide. Cancer ranks as the second-largest group of chronic and non-communicable diseases and is the third leading cause of death. Chemotherapy and medications are routinely used in cancer treatment, administered in two- to four-week cycles. They can lead to symptoms such as pain, loss of appetite, fatigue, vomiting, and nausea. Among cancer patients receiving chemotherapy, pain is a frequent issue. Pain can manifest across various types of chemotherapy. To manage chemotherapy side effects, numerous non-pharmacological or alternative methods are available. Research indicates that non-pharmacological treatments, including music therapy, acupuncture, massage, guided visualization, hypnosis, and virtual reality (VR) therapy, are also utilized.

Methods: This study aimed to systematically evaluate the use of VR in managing symptoms related to chemotherapy. A systematic review was conducted by searching articles in PubMed, Science Direct, Google Scholar, and Cochrane Library databases from February to March 2024. The search terms included combinations of chemotherapy, symptom management related to chemotherapy, VR use in oncology, and VR use in managing symptoms related to chemotherapy. A total of 2,050 articles were identified during the search. Among these, 20 studies were relevant to the topic. After screening, 5 articles meeting the study criteria were included in the evaluation.

Results and Conclusions: VR through human-computer interaction provides an immersive experience. Research has shown that VR interventions are more effective in anxiety and depression control compared to standard care. In a computer-generated real-time VR environment, participants can divert their attention from the real world and focus on VR content, thereby reducing their anxiety and cancer symptoms.

Keywords: Chemotherapy, symptom management related to chemotherapy, virtual reality use in oncology, virtual reality use in managing symptoms related to chemotherapy

[PP-09]

The human tail

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Aims: The human tail is one of the most interesting and rare congenital malformations of neural tube defects. There are two types of tails known to originate from the distal remnant of the embryonic tail. The true human tail is a vestigial organ containing adipose tissue and other connective tissues without vertebrae. Pseudotails, which bear superficial resemblances to the true tail, may occur connected to an underlying pathology such as lipoma or teratoma and are more commonly observed in the lumbosacrococcygeal region. It is often accompanied by spina bifida.

Case presentation: The first patient was a 19-month-old baby boy born with a 6 cm tail at the midline. A low-lying conus was detected on magnetic resonance imaging (MRI). Unlike the others, the lipoma did not perform intraspinal invasion and is accompanied by spina bifida. The second patient was a 4-month-old baby boy born with a 2 cm tail and dermal sinus at the lateral. MRI showed an intraspinal lipoma and a low-lying conus. The third patient was a 20-year-old male with a 1 cm tail at the midline. Intraspinal lipoma and low conus were seen on MRI.

Conclusions: Radiological evaluation is important in human tail cases. An MRI study should be performed to investigate the spinal pathologies of the lipoma accompanying the pseudotail and to determine if there is a nerve invasion.

Keywords: Tail, pseudotail, lipoma, spina bifida

POSTER PRESENTATIONS

[PP-10]

Sexual health after treatment in breast cancer patients: E-health applications

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Aims: The number one cause of cancer-related death in women worldwide is breast cancer. The survival rate for women with breast cancer changes every day. While the survival rates of breast cancer patients have increased compared to the past, post-treatment genitourinary and sexual health problems are more common today. The purpose of this review study is to examine the patient-centered treatment process for sexual health problems faced by patients after breast cancer.

Methods: For the study, 172 studies conducted between 2014 and 2024 with the keywords breast cancer, sexual health and patient-centered care were examined using the PubMed database, and detailed analysis was performed on 32 of these studies.

Results: When we look at the studies conducted in the last decade, we see e-health (health information and communication technologies) applications to improve patient-centered cancer care. Among these applications, it has been observed that various patient-centered artificial intelligence and web-based systems have been developed to increase the quality of life and health outcomes of cancer patients after treatment. However, the content of personalized follow-up and consultancy services is not focused on solving sexual life problems. Current research on sexual health problems generally focuses on methods such as drug treatments, pilates, exercise and the use of lubricants. Studies that identify patients' physical and emotional needs regarding sexual health and solve the problems experienced with e-health are limited.

Conclusions: These technologies can provide patients with personalized information and support, improving their quality of life and helping them cope with sexual life problems. However, more research is also needed on the effectiveness and reliability of these technologies.

Keywords: Breast cancer, sexual health, nursing, patient-centered care