

Diffuse Idiopathic Skeletal Hyperostosis Treatment Guidelines

Diffuse idiopathic skeletal hyperostosis (DISH) is a condition characterized by the calcification and ossification of soft tissues, primarily affecting the spine and peripheral sites. The treatment guidelines for DISH focus on managing symptoms and improving quality of life, as there is currently no cure for the condition.

General treatment approach

In daily practice, the treatment approach is based on the knowledge gathered mainly from the treatment guidelines for other conditions or from empirical approaches of single patients. In most patients with isolated back discomfort, the mainstays of treatment include activity modification, physical therapy, bracing, NSAIDs, and bisphosphonates.

Treatment modalities

The treatment of pain in the spine, in peripheral joints or entheses is largely based on the practice used for the treatment of osteoarthritis with analgesics, local or systemic non-steroidal anti-inflammatory drugs (NSAIDs), random physiotherapeutic modalities and lifestyle changes such as diet programmes.

Surgical interventions

Surgical decompression and stabilization may be indicated for specific sequelae of the condition, including fracture, cervical myelopathy, lumbar stenosis, neurologic deficits, infection, or painful deformity.

Occupational considerations

Patients employed with heavy manual labour, can benefit from ergonomic, occupational therapy and aptitude counselling.

Medication considerations

Due to the comorbidities that often accompany DISH, it has been suggested to avoid medications that might enhance insulin secretion such as sulfonylureas, β -adrenergic blockers or thiazide diuretics.

Perioperative management

Due to the propensity of patients with DISH to develop heterotopic ossification following joint replacement surgeries, it has been suggested to adopt preventive measures such as the use of NSAIDs and/or irradiation in the perioperative period.

Challenges in treatment research

Therapeutic studies in DISH are hampered by several reasons. The most important is that the present classification criteria only allow for recognition of DISH in a late stage of a well-established condition. Furthermore, it has recently been shown that the time elapsed from the initial ossification process to a full completion of the ossified bridges may last up to approximately 10 years.

Potential future treatments

At present, there is only indirect evidence for possible therapeutic interventions. Besides the already mentioned interventions with NSAID treatment, which may prevent heterotopic ossifications, it has been suggested that bisphosphonates may be able to reduce osteophyte formation in both animal models and humans, which suffices them as candidate options.

If DISH would be confirmed as a local inflammatory process, various anti-inflammatory agents, including biological agents, could prove to be potentially useful. However, such treatment has not been tried out in patients with DISH so far, and due to its economic burden, this hypothesis needs to be meticulously investigated.

Special considerations

Finally, since trauma to the ankylosed spine may lead to spinal fractures with complications and death, or, complications during upper gastrointestinal/airway procedures, this also needs to be taken into account by physicians treating these patients.

References

Luo, T. D., & Varacallo, M. (2022). Diffuse idiopathic skeletal hyperostosis. PubMed; StatPearls Publishing. <https://www.ncbi.nlm.nih.gov/books/NBK538204/>

Mader, R., Verlaan, J.-J., Eshed, I., Jacome, B.-A., Puttini, P. S., Atzeni, F., Buskila, D., Reinshtein, E., Novofastovski, I., Fawaz, A., Kurt, de V., & Baraliakos, X. (2017). Diffuse idiopathic skeletal hyperostosis (DISH): where we are now and where to go next. *RMD Open*, 3(1), e000472. <https://doi.org/10.1136/rmdopen-2017-000472>

Nascimento, F. A., Gatto, L. A., Lages, R. O., Neto, H. M., Demartini, Z., & Koppe, G. L. (2014). Diffuse idiopathic skeletal hyperostosis: A review. *Surgical Neurology International*, 5(Suppl 3), S122-S125. <https://doi.org/10.4103/2152-7806.130675>