

A Taxa de Prevalência de Fabela está a Aumentar?

Fabella Prevalence Rate is Increasing?

Moisés Henriques⁽¹⁾

Palavras-chave: Articulação do Joelho; Artropatias; Ossos Sesamóides; Prevalência.

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To the Editor,

Last April I read an article in a Portuguese newspaper with the title “Does your knee hurt? It may be the fault of fabella, the bone that is resurging”.¹ Immediately, I remembered the last letter I addressed you and I knew, with more certainty, that it was worth it.

Berthume M and colleagues recently published the article “Fabella prevalence rate increases over 150 years, and rates of other sesamoid bones remain constant: a systematic review” in the *Journal of Anatomy*. They presented the prevalence rate of the fabella in a population of Koreans using a randomized previously gathered dataset and performed a systematic review to determine how Koreans compare with other populations, investigated possible changes in prevalence rate through time, and compared this with prevalence rates of other sesamoid bones.²

These authors found a temporal shift in prevalence rates, with the median prevalence rate in 2000 (31.00%) being almost 3,5 times higher than that in 1900 (7.64%), and no increase in prevalence rates of 10 other sesamoid bones in the human body.² Because of this, they postulate that the increase in fabella prevalence rate is due to an environmental factor related to the global increase in human height and weight: increased tibial length coupled with increased force from a larger gastrocnemius may produce the mechanical stimuli necessary to initiate fabella formation and/or ossification.²

Fabella prevalence in humans has a wide range (3% to 87%) making it a normal variant in human anatomy.² The highest rates reported are in Asians and Australians, but fabella is even more common in non-human mammals, which highlighted the role of the bipedal posture in the evolutionary development of the fabella.^{2,3} Despite that, there are still contradictory evidences about the importance of the mechanical stimuli from muscles in the fabella development.^{3,4}

Although the prevalence rate of the fabella seems to be increasing, we cannot ignore that prevalence rates calculation, which support this trend, have some important limitations. On the one hand, we have limitations related to the method employed: radiography or computed tomography scans may not always detect cartilaginous fabellae and magnetic resonance imaging scans have difficulties in detecting fabellae with very small dimensions, particularly if the knee is not correctly positioned.² This highlights further concerns when comparing prevalence rates between studies as some consider only osseous fabellae, whereas others also consider cartilaginous ones; others even do not specify this information.² On the other hand, we have limitations related to the collecting data method: as most studies rely on hospital archives of previously gathered imaging exams this will lead to skewed samples because those exams result of knee problems investigation and the presence of the fabella has been associated with some of them, including fabella pain syndrome, common fibular nerve palsy and popliteal entrapment syndrome.^{2,5,6}

Future studies aiming to calculate the prevalence of fabella in a population – this prevalence among the Portuguese people is unknown – should acknowledge the limitations referred above and plan a repetition of the study after some years, eventually a decade.

(1) Centro de Investigação Naval (CINAV)

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Autor correspondente: Moisés Henriques. email: salvodasaguas@gmail.com. Centro de Investigação Naval (CINAV), Base Naval de Lisboa - Alfeite, 2810-001 Almada, Portugal. <http://orcid.org/0000-0002-3194-1386>

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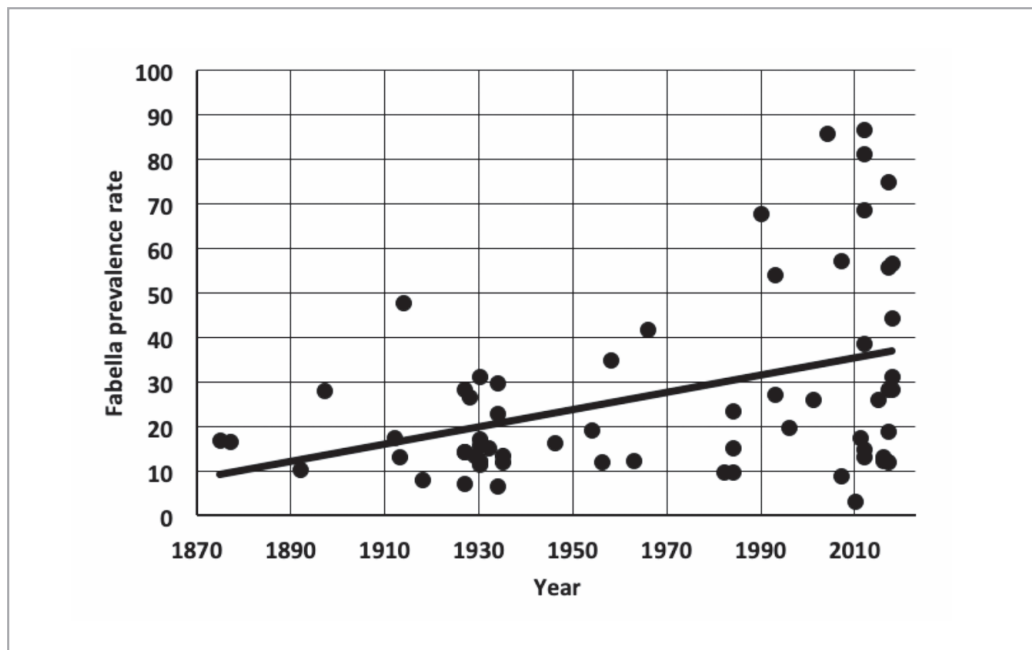


Figure 1 - Fabella prevalence rate according 63 different studies (1875 – 2018) and respective linear tendency line. Adapted from Berthaume M, Federico E, Bull A. Fabella prevalence rate increases over 150 years, and rates of other sesamoid bones remain constant: a systematic review. *J Anat.* 2019:1-13.

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