KESSLER FOUNDATION Podcast Transcript

Exercise and PRP Promising for Shoulder Pain in Wheelchair Users with Spinal Cord Injury - Ep9

*** Recorded on September 24, 2020. *** Listen to it here.

JOAN BANKS-SMITH: 00:04

[music] This is Joan Banks-Smith, for Kessler Foundation's Fast Takes - Research that Changes Lives. Today, I'm with Dr. Trevor Dyson-Hudson, director for the Center for Spinal Cord Injury Research and the Center for Outcomes and Assessment Research at Kessler Foundation, to talk about his latest peer reviewed article, Ultrasound-guided platelet research plasma injection for the treatment of recalcitrant rotorcuff disease and wheelchair users with spinal cord injury: A pilot study. This was e-published ahead of print on May 7th, 2020 by the Journal of Spinal Cord Medicine. Funding sources for the study is the Derfner Foundation, Kessler Foundation, and the National Institute on Disability, Independent Living, and Rehabilitation Research. Dr. Dyson-Hudson, can you share with us the main takeaways of this study?

TREVOR DYSON-HUDSON: 00:55

We know that shoulder pain is common in people with spinal cord injury. Due to lower limb paralysis, individuals with spinal cord injury are forced to rely on their upper limbs for mobility, such as wheelchair propulsion and transfers and performing tasks, reaching and everything from the seated position. So this can lead to overuse injuries and, as I said, shoulder pain. So current treatments generally consist of education, evaluating the equipment they're using to see if that's contributing, and what are their activities of daily living. If necessary, we prescribe pain medications, do steroid injections, and then prescribe physical therapy to try to strengthen up the shoulder muscles and improve mechanics. However, if these treatments fail, then surgery is often the next line of treatment. But for individuals with spinal cord injury, I mean that can-- you take an upper limb dependent person and you operate on their shoulder, that really can have a significant impact on their function and quality of life. So this study-- we know platelets, they're found in the blood and they help with healing. So they're kind of the first cells that appear on sight when you cut yourself. So the purpose of this study was looking at something called platelet-rich plasma in which you take a volume of blood from somebody, spin it down to isolate a large amount of the platelets, process that, and then re-inject it into a damaged area.

DYSON-HUDSON: 02:46

And so in our study, we were injecting it into the rotator cuff of individuals who had had shoulder pain, who hadn't responded to physical therapy, so they were looking for alternate treatments. And we found that there was a significant number of the individuals-- it was only six people, but for some of them they really had quite significant improvements in their pain, which was remarkable because they had tried other types of treatments with no improvement. So we thought this was promising. And I've seen many of these individuals-- this study was done a number of years ago, and I've seen some of these individuals and they're still pain free. So there was something that worked for them. Unfortunately, we don't know if it was the treatment in itself or if there was just a placebo kind of effect or the injection itself did something to break up the tissue. So it wasn't necessarily the platelets themselves. So what it does, is it kind of-- the impact in the field and some of the implications are, is it kind of suggests that maybe cell based therapies like platelet-rich plasma may be beneficial in people with spinal cord injury.

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BANKS-SMITH: 04:18	What is the impact and next implications of the study to the field ?
DYSON-HUDSON: 04:22	What it suggests is that there may be alternative treatments for shoulder pain in people with spinal cord injury, such as platelet-rich plasma and perhaps other cell based therapies, which we're starting to explore. This was a pilot study, so we don't know if this was a placebo or whether it actually was from the platelet injection, so to speak. So really, what we would need to do is larger clinical trial with multiple groups where one group gets the platelets and another group gets an alternative treatment. Ideally, if it's blinded-- with this kind of treatment, it may be a little easier to blind those performing the procedure and those receiving it.
BANKS-SMITH: 05:11	Well, thank you very much for sharing this information with us.
DYSON-HUDSON: 05:14	Thank you for having me.
BANKS-SMITH: 05:16	For more information about this study, check out the press release on our website, kesslerfoundation.org. The link is in the program notes. Be sure to subscribe to our SoundCloud channel, Kessler Foundation, for more research updates.