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AUTHOR REPLY

Without doubt, substantial controversy surrounds mesh, its efficacy and the potential complications arising from its use. This study did not seek to address the utility of mesh in pelvic floor repairs nor draw any new connections between the use of mesh and patient pain. While the incidence and severity of chronic pain following vaginal mesh placement is not clear, it is a well-accepted and frequently debilitating complication after mesh-augmented vaginal procedures. This study examined a selective population, almost all of whom had substantial chronic pain as a complication after mesh-augmented vaginal surgery, to identify modifiable factors contributing to the patient's experience and recovery. The most significant feature associated with a poorer outcome was the degree of catastrophization by the subject, which varied substantially despite relatively similar pain levels.

Perhaps the most interesting feature of our results is the association of greater catastrophization with sexual pain. There exists a large body of evidence demonstrating increased catastrophization among women with dyspareunia and/or vestibulodynia¹ and exploring the significant negative impact of this pain-related psychosocial factor in magnifying the patient's pain experience.² Most of these studies, however, have examined patients with dyspareunia in comparison to patients without pain. Within our cohort, however, the large number of subjects allowed for a comparison of well-matched patients with similar pain levels in the same body region, differing primarily in the association of that pain with sexual relations. Thus, this study confirmed that sexual pain *in particular* is potently associated with negative beliefs toward pain and poorer attitudes towards recovery than other types of genitourinary pain. In fact, the combination of sexual pain and catastrophization is associated with altered systemic pain processing and generalized sensory dysregulation³ suggesting that the presence of dyspareunia may negatively impact other pain domains in these patients, which could serve as a significant barrier to recovery.

Our study reinforces the substantial body of data that sexual pain, regardless of its origin, remains a large factor in women's pain perception and overall emotional and physical health. Dyspareunia/sexual pain in any context remains underrecognized; education and discussion regarding these disorders remain poor in most clinical settings. However, just asking about it and recognizing it as an important aspect of the patient's pain is the beginning of working to manage the self-effacing impact of sexual pain on patient well-being. A detailed characterization of the pain should include the location and nature of that pain, including inciting factors such as intercourse, as well as exploration of the patient's perception of the pain, which needs to include an assessment of catastrophization.

A multitude of options exist for the management of catastrophization after its recognition; greater incorporation of multidisciplinary care may ease negative perceptions and help break the cycle of pain that is reinforced by catastrophization. But only

EDITORIAL COMMENT



In the past decade, we witnessed a dramatic change in female pelvic surgery. We started by offering slings and meshes to all the patients that needed a procedure to correct stress urinary incontinence and pelvic organ prolapse, and ended up banning them all. The complications correlated with mesh surgery were so dramatic that some national regulating bodies around the world interdicted their use. Many pelvic floor surgeons encountered a new clinical entity, known as “mesh-o mania”. Many patients, even the ones with a perfectly successful outcome and without complications, asked meshes to be removed. The real incidence of the complications associated with mesh surgery is not really known. There are clear outcome advantages in the use of meshes compare to the procedures we used in the pre-mesh era: stress urinary incontinence and correction of the apical components of the vagina are some examples of it.

Therefore, there must be something more than a solely interaction between the mesh and patient's body to explain the complication rates for this surgery. The current article explores precisely this issue, namely how can patient's perception of the events influence surgical outcome. Some patients experience surgery and post-operative pain due to an exaggerated mental thought process known as “catastrophization”. This psychic condition could be the actual cause of development of chronic pain, disability and depression in some of the patients with mesh surgery complications. Pelvic surgeons are not the only ones who are dealing with this entity. Catastrophization is actually well-known in many other surgical specialties. The good news is that there are tools such as questionnaires that can be used to identify these patients and offer them a proper treatment. Interestingly, the authors found in their study a higher incidence of catastrophizing among patients complaining of dyspareunia and, more in general, of vaginal pain. Patients with a high catastrophizing scores had a decreased hope and an unrealistic expectation for recovery. The outcome of our procedure clearly does not depend solely on the surgical act. Proper patients counseling and managing expectations is as important as the surgical skills used in treating our patients. We should become familiar with the variety of non-surgical techniques such as biofeedback, relaxation techniques, mindfulness, meditation, and coopt them in our everyday practice.