

Cortisone

Beauty Or Beast?

By BRIAN SULLIVAN

NEW YORK (AP) — It was 30 years ago that Dr. Philip Hench tried a new drug on patients badly crippled with rheumatoid arthritis in the Mayo Clinic. The substance was cortisone.

Today, tennis players with bursitis, arthritics and asthma patients are familiar with the artificial hormone that puts out painful fires in the body. Cortisone, one of the broader group of corticosteroids, is almost as well known as penicillin.

The steroids, potent medication, can attack a wide variety of diseases, but they can also produce potent, disagreeable side effects. The same corticosteroid that can relieve the agonies of rheumatoid arthritis and bronchial asthma like no other medicine can also produce high blood pressure, peptic ulcer and other troubles.

So the physician prescribing a cortisone-like steroid — they are a \$225 million business today — must prescribe with great care.

"This is the excellent example of a drug you think is going to be a panacea," says Dr. Carol Proudfit, senior scientist in the American Medical Association's department of drugs. "There is a tremendously wide range of usefulness and problems associated with them. Corticosteroids serve as an example of the things you learn about drugs only with use."

Cortisone had its clinical beginnings in 1948, when Hench was treating rheumatoid arthritis patients at the Mayo Clinic. The early results were dramatic.

In September of that year, as Donald Robinson recalls in "The Miracle Finders," an account of key developments in modern medicine, Hench injected cortisone into a 29-year-old woman who had been bedridden for four years with crippling rheumatoid arthritis.

Two days later, on Sept. 23, "for the first time in several weeks, she could roll over in bed easily. On Sept. 24, she was able to get out of bed and exercise. She could raise her arms over her head. By Oct. 1, her pain and stiffness were almost completely gone. She went shopping in downtown Rochester for three hours.

"Other patients who were in grisly shape with rheumatoid arthritis were given Compound E (cortisone). They all responded excellently."

But cortisone did not cure arthritis or any other disease. It just controlled the symptoms. And a range of side effects began to appear with prolonged use.

As research continued over the years, doctors found that cortisone, or more properly corticosteroids in general, had a dazzling range of effects on many diseases — and carried about as imposing a potential for undesirable, dangerous side effects. Most of the cortisone-like drugs now in use are synthetic agents that have replaced cortisone and have been tailored in the laboratory for more specific uses.

These synthetic analogs, as they are called, are effective because of their potent anti-inflammatory effects in many diseases. Inflammatory disease is a reaction of body tissue to some irritant. Unlike antibiotics, which kill disease-causing bacteria in the body, the steroids provide the body tissue with a resistance, a protective mantle, against the inflammation. But at the same time, they let bacteria or viruses — if they are causing the inflammation — multiply.

Another illness on which steroids can have a striking ef-

fect is bronchial asthma. Most treatment for the labored, agnized breathing is of the symptoms alone, not the cause. When all else fails, steroids come close to treating the source — they somehow "knock out the asthma," while conventional treatment often provides merely temporary relief.

Among the many problems associated with steroid use: They can cause cataracts, glaucoma, peptic ulcer and diabetes; produce high blood pressure; mask some signs of infection; increase salt and water retention; cause potassium loss which can lead to heart trouble; promote calcium loss; produce an odd, puffy "moon face" appearance; suppress a child's growth, cause menstrual irregularities and neurological disorders.

"Psychic derangements may appear when corticosteroids are used," says Physicians' Desk Reference, a guidebook on prescription drugs. "These may range from euphoria, insomnia, mood swings, personality changes and severe depression to frank psychotic manifestations."

Also, there is no real knowledge of possible effects on pregnancy, experts say, so the use of steroids on pregnant women has to be weighed against possible harm to the fetus.

Another danger with steroid treatment, according to Ms. Proudfit, is that the introduction of artificial steroids can interrupt a feedback system that the body's normal hormone system depends on, thus suppressing the pituitary function. The patient's own adrenal gland production can be affected, and perhaps lead to adrenal insufficiency.

For the future, the AMA's Ms. Proudfit says, there's need to educate both physicians and the public about drugs like steroids.

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