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Mini commentary on 2017-OG-20433R1: Electromyographic characterization of abdominal wall trigger points developed after caesarean section and response to local anaesthesia: an observational study

A pathway to personalized pain care?

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Chronic abdominal and pelvic pain is a debilitating problem that afflicts 15-20% of reproductive age women (Ayorinde A et al. Eur J Pain 2017; 21:445-455). The potential etiologies are diverse and often reflect pathology in one or more organ system. While there has been substantial progress in providing effective care for women with chronic pain, current treatment strategies continue to be limited by incomplete response and high recurrence rates. One of the most significant barriers to developing a patient-centered, personalized treatment approach is our limited understanding of the various mechanisms underlying the pathogenesis of pain in this poorly understood and heterogeneous condition.

Among the numerous causes of chronic pain, abdominal wall pain is a prevalent but under-recognized and poorly understood source. In this month's edition of BJOG, Poli-Neto et al report electromyographic characteristics of presumed trigger points in women with chronic abdominal wall pain following cesarean section and provide an important step towards defining a personalized, mechanism-based approach to this condition. The authors performed electromyography in 29 women with presumed

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trigger points after cesarean section and then treated them with weekly lidocaine injections for 4 weeks. They found that abnormal electromyography findings prior to injections (which were present in 15 women) was associated with a significantly higher likelihood of pain improvement 1 week and 3 months after lidocaine injections.

This study highlights an important barrier in clinical care and research studies of chronic abdominal and pelvic pain. As the authors correctly point out, there are no uniform, objective diagnostic criteria for many presumed etiologies of chronic pain. In the case of abdominal wall pain, distinguishing pain due to generalized myofascial pain, focal trigger point, abdominal wall neuropathy, or referred pain due to an underlying visceral cause is currently based on clinical history and exam findings without objective diagnostic criteria. However, the symptoms and exam findings of these diagnoses often overlap, leaving clinicians to empirically treat overlapping conditions with multiple or non-specific therapies. Identifying a reproducible and standardized test to define the mechanism of pain and predict which treatments are most likely to succeed, like the present study attempts to do, will greatly improve our ability to provide personalized treatment plans to patients with chronic pain.

While these findings provide insight into the pathophysiology of abdominal wall pain and suggest that mechanism-based treatment recommendations may be feasible, applicability of these results to broader populations of women with chronic abdominal pain are limited due to the exclusion of patients with concomitant endometriosis, painful bladder syndrome, or irritable bowel syndrome, all of which frequently co-occur with trigger points. Efficacy and mechanistic studies, such as this, are highly manicured and do not reflect most clinical populations. In reality, most women with chronic abdominal-pelvic pain have more than one cause of pain. As such, findings from these studies are not consistently reproducible in real world practice. However, these studies are important first steps towards identifying personalized care strategies for chronic pain.

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