Scopus

Documents

Jeantet, R.-E., Violas, P., Maximen, J.

Surgical management of proximal femoral unicameral bone cyst in children A EUROPEAN RETROSPECTIVE STUDY OF 201 PATIENTS BY THE FRENCH SOCIETY OF PEDIATRIC ORTHOPEDICS

(2024) *Bone and Joint Journal*, 106 B (5), pp. 508-514.

DOI: 10.1302/0301-620X.106B5.BJJ-2023-0577.R4

Department of Pediatric Orthopedic Surgery, Rennes University Hospital, Rennes, France

Abstract
Aims The aim of this study is to evaluate the surgical treatment with the best healing rate for patients with proximal femoral unicameral bone cysts (UBCs) after initial surgery, and to determine which procedure has the lowest adverse event burden during follow-up. Methods This multicentre retrospective study was conducted in 20 tertiary paediatric hospitals in France, Belgium, and Switzerland, and included patients aged < 16 years admitted for UBC treatment in the proximal femur from January 1995 to December 2017. UBCs were divided into seven groups based on the index treatment, which included elastic stable intramedullary nail (ESIN) insertion with or without percutaneous injection or grafting, percutaneous injection alone, curettage and grafting alone, and insertion of other orthopaedic hardware with or without curettage. Results A total of 201 patients were included in the study. The mean age at diagnosis was 8.7 years (SD 3.9); 77% (n = 156) were male. The mean follow-up was 9.4 years (SD 3.9). ESIN insertion without complementary procedure had a 67% UBC healing rate after the first operation (vs 30% with percutaneous injection alone (p = 0.027), 43% with curettage and grafting (p = 0.064), and 21% with insertion of other hardware combined with curettage (p < 0.001) or 36% alone (p = 0.014)). ESIN insertion with percutaneous injection presented a 79% healing rate, higher than percutaneous injection alone (p = 0.017), curettage and grafting (p = 0.028), and insertion of other hardware combined with curettage (p < 0.001) or alone (p = 0.014). Patients who underwent ESIN insertion with curettage had a 53% healing rate, higher than insertion of other hardware combined with curettage (p = 0.009). The overall rate of postoperative complications was 25% and did not differ between groups (p = 0.228). A total of 32 limb length discrepancies were identified. Conclusion ESIN insertion, either alone or combined with percutaneous injection or curettage and grafting, may offer higher healing rates than other operative procedures. Limb length discrepancy remains a major concern, and might be partly explained by the cyst's location and the consequence of surgery. Therefore, providing information about this risk is crucial. © 2024 British Editorial Society of Bone and Joint Surgery. All rights reserved.

Author Keywords
Bone Joint J 2024;106-B(5):508–514

Index Keywords
Article, Belgium, child, chronic pain, curettage, device removal, female, follow up, fracture, France, healing rate, human, injection, intramedullary nailing, leg length inequality, major clinical study, male, multicenter study (topic), pediatric hospital, postoperative complication, postoperative pain, proximal femur, retrospective study, school child, surgical infection, Switzerland, tertiary care center, unicameral bone cyst, adolescent, bone cyst, bone transplantation, clinical trial, curettage, diagnostic imaging, femur, multicenter study, preschool child, procedures, treatment outcome; Adolescent, Bone Cysts, Bone Nails, Bone Transplantation, Child, Child, Preschool, Curettage, Female, Femur, Follow-Up Studies, Humans, Male, Retrospective Studies, Treatment Outcome

Correspondence Address
Maximen J.; Department of Pediatric Orthopedic Surgery, France; email: julien.maximen@chu-rennes.fr

Publisher: British Editorial Society of Bone and Joint Surgery

ISSN: 20494394
PubMed ID: 38688504
Language of Original Document: English
Abbreviated Source Title: Bone Jt. J.
2-s2.0-85191911476
Document Type: Article
Publication Stage: Final
Source: Scopus

ELSEVIER

Copyright © 2024 Elsevier B.V. All rights reserved. Scopus® is a registered trademark of Elsevier B.V.

RELX Group™