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## Introdução e Objetivo

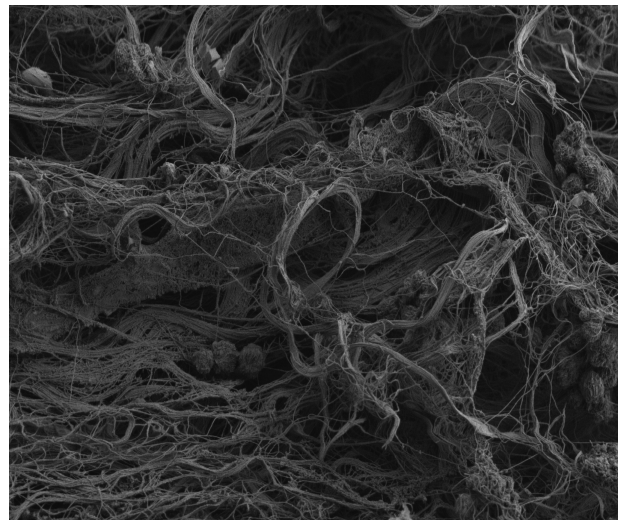
The gubernaculum seems to be the most important structure in testicular migration process, facilitating the testicular transition through the inguinal canal during fetal period. We will evaluate the possible alterations of the gubernaculum connective tissue in patients with undescended testis (UT) by using scanning electron microscopy (SEM).

## Método

We studied the gubernaculum of 5 patients (mean 2.78 years-old) with unilateral UT who had been submitted to orchidopexy. For qualitative analysis of the connective tissue, we studied 5 samples from each gubernaculum, with 2mm length. The samples were submitted to fixation for SEM by immersing tissue fragments in a modified Karnovsky solution for 48 hours at 4°C. For better visualization of the 3-dimensional organization of the vesicle stroma under SEM, tissue samples were submitted to an alkaline treatment to solubilize and remove cells. The obtained acellular preparations were then processed for high-vacuum SEM, and observations were performed on a LEO 435 (Zeiss, Oberkochen, Germany) SEM with an acceleration voltage of 15 to 20 kV.

## Figuras

**FIGURA 1:** A figura evidencia o aspecto do gubernáculo de um paciente portador de criptorquia com 2 anos de idade com o testículo localizado no canal inguinal. Podemos observar a matriz extra-celular abundante na microscopia eletrônica



## Resultados

The 5 studied testes were in inguinal position. We observed patency of the Processus vaginalis in 4 cases (80%) and Epididymal anomalies of tail disjunction in 2 testes (40%). Under SEM, with a magnification of 5,000X, we observed the gubernaculum is mostly collagenous in composition with the collagen system fibers ranged in thickness from 0.2 to 0.4µm and with a clear disarrangement (Figure). Elastic fibers had the same thickness and were located mainly at the distal end of the gubernaculum (Figure).

## Conclusão

For the first time in literature the gubernaculum was studied with SEM in patients with UT. This preliminary report shows that the gubernaculum in inguinal UT had disarrangement in collagen distribution and a significant amount of elastic fibers in its distal portion.

## Referências

Favorito La – Translational research applied to pediatric urology – Springer 2023