Lipoma arborescens (LA) in childhood: Case report and systematic review of the literature

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Introduction

LA

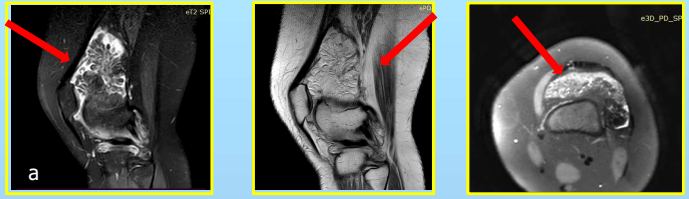
- Rare benign lesion of synovium
- Proliferation of mature fat cells in subsynovial layer
- More often in the knee of young adults (primary)
- Causes chronic effusions & restricted ROM

Case Report

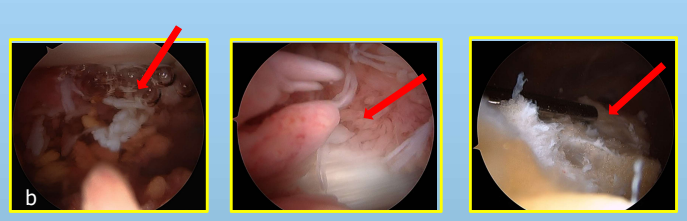
9 y. o. girl with left knee effusion and painful ROM limitation since a year

Plain radiograph and laboratory parameters negative

MRI (a) → nodular and frond-like villous proliferation of synovial tissue in the suprapatellar pouch without enhancement after contrast agent IV



Treatment: **Arthroscopical Synovectomy (b)**



Histopathological analysis confirmed the diagnosis

Outcome: Asymptomatic in a 36 m – follow up

Systematic Review

Database Searching (**PubMed**, **Google Scholar** ,**Cochrane)** using keywords related to **LA** and **synovial lipomatosis**

170 papers retrieved → ***406 reported cases***

211 males | 195 females

Only ***11 cases*** concerned ***children < 16 years*** (2,7%)

The main location was ***the knee*** (84,7%)

In ***one pediatric case*** (6,25%) more than one joints were affected

Treatment was in ***216 cases*** reported:

- 52,3 % arthroscopical synovectomy
- 41,2% open synovectomy
- 4,6% conservative options

7 cases (3,2%) experienced recurrence

LA is considered ***neoplastic*** but ***no malignant transformation*** has been reported

Conclusions

- LA should be considered when diagnosing chronic intra-articular effusions (c)
- MRI is the gold standard due to pathognomonic appearance (d)
- Arthroscopic (vs. open) synovectomy is safe and effective therapeutic approach because of minimal morbidity and early functional recovery with comparable low rate of recurrence (e)