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COMMENT

# Comment to "Psychological disorders in patients with chronic postoperative inguinal pain"

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We would like to congratulate and thank B.T. Miller et al. for this very important contribution to society [1]. With this paper, they have opened the doors for dialog regarding the role of mental health in patients who develop chronic postoperative inguinal pain (CPIP). We strongly agree with the authors about the need for a more holistic approach to patients with CPIP specifically and even inguinal hernia more broadly. This article is thought-provoking and gives us a road map for how to approach these patients. We believe that this approach can be applied to patients with CPIP as well as to patients who struggle with mental health conditions who present with a primary inguinal hernia. Additionally, we feel strongly that CPIP is a public health issue that is largely preventable and warrants more discussion.

The authors have found that patients who develop CPIP also often deal with complex psychosocial issues. While in some cases, it is not clear if these mental health issues were present before the index inguinal hernia surgery, these patients were found to have higher rates of mental illness, pain catastrophizing, disability, substance misuse, and a history of childhood abuse than the general population. It seems quite significant that 35% of patients who developed CPIP had previously been diagnosed with and received treatment for a mental health condition [1]. The authors point out that the question remains whether CPIP increases the risk of psychological disorders or if these disorders predispose patients to CPIP. Regardless, it seems clear that psychological factors often play a significant role in this disease process and suggest that psychological therapy should be part of the treatment for this surgical disease.

Mental illness prior to surgery has been linked to higher incidence of pain and long-term opioid use [2]. It does not take a big leap to suggest that mental health issues may predispose patients to CPIP. Given the findings of this paper and our own observations, we think that there is a role for further study on the link between mental health and the development of CPIP. In our inguinal hernia practice, we have observed that patients with pre-operative anxiety about CPIP ask more questions, often come in for multiple pre-operative appointments and get multiple opinions prior to surgery. They are also more likely to experience pain requiring opioids postoperatively than the general population.

As surgeons, we must also consider our contribution to this public health issue. We have normalized our informed consent discussion by quoting a rate of 10–12% for CPIP and 0.5–6% of long-term disability after inguinal hernia surgery [3]. In comparison, common bile duct injury during cholecystectomy is a debilitating complication of a commonly performed surgery. Considerable research was performed to better elucidate why injuries occur and how to prevent them, which has in turn led to the practice of obtaining a "critical view of safety". This resulted in significantly reduced rates of common bile duct injury over the last 20 years [4]. It is known that CPIP after anterior repair is often mapped to areas that clearly mimic the dermatomes of the three most common nerves known to be present in this area, yet surgeons do not always identify those nerves at the time of surgery. A critical view of safety with identification of the ilioinguinal, iliohypogastric, and genital branch of the genitofemoral nerve and consideration of neurectomy should be performed during every anterior inguinal hernia repair. Felix et al. describe a critical view of safety for the myopectineal orifice of Fruchaud in laparoscopic and robotic inguinal repairs to ensure lack of vascular injury and injury to the lateral branch of the femoral cutaneous nerve[5]. This, in combination with other factors, have led to a lower incidence of CPIP over the last two decades. As discussed in this paper, injury to these nerves can result in significant impairment and we have a responsibility to do everything we can to prevent this life altering complication.

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Chronic pain after inguinal hernia repair is multifactorial and requires a holistic approach to therapy and care. The authors are doing tremendous work to treat these patients and to study this complex problem. We all share a responsibility that includes recognizing the role psychosocial factors play in this disease and the adjunct to care that some patients may need before and after inguinal hernia repair, not just patients with CPIP. Additionally, we need to recognize our role in causing the problem. Better attention to the anatomy, nerve identification and protection are essential to performing inguinal hernia repairs. As surgeons who are committed to continuous improvement, we should strive to do for CPIP the same as we did for CBD injuries. We should strive to eliminate this disease altogether.

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## Declarations

**Conflict of interest** Michael Reinhorn MD FACS has received consulting fees from Heron Therapeutics. Lauren Ott PA-C has no conflicts to disclose. Nora Fullington MD FACS has no conflicts to disclose.

**Human and Animal Rights** This commentary does not contain any data related to human subjects

**Ethical Approval** This commentary does not contain any study of human subjects

**Informed Consent** This commentary did not involve the study of humans and did not require consent

## References

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