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Highlights



Consensus of nocturnal enuresis management

Worldwide, nocturnal enuresis is a substantial psychological distress for affected children and their family. In this consensus statements by Wang et al.,¹ an expert committee developed a treatment algorithm for the management of patients with nocturnal enuresis in Taiwan. The finalized consensus statements were endorsed by both Taiwan Urological Association and Taiwan Pediatric Association. In brief, patients with suspected enuresis should undergo a thorough initial assessment to fully evaluate urinary signs and symptoms and to rule out underlying causes of diurnal and nocturnal incontinence. Behavioral therapy is recommended throughout the course of management. Desmopressin in the fast-melting formulation is the recommended first-line pharmacological treatment. Combination therapy may be effective in patients who have failed first-line treatment. These consensus statements will provide evidence-based support to practicing physicians in Taiwan.

Gastric parietal cell and thyroid autoantibodies in atrophic glossitis

Gastric parietal cell antibody (GPCA), thyroglobulin antibody (TGA), and thyroid microsomal antibody (TMA) are organ-specific autoantibodies. In this study, Chiang et al.² assessed the frequencies of presence of serum GPCA, TGA, and TMA in 1064 atrophic glossitis (AG) patients and in 532 age- and sex-matched healthy control subjects. They found 26.7%, 28.4%, and 29.8% of 1064 AG patients and 2.3%, 2.1%, and 2.6% of 532 healthy control subjects were positive for serum GPCA, TGA, and TMA, respectively. AG patients had a significantly higher frequency of GPCA, TGA, or TMA positivity than healthy control subjects (all P -values < 0.001). In addition, 67 (6.3%), 181 (17.0%), and 340 (32.0%) AG patients and 3 (0.6%), 10 (1.9%), and 8 (1.5%) healthy control subjects had the presence of three (GPCA + TGA + TMA), two (GPCA + TGA, GPCA + TMA, or TGA + TMA), or one (GPCA only, TGA only, or TMA only) organ-specific autoantibody, respectively. Since a proportion of GPCA-positive AG patients may develop pernicious

anemia, autoimmune atrophic gastritis, and gastric carcinoma, and part of TGA/TMA-positive AG patients may have thyroid dysfunction such as hyperthyroidism and hypothyroidism, autoantibody-positive AG patients should seek medical care for further evaluation.

Computed tomography-guided dual localization for deep-seated pulmonary nodules

In video-assisted thoracic surgery (VATS), preoperative dye marking around the visceral pleura provides surface localization, whereas implantation of a fiducial marker provides inner localization under fluoroscopic guidance. Lin et al.³ determined whether dual localization with microcoil placement and dye marking is safe and useful for guiding the resection of small deep-seated lung nodules. A total of 39 consecutive patients (40 nodules) were retrospectively enrolled. Dual localization with patent blue V dye and microcoil was performed preoperatively. All 40 lesions were successfully resected using the dual localization technique followed by fluoroscopy-assisted thoracoscopic surgery. The median lesion diameter and depth were 0.9 and 1.7 cm, respectively, while the median margin/diameter ratio in the first resected specimen was 1.25. One patient had failure of localization due to partial release of the microcoil into the chest wall. Six of 39 patients (15.4%) had self-limited, localization-related pneumothorax. Thus dual localization with microcoil placement and dye marking was safe to support successful VATS resection of small deep-seated lung nodules.

Sleep and emotional disturbance in non-dialysis renal disease patients

Tu et al.⁴ evaluated the prevalence of depression, anxiety, health anxiety, and sleep disturbance and explore the association between CKD stage, psychological symptoms and sleep quality. A total of 326 CKD patients (stage 1–5) not on dialysis were recruited. All participants completed the Beck Depression Inventory-II (BDI-II), Beck Anxiety Inventory (BAI), Health Anxiety Questionnaire (HAQ), and Pittsburgh

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Sleep Quality Index (PSQI). The results showed that clinically significant depression, anxiety, health anxiety, and sleep disturbance were found in 3.1%, 3.1%, 18%, and 36.2% of the patients, respectively. BDI-II, BAI, HAQ, and PSQI scores did not significantly differ across CKD stages. In a multiple linear regression model, BDI-II score had a statistically significant association with PSQI score ($\beta = 0.418$, $p < 0.001$). In summary, depressive symptoms were associated with sleep quality of patients with earlier-stage CKD. Nevertheless, CKD stage was not associated with sleep disturbance or other psychological symptoms.

Weaning of solid cancer patients with mechanical ventilation

In this study, Hsiue et al.⁵ compared the weaning outcomes between non-cancer patients and patients with different types of cancer. Cancer patients were grouped into those with lung cancer (LC), head and neck cancer (HNC), hepatocellular carcinoma (HCC), and other cancers (OC). The primary endpoint was successful weaning at day 90 after the initiation of MV, and the main secondary endpoints were 28-day and 90-day mortality after intensive care unit (ICU) admission. A total of 518 patients with solid cancers and 1362 non-cancer patients were recruited. The rate of successful weaning at day 90 was 57.9% in cancer patients, which was lower than 68.9% in non-cancer patients ($p < 0.001$). Compared to non-cancer patients, LC was associated with a lower probability of weaning at day 90 (hazard ratio 0.565, 95% CI 0.446 to 0.715), while HNC, HCC, and OC had similar probabilities. The 28-day and 90-day mortality rates were higher in cancer patients than in non-cancer patients (45.2% vs. 29.4%, and 65.6% vs. 37.7%, respectively, both $p < 0.001$). Therefore, mechanically ventilated patients with lung cancer were associated with a lower probability of weaning at day 90 compared to non-cancer patients in the intensive care unit.

Promoting dentinogenesis of dental pulp stem cells

Chang et al.⁶ explored the roles of microRNA-218 (miR-218) delivered by a newly designed magnetic nanocarrier: GCC-Fe₃O₄ (GCC-Fe) in dentinogenesis potentials of human dental pulp stem cells (DPSCs). The authors found that the magnetic GCC-Fe₃O₄ nanocarrier was serum enduring with about 90% transfection efficiency in DPSCs under normal culture condition. Results of ARS staining indicated that miR-218 was negatively regulating dentinogenesis potentials of DPSCs after induction. When the miR-218 inhibitor was delivered, calcium deposits in DPSCs were increased significantly. In addition, the effects of miR-218 were further regulated through the MAPK/ERK pathway. In brief, miR-218 had a negative regulation role in the dentinogenesis of DPSCs. By inhibiting miR-218, the mineralization potentials of DPSCs were promoted after induction.

Real-world anti-viral treatment decisions in chronic hepatitis C patients

Before the introduction of direct-acting antiviral regimens to Taiwan, Liu et al.⁷ investigated the percentage of CHC patients who were recommended and willing to receive pegylated interferon plus ribavirin (PEG-IFN/RBV), and to identify reasons why patients were not recommended or unwilling to receive treatment. A total of 822 Taiwanese CHC patients were enrolled. PEG-IFN/RBV recommendation and patient willingness to receive treatment were evaluated through surveys. Of them, 311 (37.8%) were recommended PEG-IFN/RBV while 102 (12.4%) were willing to follow treatment recommendation. Rates of recommendation and willingness were lower in treatment-experienced, hepatitis C virus genotype 1 (GT1) and cirrhotic patients, and those treated in Northern Taiwan. Multivariate analyses found factors such as prior treatment experience, GT1, cirrhosis and low hemoglobin levels to be associated with lower recommendation rates while advanced age, GT1 and low baseline viral loads were associated with lower willingness rates. Physicians' top reasons for not recommending PEG-IFN/RBV included the wish to wait for better treatment options (60.3%), prior treatment failure (21.3%) and patients' advanced age (20.9%). Patients were unwilling to receive treatment mainly due to concerns about side effects (91.4%), the wish to wait for better treatment options (71.3%) and inconvenience (25.4%). These results reflected a minority of Taiwanese CHC patients were recommended PEG-IFN/RBV, of which few were willing to receive treatment.

Metabolic response to one-cycle chemotherapy in locally advanced esophageal carcinoma patients

The optimal use of ¹⁸fluorodeoxyglucose positron emission tomography (PET) in measuring metabolic tumor response for the treatment of esophageal squamous cell carcinoma (ESCC) remains unclear. Huang et al.⁸ conducted a phase 2 trial to evaluate early metabolic response to one-cycle induction chemotherapy in patients with locally advanced ESCC. ESCC patients in stage classification T3N0, N1M0, or M1a received one-cycle chemotherapy comprising paclitaxel, cisplatin, and 24-h infusional 5-fluorouracil and leucovorin on days 1 and 8, followed by neoadjuvant chemoradiotherapy, 40 Gy, with paclitaxel/cisplatin and then esophagectomy. PET was performed at baseline and day 14 of chemotherapy. The primary endpoint was pathological complete response (pCR). A total of 66 patients were enrolled. The median progression-free survival (PFS) and overall survival (OS) were 16 months (95% confidence interval [CI], 9–27) and 22 months (16–40), respectively. The early metabolic response rate was 55%; and the pCR rate was 34% in the esophagectomy population. The early metabolic response was not associated with pCR or survival. In an exploratory analysis, the postchemotherapy SUV_{max}

was an independent prognostic factor for pCR, PFS, and OS. Although the study failed to validate the predefined early metabolic response for pCR to neoadjuvant chemoradiotherapy in locally advanced ESCC patients, post-chemotherapy SUV_{max} may be prognostic and predictive.

Bleeding scan before enteroscopy in patients with obscure gastrointestinal bleeding

Yang et al.⁹ evaluated the efficacy and accuracy of bleeder localization in a pre-enteroscopic bleeding scan in patients with obscure gastrointestinal bleeding (OGIB). A total of 98 patients with OGIB undergoing single-balloon enteroscopy (SBE) were enrolled; 56 had undergone a previous bleeding scan and 42 had not. The ability of the bleeding scan to localize the bleeding site was analyzed. The mean age of patients was 56 ± 22 years; final diagnostic yield, 65.3%; and the most common etiology of OGIB, angiodysplasia (29.6%). There was no significant difference in demographic characteristics, OGIB etiologies, and final diagnostic yields (67.9% vs. 61.2%, bleeding scan vs. control group) between groups. In the bleeding scan group, the rate of positive detection was approximately 80.4%. However, only 26.7% patients with a positive bleeding scan showed correct localization of bleeding. Moreover, the bleeding scan delayed SBE (8.9 days vs. 3.0 days, $p < 0.001$). In this study, bleeding scans in patients with OGIB revealed poor localization of the bleeder and delay in performing SBE. Thus, a bleeding scan prior to SBE might not be necessary in patients with OGIB.

Night eating syndrome versus bulimia nervosa

Night eating syndrome (NES) is a new diagnosis entity. Tu et al.¹⁰ investigated the characteristics of NES in individuals with eating disorders and the clinical significance of NES in individuals with bulimia nervosa (BN). Participants with eating problems and age, sex, and educational level-comparable controls from were enrolled. All participants received in-face structured clinical interviews to establish their eating disorder and NES diagnoses and completed questionnaires assessing NES, eating attitudes/behaviors, depression, sleep disturbances, morningness/eveningness preference, and functional impairment. Comparisons of measurements were made across patients with eating disorder subtypes and across patients with NES-only, BN-only, comorbid BN and NES, and controls. The data showed that NES was identified in 10.3%, 34.9%, and 51.7% of the individuals with anorexia nervosa, BN, and binge-eating disorder, respectively. NES-only group had more frequent binge-eating, higher degrees of eating pathology, depression, sleep disturbances, and functional impairment compared to controls; however, NES-only group shared similar levels of disordered eating, depression, sleep disturbances, and functional impairment with BN-only group. BN-NES group had no difference from BN-only group on most eating pathology, psychopathology, and functional impairment, except for the presence of greater eating and

weight concerns. Taken together, NES has clinical significance, but overlaps with BN in several dimensions of psychopathology.

Type 1 diabetes mellitus and periodontal diseases

Type 1 diabetes mellitus (T1DM) is a chronic autoimmune disease, and there exists a possible association between T1DM and periodontal diseases (PDs). Sun et al.¹¹ conducted a nationwide population-based study in Taiwan, with a 14-year follow-up to investigate the risk of PDs in T1DM patients by using data from the Taiwanese National Health Insurance Research Database. Participants comprised 4248 patients in the T1DM cohort and 16992 persons in the non-T1DM cohort. The T1DM patients showed an increased risk of PDs compared to non-T1DM individuals [adjusted hazard ratio (aHR) = 1.45]. T1DM patients who visited the emergency room more than twice per year had a higher aHR of 13.0 for developing PDs. The aHR for PDs was 13.2 in the T1DM patients who had been hospitalized more than twice per year. In conclusion, T1DM patients are at higher risk of developing PDs than non-T1DM individuals.

Apical surgery of 234 teeth

Apical surgery is for management of endodontically-treated tooth with persistent periapical lesions. Liao et al.¹² examined the correlation between the demography, preoperative, postoperative factors and healed rate of apical surgery. A total of 187 patients (53 males and 134 females) and 234 teeth receiving apical surgery were included. The age was ranged between 17 and 89 years old and the mean age was 43.64 years old. Better healed rate with significant differences were observed in female patient ($p < 0.05$), age ≤ 60 years old ($p < 0.01$), preoperative root canal filling material > 2 mm short of apex ($p < 0.01$), lesion size from ≤ 2 mm to ≤ 12 mm ($p < 0.05$) and follow-up period ≥ 12 months ($p < 0.01$) groups. Gender, age, preoperative root canal filling material extent, lesion size and follow-up period may affect the outcome of apical surgery. Tooth type, post, prosthesis, and lesion area showed no marked effect on apical healing. These results provide information to clinical practitioners with endodontic practice.

Handgrip strength indexes and cardiovascular disease risk

In this study, Yu et al.¹³ examined the association between different handgrip strength (HS) indexes and cardiovascular disease (CVD) risk factors in elderly Chinese individuals. The optimal cutoffs of HS indexes for predicting CVD risk factors were also determined. Data were obtained from 603 men and 789 women aged ≥ 60 years (average age 66.8 ± 6.4 y). The optimal cutoffs were 0.376 of HS/weight in men and 0.726 of HS/body fat mass in women for predicting diabetes mellitus. The adjusted odds ratios (ORs) of

at least one CVD risk factor for those with low muscle strength identified by HS/body fat mass were 2.14 (95% confidence interval [CI]: 1.53, 3.44; $p < 0.001$) in men and 2.32 (95% CI: 1.60, 3.29; $p < 0.001$) in women. In summary, HS/body fat mass appear to be the index best associated with CVD risk factors except diabetes mellitus in men.

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