

Balneotherapy(hyperthermia) for Ankylosing Spondylitis

12 males of Ankylosing spondylitis (AS) and 12 healthy controls received 9 cycles (50 minutes each) of whole body (full bath) hyperthermia. Initial water temperature of 36°C was raised by 1°C every 5 minutes up to 40°C to achieve oral temperature of 38.5°C. The water was then cooled by 1°C every 5 minutes to reach 36°C. Blood levels of proinflammatory cytokines (TNF-alpha, IL-1 beta and IL-6) were measured before, during and after treatment. Cytokine levels reduced by 40-50% in AS patients between 6 and 24 hours after treatment. (I H Turner, U Muller-Ladner, U. Lange. Clinical Rheumatology, Online publication Dec 17, 2008) Hot spring water bath (bath-cure) is the most popular form of balneotherapy in Japan. Balneotherapy is accepted as essential complementary therapy for rheumatic diseases by American College of Rheumatology. Heat application causes analgesia and reduces tension of skeletal muscles and tendons. Whole body hyperthermia, in contrast to local heat, can affect deeper layers of soft tissue as well as joints and thus have an alleviating effect on enthesitis, arthritis and spondylitis. Cytokines are short acting soluble mediators of immune response. Inflammation caused by proinflammatory cytokines has damaging effects on joints and other structures in rheumatological disorders. Regulation of cytokine production can control these harmful effects. Cytokines, therefore, are attractive therapeutic targets in AS and other rheumatologic diseases. Newer biologic anticytokine-therapy (available in India) is very expensive and beyond reach of most of our population. Balneotherapy can provide a valuable cost effective supplementary or alternative treatment in such cases. Vagbata has recommended swedana in cases of back pain including low back (A. Hri. Sootra. 17/25). Tapa, Upanah, Ushma and Drava (Parishek/Avagaha) are 4 types of swedana. Avagaha sweda can be administered by various ways such as kund, koop and kuti. It seems that balneotherapy is similar to kund (Avagaha) sweda.