



Addiction Prescription: A Bridge Between Addiction Medicine and Digestive Diseases

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Addiction to mind-altering substances presents major burdens to society among multiple domains. Consequently, there is an overwhelming need for adequate access to addiction treatment, and in many instances, opportunities to meet these needs can be overlooked [1]. Although the field of gastroenterology (GI) is not often associated with addiction treatment, of the many substance use disorders (SUDs) encountered in GI practice, alcohol use disorder (AUD), is among the most impactful. Ranked as the seventh-leading risk factor for premature death and disability worldwide [1–3], AUD carries a lifetime prevalence of 29%, accounting annually for over 88,000 deaths and \$250 billion in health-care and criminal justice costs and lost productivity in the United States (US) alone [1–3]. Alcohol consumption in the US has increased in recent years, more significantly since the beginning of the COVID-19 pandemic [3]. Alcohol-associated liver disease (ALD) accounts for 50% of all liver-related deaths and is the most common cause of liver transplantation in the US [1, 2].

Although the pathophysiology of AUD is complex, involving genetic, psychosocial, and environmental factors, Haque and Fiellin [4], in a recent issue of *Digestive Diseases and Sciences*, highlight the substantial overlap that exists

between gastroenterology/hepatology and addiction medicine in caring for patients with SUDs, which often account for and exacerbate many gastrointestinal and liver diseases (Fig. 1). They reference a recent survey that found 90% of GI providers desire more formal training in the treatment of AUD [5]. The same survey found that only 61% of providers refer patients for psychosocial therapy, 71% have never prescribed pharmacotherapy, and 50% lack of knowledge of Food and Drug Administration (FDA)-approved medications [5]. Despite the compelling efficacy of available pharmacologic and psychosocial treatment strategies, along with recommendations of societies such as the American Association for the Study of Liver Diseases (AASLD) for treatment for all patients with AUD, these treatments remain misunderstood and underutilized [6].

Further exacerbating the low rate of treatment by providers, Haque and Fiellin [4] report that only 35% of the patients referred to addiction medicine services receive ongoing treatment after their hospitalization. There are a multitude of factors underlying this observation, including the observation that patients may be hesitant towards treatment, the negative stigma associated with seeking and receiving treatment for SUDs, a lack of well-trained providers, deficiencies of insurance coverage, transportation, or time, and an underappreciation of the severity and chronicity of addiction as a disease [7].

Recent literature has shown that alcohol-associated liver disease clinics are viable and effective [8]. Furthermore, providing addiction treatment is not only cost-effective, but also lowers the rates of hepatic decompensation and mortality [9–11]. For those who are compliant prior to transplantation, ongoing treatment of addiction and mental health comorbidities is essential for the long-term health of the recipient.

There are multiple effective approaches to incorporating addiction medicine education into GI/hepatology training [12]. Some major medical centers involved with liver transplantation are fortunate to have both addiction medicine and transplant hepatology fellowship programs. Collaboration

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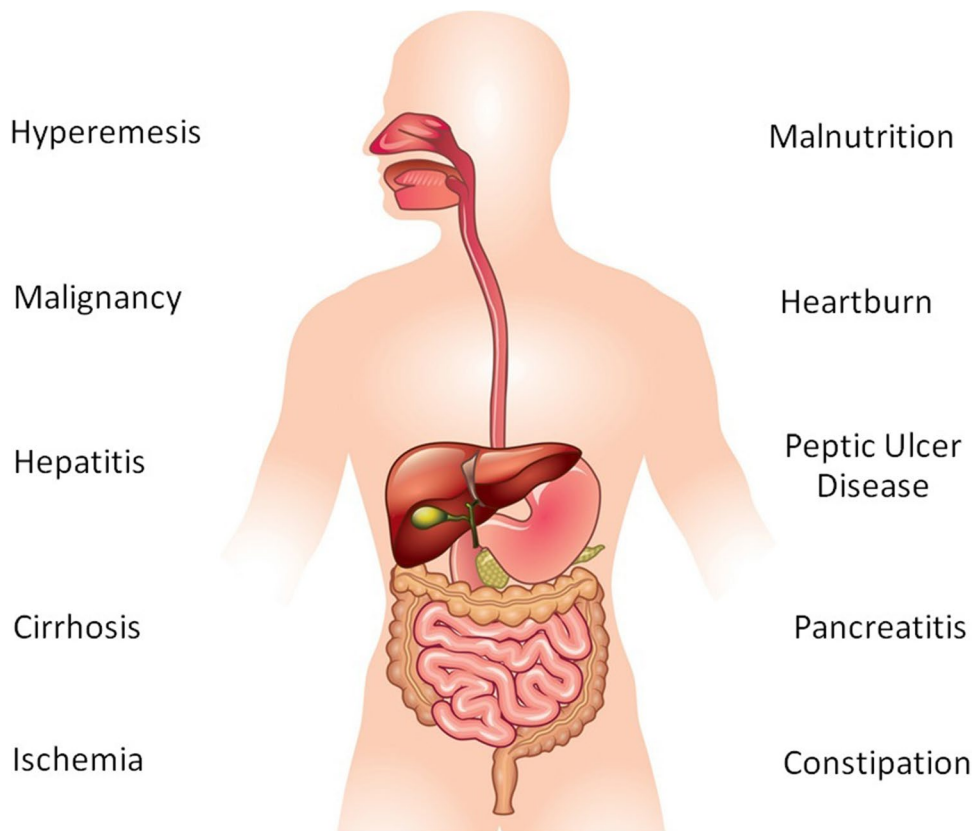
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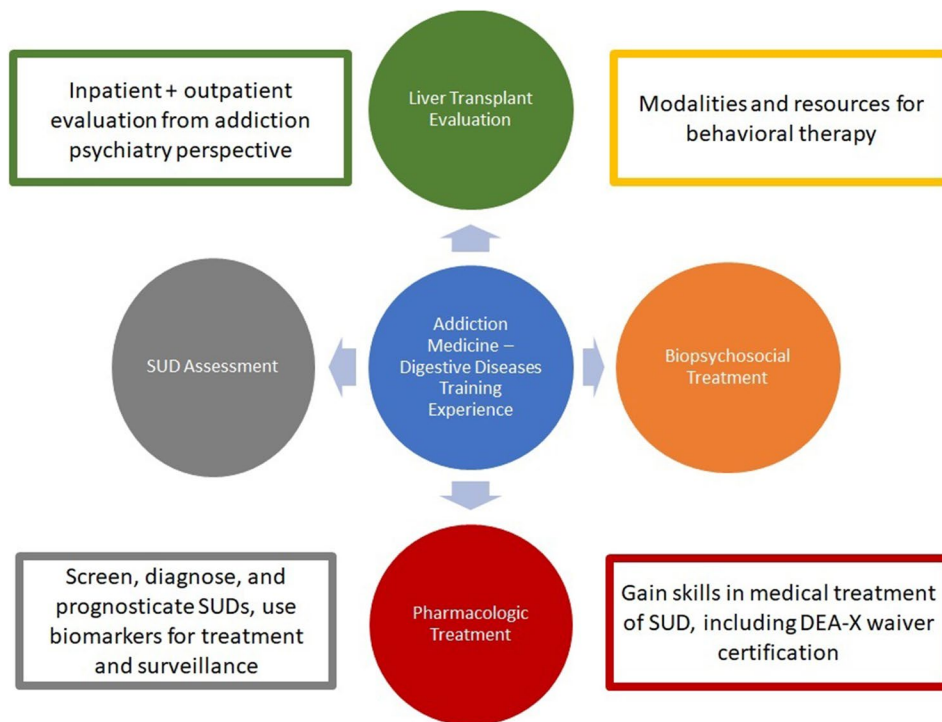
Fig. 1 Impact of substance use disorders on digestive diseases, as highlighted by Haque and Fiellin [4]. This list is not exhaustive but illustrates the overlap that exists between these sub-specialties



between these two programs has facilitated the creation of a 4-week executive fellowship in our medical center during

which fellows gain additional training in addiction medicine (Fig. 2), that engages trainees in inpatient and outpatient

Fig. 2 Core competencies, patient care, and clinical experiences for trainees who complete a 4-week executive fellowship in addiction medicine at the University of Nebraska Medical Center



management of SUD. Goals of this fellowship include increasing medical knowledge in the treatment of SUDs, along with education regarding the selection of appropriate screening tools, the use of nonjudgmental motivational interviewing skills, and accessing community resources that help navigate patients through recovery from SUDs.

After completing the executive fellowship, trainees report greater confidence and capability in more comprehensively assessing and treating patients with SUDs, especially in the context of solid organ transplant evaluation. Additionally, trainees report an improved approach towards AUD as a disease that benefits from treatment, similar many other medical conditions, which in turn reduces the stigma surrounding SUDs that Haque and Fiellin [4] appropriately emphasize. To the authors' knowledge, this is the only transplant hepatology fellowship in the US that has mandated an addiction medicine rotation. After witnessing the benefits that this exposure has for trainees and patients, we agree with Haque and Fiellin [4] regarding the importance of incorporating addiction education into digestive disease training, given the substantial overlap that exists between these two sub-specialties.

By encouraging multidisciplinary collaboration and education in addiction medicine, the goal is to provide patients with both pharmacologic and psychosocial resources to promote recovery and minimize the impact that SUD has on their health. Increasing accessibility for patients increases the number of patients who are treated for SUD.

We agree with Haque and Fiellin [4] that for those providers who are unable to complete a formal one-year fellowship in addiction medicine or who may not have access to addiction training in their institution, that provision of web-based resources and other curricula may help providers who frequently encounter these patients in clinical practice to become more comfortable with treating them. In general, this type of training will positively impact not only on their patients' health, but also on the burden of SUDs on health care systems and society. For the centers that have access to transplant and addiction medicine, we hope that continuing to promote the opportunity for interdisciplinary collaboration can increase the prevalence of providers who can comfortably manage SUDs in GI practice.

Declarations

Conflict of interest The authors have no conflicts of interest, no grants or financial support to acknowledge or disclose in the development of this article.

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