P07 Collagen metabolism in human uterine leiomyoma

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To investigate the role of collagens and prolyl hydroxylase (PH), a key enzyme of collagen synthesis, in the normal uterine myometrium and the uterine leiomyoma during the menstrual cycle. The tissues were obtained from 40 premenopausal women (29-53 years of age) at various stages of the menstrual cycle who were undergoing hysterectomy for symptomatic uterine leiomyomas. Immunohistochemical staining was performed with specific monoclonal antibodies against type 1, 3, 4 and PH. Moreover, sodium dodeyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE) was performed. Immunohistochemical analysis revealed type 1 collagen expression was increased in the leiomyomas as compared to the normal myometrium tissues. SDS-PAGE revealed the relative ratio of type 1 and 5 collagen was significantly increased in uterine leiomyoma at the protein level, compared with the normal myometrium tissues. These results suggested that these alterations of collagen metabolism plays a role in the pathogenesis of uterine leiomyoma.