

Lengthening the Lower Extremities of Children with Ollier's and Maffucci's Enchondromatosis Using Implantable Lengthening Nails

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Abstract

There are multiple forms of enchondromatosis with Ollier's and Maffucci's being the most prevalent types. Limb length discrepancy is a common problem in patients with Ollier's and Maffucci's enchondromatosis. There are multiple reports about lengthening bones in patients with enchondromatosis using external fixators. However, there are no case series regarding the use of implantable lengthening technology. The purpose of this paper is to describe our experience with implantable nail lengthening in patients with enchondromatosis. A retrospective chart and radiographic review of patients with enchondromatosis who underwent implantable nail limb lengthening was performed. Seven patients with 14 bony segments were reviewed. A total of 11/14 lengthenings were completed without difficulty. There were no issues in terms of fixation location in patients with Ollier's disease. One patient with Maffucci's syndrome experienced migration of the nail during two lengthenings due to a combination of intralesional fixation and preconsolidation. One patient with Ollier's disease developed a knee extension contracture requiring manipulation under anesthesia. No other complications were recorded. The use of implantable nail lengthening to resolve limb length discrepancies in patients with Ollier's disease appears to be safe and effective.

Keywords: Maffucci; Ollier; enchondromatosis; implantable nail lengthening; lengthening nail; motorized nail lengthening.

Conflict of interest statement

Dror Paley has patents and earns royalties from the Precice and Precice Stryde implants which are discussed in this article. No other authors have declare any potential conflicts. All other authors declare no conflict of interest.