

New Approach for Attacking Lupus Identified

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Because abnormally high levels of interferon-alpha can lead to lupus, researchers have developed drugs that block interferon. These drugs, however, have immunosuppressive side effects that can leave patients vulnerable to various illnesses and infections, some of which can be deadly. Currently, these drugs are being tested in clinical trials. If researchers are able to develop drugs for the newly identified drug targets, patients may be able to avoid these immunosuppressive effects.

Interferons have two major functions. First, they protect against viruses and second, they regulate immune responses, strengthening immune responses and playing a role in autoimmunity. Different proteins, called STATs, mediate the two functions of IFN. STAT1 mediates the autoimmune and inflammatory functions, and STAT2 mediates the virus protection function.

The investigators discovered that calcium specifically increases activation of STAT1 by interferons, and thus turned their attention to calcium. The researchers tested whether two kinase enzymes in the calcium-signaling pathway, CAMK and Pyk2, could be manipulated to control STAT1. In studies involving mice, the investigators showed that blocking these calcium-signaling pathways with a drug called KN-93 regulated the amount of STAT1, but not STAT2 activation.

The idea was if you block these signaling pathways, would you block the STAT1 part, which controls the inflammatory/deleterious effects and preserve the antiviral part. We tested that in an animal model of lupus and we were able to show, in vivo, that you can suppress STAT1 activation by inhibiting the calcium-dependent kinases.

Lupus is an autoimmune disease that can affect various parts of the body, including the skin, joints, heart, lungs, blood, kidneys and brain. Inflammation, considered the primary feature of lupus, is characterized by pain, heat, redness, swelling and loss of function. In most people, the disease affects only a few organs and symptoms are mild, but in others, the disease can cause serious and even life-threatening problems. According to the Lupus Foundation of America, an estimated 16,000 Americans develop lupus each year.

Support for the research came from the National Institutes of Health and an Abbott Scholar Award.

About Hospital for Special Surgery

Founded in 1863, Hospital for Special Surgery (HSS) is a world leader in orthopedics, rheumatology and rehabilitation. HSS is nationally ranked as No. 1 in orthopedics, No. 3 in rheumatology by U.S. News World Report, and has received Magnet Recognition for Excellence in Nursing Service from the American Nurses Credentialing Center.

Hospital Quality in America Study, HSS received five-star ratings for clinical excellence in its specialties. A member of the New York-Presbyterian Healthcare System and an affiliate of Weill Cornell Medical College, HSS provides orthopedic and rheumatologic patient care at New York-Presbyterian Hospital at New York Weill Cornell Medical Center. All Hospital for Special Surgery medical staff are on the faculty of Weill Cornell Medical College.

Tuca 1 times.

3. The anesthesia patients, in the evening to water enema.
4. On the morning of the opening of the surgical site should be wound dressing 1.

Postoperative care

1. Selection of surgical hardware Banchuang accordance with the general anesthesia and postoperative care after regular routine care.

2. Position

- (1) limb after surgery with stents, pillows, sandbags and other Chigaohuanshi to facilitate blood reflux.

(2) the fixed body plaster display, should be comfortable, to venous return, not oppression from local gypsum fracture or soft tissue principle.

3. Watched limb blood circulation.

4. General orthopedic surgery after 10-14 d rewirable.

Health Guidance:

1. Timely guidance restore function in patients with exercise, intended to restore partial limb function and general health, prevent complications,

Surgery to achieve the desired results.

General can be divided into three after exercise:

(1) early: After 1 to 2 weeks, with the support of the medical staff, the volume of activities from light to heavy, ranging grow from small to large.

(2) Medium-term: from the surgical incision healing, rewirable to remove traction or use of external fixation for a period of time, according to the condition of patients,

Exercise early in a timely manner on the basis of increased physical activity, strength, time, and with simple equipment or stent-assisted training.

(3) late: strengthening symptomatic training, and with physiotherapy, massage, acupuncture, and so as soon as possible restore limb function.

2. Encourage patients to bed early movement, pulls the rings, and raise the body, increased lung capacity and the promotion cycle, preventing atelectasis. Lung infection, deep vein thrombosis.

About the Author

From www.newswise.com:

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