Journal Scan

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Comparison of Four Histological Scoring Systems for Autoimmune Hepatitis to Improve Diagnostic Sensitivity

Ahn S, Jeong SH, Cho EJ, et al. Comparison of four histological scoring systems for autoimmune hepatitis to improve diagnostic sensitivity. Clin Mol Hepatol 2024;30(1):37–48. DOI: 10.3350/cmh.2023.0325

Autoimmune hepatitis (AIH) is a heterogeneous condition concerning clinical and laboratory features, with several differential diagnoses. This makes the diagnosis of AIH difficult at times. Various scoring systems can act as saviors, but all of them have their limitations. These scoring systems were proposed by the International Autoimmune Hepatitis Group (IAIHG) first in 1993, which was revised and then simplified in 1999 (IAIHG 1999) and 2008, respectively. Although the simplified criterion (2008 IAIHG) is commonly used in routine clinical practice, the histological component in this scoring system has low sensitivity for diagnosing AIH, which relies more on rosettes and emperipolesis. Some modifications in the histological component of the 2008 IAIHG criteria have been recently proposed by a group of pathologists, Balitzer et al. from the University of California, San Francisco (UCSF). This criterion (2017 UCSF) is mainly based on the necroinflammatory activity and the degree of plasma cell infiltration, which has increased the diagnostic sensitivity of AIH. In 2022, another group of liver pathologists (IAIHG) published a consensus statement for the histological diagnosis of AIH (2022 IAHPG). In this, they stated that emperipolesis and liver cell rosettes should not be considered as diagnostic features of AIH and lymphoplasmacytic infiltrate, including plasma cell clusters; central perivenulitis and the inflammatory pattern of interface hepatitis seemed to be more specific for AIH.

This paper compares the above four scoring systems in a retrospective cohort of AIH patients from two institutions in Korea over 10 years (2006–2016). Here, a total of 68 patients with a mean age of 58 years (range—20–87) and with a final diagnosis of AIH based on the clinical features, laboratory findings, and pathology following the 1999 IAIHG system were included. All the liver biopsies were reviewed independently by two pathologists, and based on the clinical and histological findings of each case, the AIH scores were calculated using the four different scoring methods. In this new review, all patients met the definite or probable criteria by the 1999 IAIHG system (60.3% "definite," 39.7% "probable") while using the 2008 IAIHG system, 56 (82.4%) cases met the probable or definite criteria for AIH (61.8% "definite," 20.6% "probable"). Then they tried replacing the histological criteria of 2008 IAIHG with 2017 UCSF histology criteria and found that the number of cases that met the definite or probable criteria for AIH increased to 61 (89.7%), with an increase of "definite" cases from 61.8 to 64.7%. And by applying 2022 IAHPG criteria with the 2008 IAIHG system, 62 (91.2%) cases met the probable or definite criteria for AIH, with 45 (66.2%) cases being classified as "definite AIH." So, out of the four criteria, when the histological criteria of the 2008 IAIHG system were replaced with the 2022 IAHPG histologic score, the sensitivity of diagnosing "definite AIH" and "at least probable AIH" increased from 61.8 and 82.4%, respectively (2008 IAIHG) to 66.2 and 91.2%, respectively (2008 IAIHG + 2022 IAHPG).

Comments: Liver biopsy remains the standard for diagnosing AIH in children, especially when the pediatric population has low antibody titers. 2022 IAHPG scoring should evolve as a helpful tool in the pediatric population. This study involved the adult population and was limited by its smaller number of cases, retrospective, and nonrandomized nature. More randomized control studies are needed in the pediatric population for the validation of the scores.

Management of Chronic Pancreatitis: Recent Advances and Future Prospects

Han C, Lv YW, Hu LH. Management of chronic pancreatitis: recent advances and future prospects. Therap Adv Gastroenterol 2024;17:17562848241234480. DOI: 10.1177/17562848241234480

This review article aims to provide an overview of evidence-based current clinical practice concerning the management of chronic pancreatitis (CP). The following headings are discussed in this article based on published and unpublished data:

- Nutritional support: Pancreatic enzyme replacement (PERT) and micronutrient supplementation remain the mainstay of nutritional management. Two meta-analyses in 2016 and 2017 revealed that PERT may improve nutritional status, but it has no effect on pain relief. A double-blinded randomized control trial (DBRCT) is currently undergoing with the hypothesis

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that negative feedback of cholecystokinin by nonenteric coated pancreatic enzymes may exert the function of pain relief (Talukdar et al.). Micronutrient deficiency is common in CP patients due to impaired absorption. A cross-sectional analysis in the Prospective Evaluation of Chronic Pancreatitis for Epidemiologic and Translational Studies (PROCEED study) showed that the prevalence of osteopathy on dual-energy X-ray absorptiometry scans was 56.0%, and higher prevalences of traumatic and spontaneous fracture were observed in these patients. Currently, an RCT from Finland is ongoing to investigate whether vitamin D substitution (10 or 100 µg daily) could prevent the development of CP after the first attack of acute pancreatitis. In 2020, Wiese et al. showed that 63% of CP patients had moderate to severe malnutrition. European Society for Parenteral and Enteral Nutrition recommends that patients with CP adhere to a well-balanced diet and that fat should not be restricted.

- Medications: Medication is commonly aimed at pain relief, which should follow the World Health Organization analgesic ladder, including nonsteroidal anti-inflammatory drugs and opiates. There are studies where an attempt is being made to investigate whether other medicine therapies, such as indomethacin, antioxidants, and pregabalin, can have analgesic effects. Han et al. are conducting a trial to see the effect of the administration of indomethacin twice a day on the progression of CP. Antioxidant therapy has been investigated to see an increase in antioxidative biomarkers and a decrease in fibrotic markers, but their role in pain relief is questionable. Two meta-analyses in 2013 and 2015 found that antioxidant therapy might be associated with pain relief. Cochrane Library suggested that antioxidants could alleviate pain to a certain extent, but the clinical relevance was uncertain. In 2020, a study from India (Singh et al.) showed that antioxidants did not have any effect on pain relief, endocrine or exocrine functions, markers of fibrosis, inflammation, oxidative stress, nutritional status, and quality of life. Many RCTs have been conducted to unmask the role of pregabalin in pain relief in CP patients, and there are mixed results. One study mentions that 3 weeks of pregabalin may have an analgesic effect. In 2016, the Cochrane Library published that the evidence for analgesic effects was of low-to-moderate quality. However, Talukdar et al., in 2016, showed in a DBRCT that a combination of antioxidants and pregabalin could significantly relieve pain in CP patients. Another DBRCT from India in 2020 observed that this combination can reduce pain and the requirement for nonopioid analgesics as well, along with the number of hospital admissions. S-ketamine is a lipid-soluble phencyclidine derivative used for anesthesia and sedation, and it has raised interest in the researchers for pain relief in hospitalized patients. There are some promising results also. Some more drugs, such as camostat mesylate, catechin hydrate, nintedanib, aspirin, and pirfenidone, are in the stream with clinical significance.
- Endoscopic treatment: Endoscopic treatment is based on the drainage and patency of the main pancreatic duct (MPD) to decrease the pressure. For the extraction of pancreatic stones, extracorporeal shock wave lithotripsy (ESWL) is considered a highly effective treatment method for pancreatic stone fragmentation, especially for stones larger than 5 mm. However, data on its safety profile is scarce. Pancreatoscopy-directed lithotripsy (electrohydraulic or laser) is another effective therapy for the extraction of pancreatic stones when endoscopic and ESWL are not effective or available. For the stricture in MPD, the European Society of Gastrointestinal Endoscopy recommended one single plastic stent initially and multiple side-by-side plastic stents or self-expandable metallic stents (SEMSs) for refractory strictures. Studies in 2020 have shown that soft, fully covered SEMSs are a novel option for MPD stricture in CP, but they may also lead to stent-induced strictures. Data regarding this is scarce, and trials are in progress.
- Surgical strategy: Surgical resection is an effective strategy for intractable pain and suspicion of malignancy. Various procedures are the Whipple procedure, Puestow procedure, Frey procedure, Beger procedure, Berne modification, total pancreatectomy, islet autotransplantation, etc. There have been comparisons between the endoscopic and surgical modalities with respect to pain relief and quality of life. In two RCTs, one in 2003 and another in 2007, it was found that complete pain relief and weight gain were more frequent in the group who underwent surgery, indicating that surgery was superior. Also, 47% of the patients in the endoscopy group eventually underwent surgery. Cochrane Library in 2012 and 2015 published that though there was no difference regarding morbidity and mortality, surgery was superior to endoscopy in terms of pain relief for patients with CP.

Comments: The article provides an in-depth analysis of the current state of treating CP. The authors focus on recent advancements in medical interventions and therapies, shedding light on the evolving landscape of care for individuals with patients with CP. The article not only highlights recent developments but also anticipates future prospects, indicating a comprehensive exploration of the subject. However, as far as the pediatric population is concerned, more high-quality evidence is needed in the future for the efficacy and safety of these modalities.

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