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NEW RESEARCH SHOWS 50% of PATIENTS WHO CATASTROPHISIZE PAIN WILL NOT BENEFIT FROM SPINE SURGERY

ORLANDO, FL—Half of patients who demonstrated a high level of "pain catastrophizing" before spine surgery experienced more pain, greater disability and a lower rate of return to work one year after surgery, according to a new study reported at the 32nd Annual Meeting of the North American Spine Society (NASS). Pain catastrophizing behavior is an excessively negative mental status occurring in reaction to a painful experience or to the expectation of one to come.

"Despite being good candidates for spine surgery, some patients will not benefit from surgery due to psychologic factors that are not often considered in normal surgical decision-making," said Neil Manson, MD FRCSC, one of the study's authors. "By accurately assessing patients' mental health status—especially pain catastrophizing—spine surgeons can select appropriate patients who may benefit from surgery and identify others who may need additional support psychologically in order to succeed post-operatively."

Pain Catastrophizing Behaviour Can Be Associated with Poorer Clinical Outcomes

Wednesday October 25
11:35–11:41 a.m.
Room W230CD

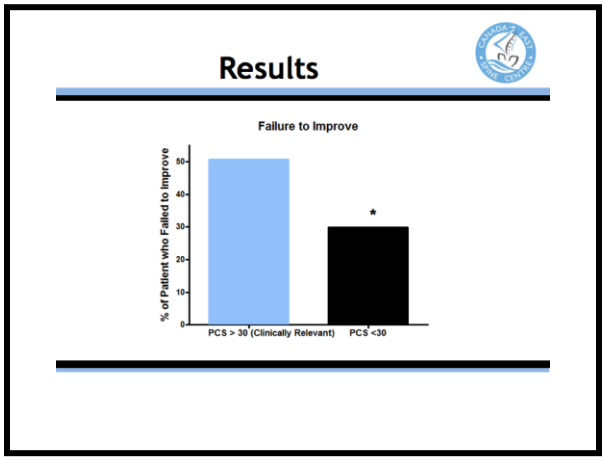
The study, "Pain Catastrophizing Behaviour Can Be Associated with Poorer Clinical Outcomes," is a prospective, observational analysis of 213 consecutively enrolled spinal surgery patients aged 20-87 from March 2014 to August 2015. Patients who had undergone previous spinal surgery were excluded. Outcome measures included the Oswestry Disability Index (ODI), Numeric Rating Scales for Back and Leg Pain (NRS-B/L), and return to work (RTW) status.

Participants were given the Pain Catastrophization Scale at baseline, along with functional outcome measures (ODI, NRS-B/L). Work status at time of surgery was recorded. At one year post-operatively, ODI, NRS-B/L and RTW were measured. A one-way analysis of variance (ANOVA) was conducted to analyze the effect of Pain Catastrophization scores on functional outcome measures and RTW status. Outcome measures were collapsed into binary groups; patients who failed to significantly improve on all three measures, and those who did significantly improve. Chi-square analysis was conducted to determine the effect of Pain Catastrophizing on overall failure to improve.

Pain catastrophizing at a clinically relevant (score of >30) level resulted in significantly higher pain for both NRS-B ($F(1,192)=6.58$, $p=0.011$) and NRS-L [$F(1, 193)=12.13$, $p=0.001$] at 1 year post-operatively, as well as a statistically and clinically relevant increase in ODI scores [$F(1,193)=5.937$, $p=0.016$].

(more)

Patients with clinically relevant levels of pain catastrophizing had significantly delayed return to work as well [F(1,70)=4.009,p=0.049]. Indeed, 50% patients with clinically relevant levels of pain catastrophizing pre-operatively failed to clinically improve on all three outcome measures of interest resulting in a significant level of failed surgery (p=0.035).



The researchers concluded that clinically relevant levels of pain catastrophization predispose the surgical spine patient to worse functional outcomes, a decrease in return to work and a higher rate of overall surgical failure at one-year post-operatively. With the knowledge gained from this research, surgeons can begin including pain catastrophizing as a baseline measure and consider the patient's pain catastrophizing when deciding if the patient would best benefit from conservative or surgical intervention for elective surgery patients. If surgery is required, surgeons can discuss expected outcomes and recommend appropriate pre-surgical interventions. Further research is underway to determine which combination of mental health measures are most predictive of surgical success.

The study authors are: Edward P. Abraham, MD of Saint John Regional Hospital, Saint John, NB, Canada and Kate Wagg, BA; Erin Bigney, MA; Eden A. Daly; and Neil A. Manson, MD, FRCSC of Canada East Spine Centre, Saint John, NB, Canada.

FDA Device/Drug Status: This abstract does not discuss or include any applicable devices or drugs. The NASS 2017 Disclosure Index can be found on pages 168-188 of the final program.

More than 3,000 spine professionals will meet at the NASS 32nd Annual Meeting in Orlando, October 25-28, 2017 at the Orange County Convention Center to share the latest information, innovative techniques and procedures, best practices and new technologies in the spine field. NASS is a multidisciplinary medical organization dedicated to fostering the highest quality, evidenced-based and ethical spine care by promoting education, research and advocacy. NASS is comprised of more than 8,000 members from several disciplines, including orthopedic surgery, neurosurgery, physiatry, neurology, radiology, anesthesiology, research and physical therapy. For more information, visit www.spine.org, NASS Facebook and NASS Twitter.

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