

Exploring Pig-to-Human Liver Xenotransplantation



Every day, people die waiting for an organ transplant. Could using organs from pigs help reduce the shortage of organs? This month's issue of *Gastroenterology & Hepatology* explores pig liver xenotransplantation. In our Advances in Hepatology column, Dr Rafael Miyashiro Nunes dos Santos discusses why pigs are the species of choice for xenotransplantation, genetic barriers of pig-to-human liver xenotransplantation, and how clustered regularly interspaced short palindromic repeats can be used to create genetic modifications to pig livers. He also discusses the research conducted thus far on xenotransplantation of pig livers to other animals and the current status of pig-to-human liver xenotransplantation.

One of our review articles this month highlights the diagnosis and management of intestinal strictures, which are a common and potentially debilitating complication of Crohn's disease. Dr Briton Lee, Dr Bari Dane, and Dr Seymour Katz examine the pathophysiology of Crohn's disease strictures along with current and novel diagnostic and therapeutic measures. The authors compare the use of computed tomography enterography, magnetic resonance enterography, and ultrasound in this setting. In addition, they compare the advantages and disadvantages of different treatment approaches, including medical therapy, endoscopic balloon dilation, endoscopic stricturotomy, and intralesional injection of corticosteroids.

Another review article examines immunization in adult patients who have chronic liver disease and those who have received a liver transplant. As Dr Stacey Rolak, Dr Adnan Said, Dr Rita German, Ms Mary S. Hayney, and Dr Freddy Caldera note, these patients have an increased risk for infections from vaccine-preventable illnesses. Superior immunogenicity has been seen when vaccines are administered early in the course of liver disease and before liver transplant. The authors summarize vaccination recommendations from the Advisory Committee on Immunization Practices regarding influenza, herpes zoster, hepatitis A, hepatitis B, pneumococcal pneumonia, human papillomavirus, and COVID-19.

Our third review article focuses on emerging treatments for eosinophilic esophagitis (EoE), a condition that was first described in the literature more than 40 years ago. To date, no therapies have been approved by the US Food and Drug Administration for patients with this condition. Dr Erin Phillips Syverson and Dr Elizabeth Hait explore recent research on a number of promising EoE treatments in development. These include novel corticosteroid preparations such as a budesonide suspension, orodispersible tablet formulations of budesonide and fluticasone, and mometasone preparations, as well as biologics such as dupilumab, cendakimab, lirentelimab, and benralizumab.

Our Advances in Endoscopy column features an interview with Dr Aasma Shaukat on improving colonoscopy. Her discussion covers quality indicators for colonoscopy (before, during, and after the procedure), metrics for determining colonoscopy quality, advances in benchmarks for adenoma detection rate, resources for providers interested in improving their colonoscopy skills, and innovations such as artificial intelligence that can help improve the quality of colonoscopy.

Finally, de-escalation of inflammatory bowel disease (IBD) therapy is the focus of our Advances in IBD column. Dr Ryan C. Ungaro discusses potential reasons to de-escalate therapy, the main risks associated with this process, the identification of successful candidates, and optimal timing and monitoring. He also discusses when and how to restart therapy and the next steps in research, among other issues.

I hope that you enjoy these articles and find them useful in your clinical practice.

Sincerely,

Gary R. Lichtenstein, MD, AGAF, FACP, FACG