partment of Dermatology and cared for by infectious disease specialists. The diagnosis was mononucleosis. Monospot and Epstein Barr virus PCR were positive. No liver affection was present. All immunosuppressive treatment was withdrawn, and we concluded that this was a primary infection and not a reactivation of a virus due to immunosuppressive treatment. The patient recovered relatively quickly and after three weeks she had recovered completely.

After 6 weeks, her arthritis reappeared and we restarted treatment with etanercept: 50 mg per week + local application. After another 4 weeks, her psoriasis was back to original level with a PASI of 18. We then added 1 mg/kg of efalizumab to her treatment regime of 50 mg etanercept per week. Again, effect was prompt. She has now been receiving this treatment for six months. She is checked every month through blood samples and is in a good state of health. She has been receiving disability benefits since the age of 18, but is now in a rehabilitation programme and will begin studies at the University of Trondheim in the autumn.

Reference

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Biological Drugs for Psoriasis in Stavanger University Hospital

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Over the past 3 years our department has treated 75–80 patients with biological drugs for psoriasis. This number will increase considerably as biological drugs have become an accepted tool in the dermatological treatment arsenal. Currently three approved biological drugs are available in Norway for the treatment of psoriasis: Remicade® and Enbrel®, which are approved for both psoriasis and psoriatic arthritis, and Raptiva® for psoriasis. Humira® is approved for psoriasis arthritis, but at present not for psoriasis. In addition, we have used Amevive® for psoriasis.

In our experience biologicals are highly efficacious, more specific, safer, without the broad activity and risks found in traditional systemic treatment, but definitely not unproblematic. It is important to select the right patients for the right biopharmaceutical, because these drugs differ with regards to onset of action, control of inflammation, sustainability and safety profiles. In addition to potentially serious side-effects and association with important co-morbidities, not all psoriasis patients respond to biologicals.

Clinical studies have been performed on selected patients with stable moderate to severe disease, but we have only limited knowledge of biologicals in the treatment of unstable psoriasis, erythrodermic psoriasis or pustular forms of psoriasis. In other words, treatment of the most problematic group of patients with biologicals is based on clinical experience and reports from other medical centres, but not on controlled studies.

Psoriasis is now considered as a complex autoimmune disease, which shares common inflammatory pathogenesis with other immune-mediated inflammatory diseases. TNF-α antagonists: Remicade®, Enbrel® and Humira® are also used in inflammatory bowel disease, rheumatoid arthritis and spondyloarthropathies. Raptiva® and Amevive®, which inhibit activation of T-cells, have only psoriasis as indication. The mode of action of Raptiva® and Amevive® is at an earlier step in the psoriatic

cascade compared with TNF-α antagonists, but nevertheless the TNF-α antagonists elicit more rapid suppression of inflammation in psoriasis and generally have a more profound effect on the disease. This suggests existence of an alternative pathway in psoriasis, which can be activated after blockage of interaction between antigen-presenting cells and T-cells. On the other hand, Raptiva® seems to be relatively effective in the treatment of chronic psoriasis of the hands and feet, whereas Remicade® and Enbrel® generally need more time.

During 2006 we hope to be able to present national guidelines for use of biological drugs in dermatology in Norway. This is a very important project, because at present the six university departments in Norway use different treatments protocols with regards to selection of patients, history of previous malignancies, use and interpretation of Mantoux reaction, treatment regimes and follow-up. On a Nordic level it will be important to have a registry to monitor outcome data in a day-to-day population, not just those selected for clinical trials. The registry will enable us to compare the safety data for a particular biological drug against other therapies and to record variable co-morbidities and concurrent medical treatments.

Since the biological drugs as a group exhibit rapid onset of action, control of inflammation, significant improvement in symptoms and improvement in quality of life, in the future the patient population and organizations will demand that therapy with biological drugs commences in the early stage of the disease. The medico-economic issues of the cost to society need to be clarified and will be an important challenge.

Biological Drugs for Psoriasis in Iceland

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A number of dermatologists have stated that we have entered a new era with the use of biological drugs. However, we are not entirely without experience when it comes to using potent drugs. To name a few potent and potentially dangerous "old" drugs: azathioprine, cyclosporine, dapsone, methotrexate, isotretinoin, etretinate and steroids. Generally speaking, the biologicals are not necessarily more effective than the old drugs, but they seem to work in many cases where other treatments fail. I guess I am a little defensive here, as some dermatologists, myself included, have been conservative and late to start using these potent drugs for our patients.

Rules and regulations

In Iceland, rheumatologists have been using biological drugs from the start, but we have only recently entered the arena. In order to reduce the use of expensive drugs, the Icelandic authorities limited the use of most of the very expensive drugs to the Landspitali University Hospital. This means that even if the drug is registered in the country, and thus available, the doctor has to apply to the hospital drug committee to have the drug paid for in full by the hospital. Otherwise

the patient has to pay the full price. Most drugs in Iceland are paid for by state insurance, except for a small amount paid by the patient. In the case of the biologicals the hospital then continues to pay for the drug after the patient has received the first treatment and has been discharged home. The system for the biologicals