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Superolateral Hoffa's Fat Pad Edema and Patellar Malalignment: Case Series

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Introduction:

- Hoffa's edema or inflammation of the superolateral adipose fat pad of the knee is a frequent finding in magnetic resonance imaging, although its association with clinical findings is not clear. [1]
- The objective of this study is to describe a series of patients with these findings and the prevalence of abnormal patellar malalignment parameters described in the literature. [2-9]



Methods:

- 90 patients (104 knees) with anterior knee pain aged between 15 and 45 years old and imaging signs suggestive of superolateral Hoffa's fat pad edema were included.
- Knee MRIs were performed at Clínica Alemana de Santiago between August 2020 and August 2021. All MRIs were reported by radiologists with musculoskeletal training and more than 5 years of experience.
- Patients with a history of trauma, patellar dislocation, ligament injuries and incomplete records were excluded.
- The parameters used were TT-TG, lateral patellar displacement, Insall-Salvati index, trochlear angle and sulcus angle. [1-3]



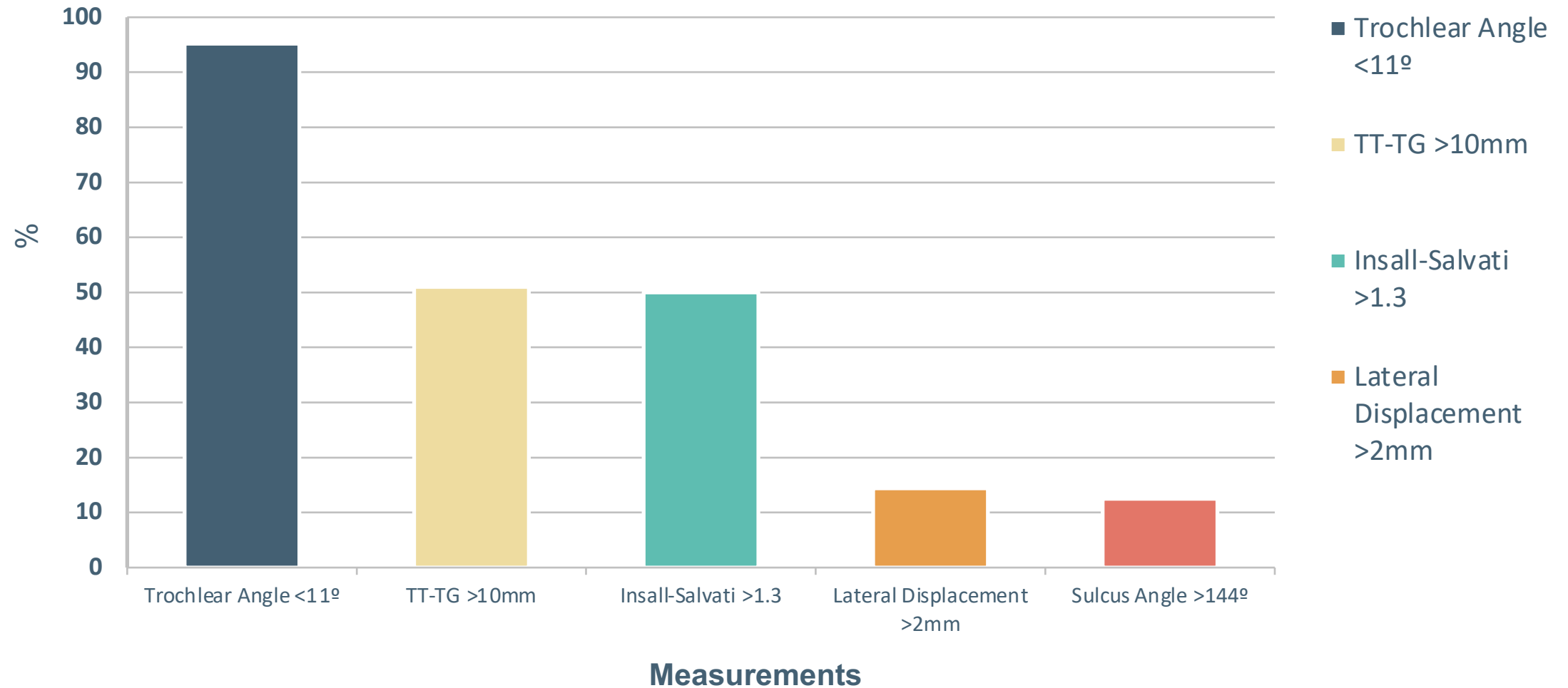
Results:

- 70.2% are women and the mean age is 33.3 years (SD 8.6, range 15 - 45).
- The average BMI is 24.5 (SD 4.2, range 18.4-35.6).
- 51% presented a TT-TG greater than 10mm, 14.4% a lateral displacement greater than 2mm, 50% Insall-Salvati greater than 1.3, 95.2% a trochlear angle less than 11° and 12.5% a sulcus angle greater than 144°. [1]



Results:

Prevalence of abnormal measurements in patients with superolateral Hoffa's fat pad edema



Discussion:

- In the studied subjects there is a high prevalence of abnormal trochlear angle, suggestive of trochlear dysplasia. About half of the patients studied have an abnormal TT-TG and Insall-Salvati index.
- The rest of the studied parameters are abnormal in less than 15% of the cases.
- Additional studies to standard MRI are required to evaluate and/or rule out the presence of patellar malalignment.



Conclusions:

- The finding of a Hoffa's edema in knee magnetic resonance is related with a high prevalence of abnormal patellar alignment indices such as TT-TG and Insall-Salvati.
- Therefore, in MRIs with signs suggestive of superolateral adipose fat pad edema the presence of patellar malalignment should be evaluated.



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