IS-79 Determinants of vaginal length, thickness and width by Computed tomography in Korean women

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Objective: The purpose of this study is to find out the interrelation of the vaginal length, thickness and width measured by computed tomography, and age, height, weight, delivery experience and method in Korean women. Methods: 185 women were examined and measured by the computed tomography from March 2006 to March 2008. For an objective test each of two clinicians in obstetrics and gynecology department and Radiology measured twice the vaginal length, thickness and width in optical way. Women who have received total hysterectomy or who have had cervical lesion were excluded in this test. Result: Of 185 Korean women the ages arrange from 14 to 81. The average age is 38.5 ± 10.5, and the average vaginal length is 85.9 ± 10.7 mm, and the average vaginal width is 31.1 ± 6.6 mm, and the average thickness is 17.6 ± 2.7 mm, and the average weight is 57.1 ± 9.0 kg, and the average height is 158.8 ± 4.5 cm. According to the ages (14 year to 19, 20 to 49, above 50 year), there is no differences in vaginal length and thickness in statistics, but there is a meaningful statistic difference in vaginal width in accordance of ages. The parity does not make any statistical difference of the length and thickness of vagina, however the width of vaginal done by normal delivery is significantly wider than that by cesarean section. Conclusion: This research proves that there is no difference in the vaginal length between Korean women and Western women. And it also shows the length of vaginal has no association with parity, ages and physical characters, but the width of vaginal has something to do with the increasing of the age and delivery method. It is thought that this is rather related to functional reasons by the relaxation or weakness of muscles and supporting structures around, and is suggested to make a further study of the functional aspects. Key words: Total vaginal length, Total vaginal thickness, Total vaginal width, Computed Tomography, Parity

IS-80 Clinical Characteristics and Management of Pyometra: Specific Issues in Gynecological Emergency

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Objective: To evaluate the clinical characteristics of pyometra and differences between perforated pyometra and early-draied pyometra in order to diagnose early and prevent morbidity. Study Design: Retrospective study of 14 patients with early-drained pyometra and 5 patients with perforated pyometra between 1998 and 2008 were included. In addition, a review of the literature yielded another 30 perforated pyometra for comparison. Result: Of 19 women with pyometra, the major presented symptoms at admission were abdominal pain (79%), fever (42%) and vaginal discharge (26%). The majority of organisms isolated were Bacteroides fragilis (7 cases), Streptococcus species (5 cases), and Escherichio coli (4 cases). Patients with pyometra tended to be mobility-limited or bedridden due to chronic disease (58%) or old age (79%). Of the 35 cases with spontaneous uterine perforation to date, 34 cases (97%) had abdominal pain, 10 cases (29%) had fever, and 10 cases (29%) had vomiting. Hypoalbuminemia was found in 6 patients (4 cases in the perforation group and 2 cases in the drainage group). Conclusions: Early diagnosis of pyometra before perforation can avoid surgical exploration and decrease the morbidity and mortality. Perforated pyometra should be considered as a differential diagnosis of a woman with pneumoperitoneum and hypoalbuminemia should be considered as a predisposing factor for pyometra perforation.

IS-81 Comparison and Standardization of Dual Energy X-ray Absorptiometry systems

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Dual energy X-ray absorptiometry (DXA) has become the reference method for diagnosing osteoporosis. The DXA has different results in reported bone mineral density (BMD) among manufactures, system, and measurement site, so called T-score discrepancy. In this study, the comparison and standardization between DXA systems was obtained. Consequently evaluation of the cross calibration formula and Korean reference database was also obtained. A total of 100 Korean women were recruited and studied between September 2006 and February 2007. All are volunteer visitors in OB/GY in Kangnam St. Mary's Hospital, The Catholic University of Korea. The BMD was measured in the lumbar vertebrae (L1-4) and in the both femoral neck one the same day using a GE Lunar Prodigy and Hologic QDR-4500. We compared the BMD values, T-scores, Z-scores and patients' diagnosis based on WHO criteria between two systems. We calculated standardized BMD (sBMD) based on cross calibration of the International standardization committee for bone densitometry and compared Lunar to Hologic. This study evaluate possibility to apply this non-Asian reference data to Korean women and calculate new conversion formula between Lunar and Hologic DXA for Korean women. In the lumbar spine, the GE Lunar Prodigy yielded consistently higher results than the Hologic QDR-4500 (P<0.0001). In the femur neck, the GE Lunar Prodigy also yielded consistently higher results than the Hologic QDR-4500 (P<0.0001). The BMD values measured by the two instruments were highly correlated (lumbar spine r = 0.97, femur neck r = 0.89, P<0.001). The sBMD values by the conversion formula which were compared with BMD measured, had significant differences in lumbar spine (P<0.001, paired t-test). New conversion equations between two systems for Korean women are calculated. For the lumbar spine: Hologic = (0.844 × Lunar) + 0.006. For the femur neck: Hologic = (0.886 × Lunar) − 0.05. The possible explanations for the different BMD values between different DXA systems are, edge detection, calibration procedure, normative database and statistical model. For correcting the discrepancy, we can use sBMD, cross calibration, and furthermore calculate new conversion formula for the reference population. Key words: Bone mineral density, Dual energy X-ray absorptiometry, Hologic Lunar, standardization