

Histological Structure and Vascularity of Hysteroscopically Removed Uterine Septa

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Abstract:

Background:

Congenital malformations of the female genital tract are defined as deviations from normal anatomy resulting from embryological maldevelopment of the Müllerian or paramesonephric ducts. They are associated to an increased rate of miscarriage, preterm delivery and other adverse fetal outcomes. Therapy in these cases is hysteroscopic removal of the anomaly. Purpose of this study is to depict histological structure and vascularity of specimens from septate uteri (10 patients) and T-uteri (6 patients) removed hysteroscopically in our Unit. Samples of each septum were collected from the middle (external and internal lays), the tip and the base.

Results:

All specimens collected by T-Uteri showed two layers with different disposition of fibromuscle structures: an outer layer and an inner one. In the external layer muscle cells are arranged in nodules, separated by collagen fibers with semicircular course. Enhancement of vessels (CD31+) shows their bifurcation around nodules and poor inner vascularization. In the internal layer muscle fiber are linear with oblique trend, according to what is in normal myometrium, with persistence of collagen fibers among muscle fibers. Vessels do not show particular ramification. All specimens collected by septate uterus showed fasciculated structure with 90 degrees transverse orientation of bands. This organization resembles leiomyoma's structure, without augmented cellularity. Between muscle bundles collagen fibers are scarce. Vascular architecture do not shows peculiar trend, capillars are poor respect to the amount of smooth muscle cells.

Conclusions:

In our study no differences can be highlighted in malformed uteri respect to normal myometrium regarding cellularity and type of cells. Difference is in cytoarchitecture of each tissue: in T-uterus, external layer is organized in nodules with peripheral vascularization while internal layer differs slightly from normal myometrium; in septate uterus no layers can be identified, muscle fibers arranges in perpendicular bands with poor vascularization.