

EP29.06

Metabolic syndrome and risk of endometrial carcinoma among asymptomatic, postmenopausal, urban Sri Lankan females: a community cohort follow-up studyT. Dias¹, M. Niriella², S. de Silva², C. Motha²,
T.S. Paliawadana¹, D. Ediweera², J. de Silva²¹*Obstetrics and Gynecology, Faculty of Medicine, University of Kelaniya, Ragama, Sri Lanka;* ²*University of Kelaniya, Kelaniya, Sri Lanka***Objectives:** Metabolic syndrome (MetS) has been recognised as a risk factor for malignancies. The aim of this study was to evaluate the association of MetS and risk of endometrial carcinoma (EC), by measuring endometrial thickness (ET).**Methods:** The Ragama Health Study (RHS) recruited 35–64-year-old female cohort by age-stratified random sampling in 2007 and re-evaluated them in 2014, using a structured interview, anthropometric measurements and biochemical tests. Liver ultrasound to detect fatty liver was performed in 2007. Pelvic ultrasound to detect ET was performed in 2014 among consenting participants. MetS was diagnosed on established International Diabetes Federation (IDF 2012) criteria. Increased ET was defined as >5mm. Simple logistic regression was used to screen variables and multiple logistic regression was used to obtain adjusted effects of risk factors for increased ET.**Results:** 813/1636(49.7%) of the original female cohort attended follow-up; ET was measured in 567(69.7%). Median (IQR) age of females was 61 (56–66) years. 323 fulfilled criteria for MetS (prevalence 57.1%) in 2007. 57(10.1%) had increased ET in 2014. Increasing plasma triglycerides [OR=1.004 per mg/dl, 95%CI:1.001–1.007, $p<0.05$] and being hypertensive [OR=2.16, 95%CI:1.11–4.08, $p<0.05$] were associated with increased ET, while advancing age [OR=0.93 per year, 95%CI:0.89–0.98, $p<0.01$] and being diabetic [OR= 0.34, 95%CI:0.10–0.89, $p<0.05$] were protective.**Conclusions:** Hypertension and increased plasma triglyceride levels, in the pre-menopausal period, were risk factors for future asymptomatic increased ET.

EP29.07

The predictive value of advanced transvaginal sonography in patients with endometrial neoplasia

E.M. Levine, C.M. Fernandez, S. Locher

*Obstetrics and Gynecology, Advocate Illinois Masonic and Medical Centre, Chicago, IL, USA***Objectives:** The authors have investigated the use of advanced transvaginal sonography (TVS) techniques to identify the features of this neoplastic entity pre-operatively, in order to possibly predict the extent of its required surgical treatment.**Methods:** All patients in this continuous ongoing investigation who were histologically diagnosed with AEH or EC were examined sonographically, using three dimensional ultrasound (3D U/S) with Power Doppler Angiography (PDA) from April 1, 2015 to the present. All of these patients underwent a subsequent surgical procedure with the resulting histology surgically obtained to be compared with those pre-operative ultrasound findings.**Results:** The identified sonographic features of the cases enrolled in this study were compared with the intraoperative and post-operative pathologic findings. With the results of only 12 patients thus far, the ultrasound findings predicted the *minimum* EC staging 100 % of the time. Deep myometrial invasion ($\geq 50\%$) and cervical stromal invasion were specifically identified and which is naturally associated with the surgical staging of EC.**Conclusions:** This ongoing investigation seeks to validate the findings of Alcazar and those of Karlsson, to sonographically identify

the features of this oncologic condition, so as to properly predict its optimal surgical treatment. The clinical importance of this should be recognised, for the impact it can have on patient care, in that there is often difficulty in properly obtaining the diagnosis of this entity (EC) when it presents as Postmenopausal Bleeding (PMB). An example of this is when cervical stenosis is encountered, which can prevent pipelle sampling of the endometrium. It is believed that we are introducing what should become the standard care for patients who are at risk of Endometrial Carcinoma.

EP29.08

The efficacy of Superb Micro-vascular Imaging on diagnosing endometrial cancerT. Takeda, K. Shimizu, T. Yamada, S. Tano,
K. Uno, M. Mayama, M. Ukai, T. Suzuki, T. Harata,
Y. Kishigami, H. Oguchi*Obstetrics and Gynecology, Toyota Memorial Hospital, Toyota, Aichi, Japan***Objectives:** Superb Micro-vascular Imaging (SMI) is a novel ultrasound technology that can remove motion artefact and visualise low blood flow. Small vessels which could not be clearly detected by ordinary Doppler way such as power Doppler image (PDI) can be visualised by SMI. Increased endometrial thickness indicates some endometrial disease including endometrial cancer. Visualising endometrial blood flow by Doppler imaging was thought to be useful to distinguish cancer from other endometrial lesions. The aim of this study was showing the efficacy of SMI on diagnosing endometrial cancer compared with ordinary Doppler way.**Methods:** From September 2015 to February 2017, we enrolled 27 endometrial cancer patients who visited our hospital, and 83 patients without cancer as a control group. Endometrial thickness was measured by transvaginal ultrasonography, Toshiba Aplio 300. Endometrial blood flows were obtained by ordinary Doppler way, colour Doppler image, advanced dynamic flow and PDI, and SMI. We compared age, endometrial thickness and the detection rate of endometrial blood flow between these two groups, and the capability of visualising endometrial blood flow, small branching vessels, and blooming artefact among cancer group.**Results:** The mean age of endometrial cancer group was 57.8 ± 11.4 years old and control group was 48.0 ± 13.2 . The mean endometrial thickness in cancer group was 18.7 ± 14.1 mm compared with 5.8 ± 3.6 mm in control group. The rates of visualised endometrial blood flow were significantly higher in any of each Doppler way. Among cancer group, sensitivity of visualising endometrial blood flow, visualising small branching vessels and blooming artefact rate were 92.6%, 60.0% and 100% in PDI, and 88.9%, 79.2% and 0% in SMI respectively.**Conclusions:** SMI can be a useful tool to evaluate thickened endometrium by visualising smaller endometrial blood flow without artefact.

EP29.09

Preoperative power Doppler score in predicting depth of myometrial invasion in endometrioid type of endometrial carcinomaF. Moretti², A. Alhasani², T. Lle¹, K. Fung Kee Fung¹¹*Obstetrics, Gynecology and Newborn Care, Ottawa Hospital, Ottawa, ON, Canada;* ²*Obstetrics and Gynecology, University of Ottawa, Ottawa, ON, Canada***Objectives:** Our aim is to explore the role of transvaginal power Doppler score and vascular flow pattern to discriminate superficial and deep myometrial invasion in cases of endometrial carcinoma in order to allow preoperative surgical planning and to identify those patients who would benefit from staging lymphadenectomy.