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## Under Suspicion: Painkiller Ziconotide Could Increase Suicidal Ideation

*The active agent ziconotide, the synthetic toxin of the cone snail (Conus magus), was acclaimed a safe alternative to morphine when it was introduced six years ago. Now it is increasingly suspected of causing patients to commit suicide. Researchers working under the auspices of Prof. Christoph Maier (Director of the Pain Clinic Bergmannsheil at the Ruhr University in Bochum) presume that ziconotide not only suppresses the transmission of pain stimuli, but also deteriorates the frame of mind and could simultaneously reduce anxiety and impulse control. These mechanisms could promote suicidal tendencies in vulnerable patients. The research scientists thus advise careful diagnosis and monitoring of the psychic condition of patients treated with ziconotide.*

They have published their findings in the Medical Journal Pain.

### Alternative to opioids for severe pain

Ziconotide has numerous advantages, including the fact that it does not have any of the side effects typically associated with opioids, such as respiratory depression (asphyxia). Moreover, it does not lead to tolerance development. It has been on the European and American market since 2004, being administered to patients with intrathecal pumps if opioids do not suffice or if these trigger unacceptable side effects. Recently, the number of reports on the psychic side effects of ziconotide has increased. The researchers in Bochum analysed numerous studies, registering an increasing number of attempted suicides, which the original authors had not attributed to the ziconotide treatment. In PAIN, the physicians from RUB present two new cases, which underscore the suspicion that ziconotide enhances suicidal ideation.

### Suicide despite pain relief and normal test results

As Prof. Maier stated, the first case is particularly tragic, the patient concerned, who had had pain in his feet for many years and undergone numerous unsuccessful treatments, having experienced a distinct improvement and pain relief for the first time when treated with ziconotide. There were no side effects. Tests disclosed that his depressiveness, which had also not been particularly marked before the ziconotide treatment commenced, even decreased. After a good three weeks, he appeared to be happy to all concerned. But two months after the ziconotide treatment had commenced he unexpectedly committed suicide.

A further patient, a 39-year-old woman, who had undergone pain treatment for backache for 14 years, had had depressive phases 20 years previously and had

attempted suicide after a pregnancy. Two months after the ziconotide treatment had commenced -- which, according to current recommendations, should not have been administered to her in the first place due to her medical history -- she mentioned that she had increased suicidal ideation. Moreover, she complained of other psychic side effects with hallucinations, confusion and partial amnesia, which had resulted in two severe car accidents. It is conceivable that the accidents were also of suicidal character. The physicians stopped the ziconotide treatment. Two weeks later both the suicidal ideation and the hallucinations stopped.

Pharmaceutical companies and approval authorities must investigate the situation

Prof. Maier concludes that both cases underscore the assumption that there is a causality between ziconotide and suicidal tendencies. The pain specialist strongly emphasizes that the pharmaceutical companies and approval authorities should urgently investigate this yet again. All patients must be analysed for possible psychic disorders before treatment commences and closely monitored irrespective of pain relief due to the drug. The above-mentioned cases also underscore the fact that an increase in pain treatment when standard drugs fail is not always the correct mode of action. As Prof. Maier so aptly said, it is often even exactly the wrong path. This had already been pointed out a few weeks previously at the Congress of the German Pain Therapists (Kongress der deutschen Schmerztherapeuten)

**Journal Reference:** 1. Christoph Maier, Hans-Helmut Gockel, Kai Gruhn, Elena K. Krumova and Marc-Andreas Edel. Increased risk of suicide under intrathecal ziconotide treatment? -- A warning.. Pain, 1.11.2010 DOI: 10.1016/j.pain.2010.10.007