

# Simulation and study of the geometric parameters in the inguinal area and the genesis of inguinal hernias

Fortuny, G.; Lopez-Cano, M.; Susin, Antonio; Herrera, B.



We are interested in studying the genesis of a very common pathology: the human inguinal hernia. How the human inguinal hernia appears is not definitively clear, but it is accepted that it is caused by a combination of mechanical and biochemical alterations, and that muscular simulation plays an important role in this. This study proposes a model to explain how some physical parameters affect the ability to simulate the region dynamically and how these parameters are involved in generating inguinal hernias. We are particularly interested in understanding the mechanical alterations in the inguinal region because little is

known about them or how they behave dynamically. Our model corroborates the most important theories regarding the generation of inguinal hernias and is an initial approach to numerically evaluating this affection.