SOUTHWESTERN NEWS

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CORTICOSTEROIDS REDUCE PAIN OF SICKLE CELL CRISIS

DALLAS -- A new treatment has proven effective in combating the acute pain associated with sickle cell disease, researchers at The University of Texas Southwestern Medical Center reported in the March 17 issue of *The New England Journal of Medicine*.

Dr. George R. Buchanan, principal investigator, and his associates are the first researchers to publish on the new treatment using a corticosteroid - in this case methylprednisolone - for the acute pain associated with sickle cell disease crisis. Buchanan is professor of pediatrics and holder of the Children's Cancer Fund Distinguished Professorship in Pediatric Oncology and Hematology at UT Southwestern.

Corticosteroids, which are drugs similar to natural hormones made in the adrenal glands, have been used as anti-inflammatory agents in the treatment of other diseases, such as arthritis, but they have never before been tried in sickle cell disease, Buchanan said. The study showed that methylprednisolone, when given along with pain medications, reduced the duration of pain and shortened the hospital stay of young sickle cell patients by one-third.

Working with Buchanan on the study were Dr. Timothy C. Griffin, associate medical director of hematology at Cook-Fort Worth Children's Medical Center, and Dr. Donald McIntire, UT Southwestern biostatistician. At the time the study was completed, Griffin was a fellow training with Buchanan at Children's Medical

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Center of Dallas, the major pediatric teaching hospital associated with the university.

The researchers studied 36 children and adolescents with sickle cell disease, who had a total of 56 acute episodes of pain severe enough to require hospitalization. Patients in the double-blind study received either a saline placebo or a high dose of methylprednisolone upon admission to the hospital and again 24 hours later. All patients were given intravenous morphine sulfate until their severe pain abated, at which time they received oral medications to control pain, according to standard practice in the treatment of sickle cell crisis.

Buchanan said the downside of the study was that some patients receiving the short course of high-dose methylprednisolone had recurrences of pain soon after discharge from the hospital. However, he said that "corticosteroids are promising as an adjunct to supportive therapy for painful episodes in children and adolescents with sickle cell disease."

Buchanan said more studies are needed. "We need to look at other steroid medications, dosages and duration of treatment. I feel good about this new treatment approach. We may really be on to something."

Both researchers now are conducting additional studies into the use of corticosteroid agents in sickle cell disease at their respective hospitals.

Buchanan has directed the UT Southwestern-Children's Medical Center sickle cell program since it was established in 1977. It has grown from a one-physician operation to a staff that includes seven nurses and administrative personnel. It includes an East Texas outreach program. Besides research projects originating at UT Southwestern, the staff is involved in collaborative research projects with the National Institutes of Health, the University of Colorado and others. Last year more than 500 children and adolescents were treated in the Dallas program.

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