

**PP-121****Thermoablation in osteoid osteomas of the spine – The challenge****P.M. Serrano**, M. Silva, P. Neves, P. Barreira, D. Soares, P. Cardoso*Centro Hospitalar do Porto, Hospital Santo Antonio, Porto, Portugal*

Introduction: The typical pain of the Osteoid osteoma (OO), is nocturnal and often relieved by the use of salicylate analgesia. It is a self-limited disease but can persist for several weeks, months or even years. OO affects the spine in 10 to 25% of the cases and especially the posterior elements, inducing painful scoliosis and muscle spasm.

The diagnosis may be hard, and imaging through CT scan and MRI are essential.

The exact location of the "nidus" through imaging technics is very helpful especially when considering it is often hard to identify during surgery. This particular aspect, allied with the benefits of a minimally invasive approach, have been responsible for percutaneous radiofrequency ablation under CT guidance to be used with increasing frequency.

The proximity to the neurological structures however has been seen by many as a limit to this approach. With this in mind new techniques have been described with injection of gas or a refrigerated liquid in the epidural space as a protective barrier between the nidus and the spinal cord.

Objectives: Report our experience in treating Osteoid osteomas of the spine as well as the use of new techniques to perform thermoablation near neurological structures.

Methods: Revision of the literature concerning OO of the spine. Report of 8 cases of OO of the spine treated successfully in our Hospital. 4 of the cases were treated with thermoablation (vertebral body of D8, pediculum of L2, pediculum of L4, second sacral vertebra) and 4 cases underwent surgical resection (pediculum of L2, lamina of L2, lamina of L3, superior articular facet of L4).

One of the patients that underwent thermoablation was also submitted to gas injection in the epidural space because of its proximity to neurological structures.

Post-operatively he initiated an aseptic meningitis syndrome that has solved after 4 days.

Results: All patients refer complete relief from the nocturnal pain, proving the efficacy of both methods. One of the patients was submitted to an unilateral posterior pedicular instrumentation that caused some discomfort in the late follow up. Other minor complications were solved without sequels to any of the patients.

Conclusions: Complete resection although historically considered treatment of choice for OO with very good success rates, can present complications. To minimize surgical damage a precise location of the nidus is crucial. Percutaneous radiofrequency ablation under CT guidance is both efficient and safe being less invasive, performed under local anesthesia and allowing for a faster recovery, lower costs and shorter hospital stays. The post operative complications are similar in both methods.

New protective techniques allow thermoablation of OO located near neurological structures with increased confidence and safety.