



Aging & Chronic Diseases

What can you do for a patient with multiple myeloma?

Practical guidelines for treatment

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- Review blood tests and consult a doctor before starting treatment
- Avoid heavy loads on joints to reduce chance of fracture
- Prevent deconditioning: start exercising before medical treatment

Cancer patients suffering from multiple myeloma – a form of bone marrow cancer – often have to deal with

physical limitations for which physiotherapy treatment is required. Because there are no practical guidelines yet that physiotherapists can rely on, Canadian researchers delved into the literature and asked experts and patients for their opinion. As a result, they present a series of recommendations to support physiotherapists in delivering optimal care to multiple myeloma patients.

Mobilisation

Patients suffering from multiple myeloma (MM) experience anaemia, thrombocytopenia (too little platelets), pancytopenia (reduction of all blood cells) or fractures due to side effects of medical treatment or the cancer itself. These patients are often hospitalised, causing their physical condition to decline rapidly. Therefore, it is important to mobilise these patients before, during and after treatment.

The recommendations given by the researchers are twofold: 1) a guide for the therapist to decide based on blood results whether or not to mobilise in the acute phase and 2) evidence-based guidelines on how patients can be trained best before, during and after chemotherapy and stem cell transplantation to improve their muscle strength, condition, mobility, sleep, and quality of life.



Haemoglobin

Physiotherapists should look closely at the blood tests and consult a doctor before initiating treatment. Physiotherapy is generally contraindicated in patients with haemoglobin levels lower than 8g/ dl (4.96 mmol/ L). In these patients, it is better to wait with mobilisation; physiotherapists can best monitor vital functions and look for signs of exhaustion (pain on the chest, shortness of breath, dizziness etc.)

Platelets

According to the authors, there is no clear cut-off point for suspending physical activity in MM-patients with too little platelets. However, because it is common for patients to receive platelet transfusions after chemotherapy at less than 10,000/ μ L of platelets, in such cases they advise physiotherapists to only assist the patient with transfers to the toilet and to gently move the joints while lying or sitting. The higher the platelet count, the more the patient is allowed to exercise. For numbers between 10,000 and 20,000/ μ L strength training without resistance and standing mobilising exercises, for numbers between 20,000 and 40,000/ μ L strength training with an elastic band and numbers above 40,000/ μ L, patients are allowed to exercise cautiously on a bicycle. Physiotherapists must always pay attention; avoid high blood pressure as it can cause bleeding.

Mouth mask

MM patients with a reduced immune response due to leukopenia and neutropenia (shortness of white blood cells and neutrophils) do well to wear a mouth mask and wash their hands after every physiotherapy session. According to the authors, this reduces the chance of infection.

Fractures

Be careful with twisting movements, bending over, reaching above the head, pushing, pulling, and lifting is the motto of the experts to physiotherapists. These movements pose a risk of fractures in the spine. Almost 80 percent of MM patients suffer from bone pain and over half actually suffers a fracture. Physiotherapists can alter exercises to reduce the chance of a fracture. You can think of using supporting means, such as braces and walkers. On the other hand, it is better to avoid heavy loads on the joints and end of range movements.

Sleep, exhaustion, and quality of life

Physical activity during and after medical treatment can improve the mental health of the MM patient. The researchers found evidence in a number of studies that physical activity ensures that patients sleep better, are less tired and experience a better quality of life. However, the authors do have some reservations concerning these results: the studies included small groups and not all participants had MM.

Deconditioning

The scientists recommend starting with improving fitness and muscle strength before medical treatment. During medical treatments, patients appear to be less compliant to exercise. However, if they exercise before and during treatment, they can slow down the deconditioning process and possibly even speed up recovery.

Consensus and literature research

In total, ten specialised physiotherapists and ten MM patients indicated to what extent they agreed with thirty statements about the physiotherapy treatment for patients with MM. The authors determined in advance that there was consensus if at least eighty percent of the experts and patients endorsed the statements. In addition, the scientists also conducted a systematic literature search, which resulted in 17 usable studies in which they found relevant information about the effectiveness of certain training principles.

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Expert opinion

In their paper, the authors rightly argue that an important starting point is that further damage should be avoided in this vulnerable patient group, but that this does not mean abandoning exercise therapy completely. After all, the latter can also have negative consequences, in particular an even faster decreasing exercise tolerance and negative psychosocial consequences. The authors also emphasise the low number of reported complications of carefully coordinated exercise therapy and training in patients with multiple myeloma. The potential benefits of intervention therefore generally outweigh the additional risks.

Practical implications of this publication are almost no longer necessary, given the very concrete and carefully considered recommendations. The above summary is - of course - not complete. The full paper can be accessed free of charge using the link above.

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