

Health & Science

Coming Next Week

Southeast struggles with sky-high STDs

While most of the country is talking about eradicating syphilis, high STD rates in the Southeast are exacerbated by poverty, geography, conservatism and lack of resources.

Bone marrow transplants tapped for “bold new step” in disease treatment

AT A GLANCE

Broadening the applications of BMT include treating autoimmune disease, but scientific questions about the expensive experimental procedure abound.

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AMNEWS STAFF

A 9-YEAR-OLD OREGON GIRL WAS scheduled this month to receive a bone marrow transplant for severe juvenile rheumatoid arthritis.

The procedure, which appears to be unprecedented in the United States for this condition, would make Mollie Hauck, of Canby, Ore., a pioneer in the use of BMT to treat autoimmune disease.

Physicians at Oregon Health Sciences University's Doernbecher Children's Hospital in Portland planned to remove bone marrow stem cells, ablate her immune system with chemotherapy, then re-infuse the stem cells with the hope that they will regenerate a healthy immune system.

BMT for autoimmune disease is a nascent but expanding area of experi-

mental therapy that, if proven successful, could change the way physicians think about rheumatoid arthritis, multiple sclerosis, lupus and scleroderma: from chronic illnesses requiring long-term palliative care, to conditions that may be all but cured by rejuvenating a defective immune system.

Yet a host of scientific questions are yet to be answered, and the real world applications of a procedure that can cost upward of \$100,000 remain to be seen.

“This is a bold new step in the treatment of these diseases, but the

jury is still out,” said David Sherry, MD, director of pediatric rheumatology at Children's Hospital and Regional Medical Center in Seattle. Dr. Sherry, who is Mollie's rheumatologist, emphasized that her condition is of the severest sort and that the transplant follows years of expensive and painful standard care.

“Where this is going to settle down in our armamentarium is yet to be revealed,” he said. “If we refine our techniques over the next 10 years so [the procedure] becomes safer and proves to be curative, it may be used

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Bone marrow transplants tapped for new treatments

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for milder disease.”

Prevalence figures for autoimmune disorders vary due to differences in diagnostic criteria, but one analysis of prevalence and incidence studies using conservative criteria, published in *Clinical Immunology and Immunopathology* (September 1997), found more than 8 million people with one of 24 autoimmune diseases: 154,278 with multiple sclerosis; 1,736,099 with rheumatoid arthritis; 63,052 with systemic lupus erythematosus; and 8,922 with scleroderma.

Yet physicians agree that BMT,

which has had an 8%-9% mortality rate in Europe, should only be considered for very ill patients who haven't responded to conventional therapy. Spokespersons for the American Autoimmune Related Diseases Assn. and the National Multiple Sclerosis Society said BMT isn't recommended for the vast majority of patients.

Still, optimism about BMT for autoimmune disease is high, based on animal research and successful human trials in Europe. At least two research consortia — one centered at the Fred Hutchinson Cancer Research Center in Seattle and another

at Northwestern University Medical School in Chicago — have developed protocols for performing bone marrow transplants on patients with severe autoimmune disease.

Approximately 48 BMTs have been performed in the United States for MS, lupus, scleroderma and rheumatoid arthritis. More than 200 of the operations have been performed in Europe, where the mortality was 8% to 9%.

The National Institute of Allergy and Infectious Diseases has issued requests for proposals to conduct clinical trials to test the procedure and is

negotiating contracts with research groups.

Broadening applications

THE BROADENING APPLICATION OF bone marrow transplant has been furthered by a host of advances making the procedure safer and more efficient. These include use of “committed” stem cells, drugs that allow stem cells to rapidly regenerate, and better surveillance and treatment of infection.

Last month, physicians at Massachusetts General Hospital reported

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