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CORR Insights®: Clinician and Patient-Reported Outcomes Are Associated With Psychological Factors in Patients With Chronic Shoulder Pain

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Where Are We Now?

For surgery performed to address chronic pain, psychological and social issues often influence outcomes to a greater degree than anatomy and surgical pathology

This CORR Insights® is a commentary on the article “Clinician and Patient-reported Outcomes Are Associated With Psychological Factors in Patients With Chronic Shoulder Pain” by Wolfensberger and colleagues available at: DOI: 10.1007/s11999-016-4894-0.

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[5, 6]. Relevant scientific findings have emerged for chronic pain in the upper extremities [6, 11], back [6, 12], neck [19, 22], and from articles that did not limit the focus of the participants' pain to a specific anatomical area [6, 7].

In their study, Wolfensberger and colleagues replicated the finding that psychological and social factors carry important predictive value, and that many general medical issues do not. The value of anxiety, depression, fear-avoidance, and education specifically were confirmed. The study findings, made in patients with chronic shoulder pain, add to the suggestions of others that the anatomical focus of chronic pain may, in certain circumstances, be less important than other factors [2].

The study findings also justify routine and thorough clinical evaluation for such predictors, and indicate that

individual consideration of each predictor (as published by the American Academy of Pain Medicine [7], and taught within the curriculum of the American Academy of Orthopaedic Surgeons [3]) is preferable to an algorithm (such as the one published by the American Psychological Association [4, 5]), which allows the influence of “red flags” [7] to be diluted or to even go unnoticed.

Where Do We Need To Go?

There are several questions that warrant further investigation: What is the best method for clinical evaluation of psychological and social predictors of persistent pain? How can routine thorough clinical investigation be encouraged, particularly given that it appears that surgeons often avoid such investigations [9, 10, 16]? Can a patient's prospects for benefiting from surgery be improved by addressing the modifiable predictors?

The findings by Wolfensberger and colleagues identify a patient's inability to speak the native language of the

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clinic as a predictor of surgical outcomes. This is a relatively novel finding. Therefore, additional research is needed in order to determine whether this finding can be replicated.

In regard to a clinical method for determining whether predictors of a poor surgical outcome are likely to influence an individual patient's result, a review of records currently appears to be necessary, given the unreliability of reports from patients [1]. Additionally, value has been demonstrated for a variety of psychological tests and other types of questionnaires, which can reveal predictors that might not become apparent through a review of records [6, 7, 10, 20]. Direct psychological evaluation could potentially identify predictors that might not become apparent through record review or tests/questionnaires. Is it possible that any one of these options (record review, tests/questionnaires, or psychological evaluation) would reliably provide sufficient information to make the other options unnecessary for most individual cases? If tests/questionnaires were found to be the most effective option, how many of the validated tests/questionnaires (and which ones) need to be utilized within an individual case in order to reach a reliable conclusion? Can tests/questionnaires, record review, or a combination of both be relied upon to provide enough information, so that a

thorough psychological evaluation would not be necessary?

How Do We Get There?

Research could attempt to answer these questions through a design that compares these options, and various combinations of these options, to one another. Specifically, the following could be compared to one another: (A) record review; (B) psychological evaluation; (C) tests/questionnaires; (D) various combination of these approaches (eg, record review combined with especially sensitive tests/questionnaires in the absence of an actual psychological evaluation, compared to record review with tests/questionnaires in the context of a thorough psychological evaluation). In terms of the tests/questionnaires that should be considered within such research, a minimal list includes: The Battery for Health Improvement [6, 7], both modern forms of the Minnesota Multiphasic Personality Inventory [20], and the Distress and Risk Assessment Method [10]. The goal of such research would be to find a balance between maximizing the identification of patients who are unlikely to benefit from surgery, and minimizing the expenditure of resources.

In regard to encouraging surgeons to routinely evaluate individual cases for the predictors of surgical failure,

clinical guidelines can play a role. Some guidelines currently call for individual cases to be routinely evaluated for predictors of surgical failure [21], but other guidelines make no mention of this issue [13]. The developers of guidelines that do not currently call for routine clinical evaluation for predictors of surgical failure should note the relevant scientific findings, and consequently modify the guidelines in a way that encourages routine relevant clinical evaluation.

Additionally, surgeons (as well as other stakeholders, such as payers) should recognize that there are many reasons why a thorough approach should be adopted for the clinical evaluation of predictors of surgical failure. Predictors of poor surgical outcome are common among surgical candidates [10], and so identifying those predictors can allow for interventions that can improve clinical results; identifying these factors may also decrease the risk of litigation [14, 15] and even violence against clinicians [8].

Determining whether the results of surgery can be improved by addressing modifiable predictors requires a double-blind randomized controlled trial design that monitors whether patients who undergo preoperative interventions demonstrate better outcomes than those who do not. For a limited number of predictors and patients, such research might be possible; for instance, one

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might randomize surgical candidates who have not already sought treatment for noncritical levels of anxiety or depression into blinded treatment and sham-treatment groups. Unfortunately, for most predictors, such a research design does not appear to be feasible. For example, it would not be possible to randomize or blind many predictors (like compensation status, which is a dominant predictor [17, 18]; or education level), and a research design would not be conscionable if it randomly withheld intervention for suicidality or homicidality (both of which have been identified as issues which should exclude patients from being considered for surgery for their chronic pain [7]). Therefore, for most predictors, the best that can be hoped for is a less than ideal research design, such as comparing patients who extricate themselves from litigation prior to surgery to those who do not, even though there is no blinding or randomization.

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