ECHO2D moderate LVH and preserved systolic function. Patient referred her doctor recently increased thyroid medications from 50 to 100 mcg. Instead of presenting with pulmonary embolism, she has hyperthyroidic state causing cardiac failure. Levothyroxine, heparin and Chest CTA scan were cancelled. She was started in Atenolol and diuretics. Patient symptoms improved and was discharged home to be followed in the clinic. After one week, TSH levels were in 0.008mU/L and one month later in 3.032mU/L. She was started in Levothyroxine 50mcg, to maintain patient euthyroid state.

This case illustrates that sometimes tachycardia and tachypnea are symptoms which frequently presents as baffling diagnostic problems. The association of thyrotoxicosis and cardiovascular morbidity is well established. Thyrotoxicosis most common cardiac manifestation is high output heart failure. Patients presenting with heart failure may have thyrotoxicosis as the underlying cause. Treatment of the thyrotoxicosis can restore normal heart function. Hyperthyroidic state may be take into consideration as a differential of tachycardia and tachypnea even if it’s not one of the common causes. Awareness of this presentation may help identify patients with reversible dilated cardiomyopathy and other complications.

**Neuroendocrinology and Pituitary**

**NEUROENDOCRINOLOGY AND PITUITARY**

**Clinical Relevance of Serum Prolactin Levels to Inflammatory Reaction in Male Patients.**

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**MON-272**

PRL is a polypeptide hormone that is, in phylogeny, well conserved but elicits various species-dependent functions. PRL is related to the regulation of osmotic pressure in fish and amphibians, fat retention in reptiles and birds, and glucose-lipid metabolism, bone homeostasis and development of the mammary gland in mammals. In humans, PRL secretion is regulated in an inhibitory manner by dopaminergic neurons that project from the hypothalamus to PRL-producing cells in the anterior pituitary gland. Since dopaminergic actions are mainly mediated by D2R, various agents that bind D2R can affect serum PRL levels.

In the clinical aspect, hyperprolactinemia is considered as high output heart failure. Patients presenting with heart failure may have thyrotoxicosis as the underlying cause. Treatment of the thyrotoxicosis can restore normal heart function. Hyperthyroidic state may be take into consideration as a differential of tachycardia and tachypnea even if it’s not one of the common causes. Awareness of this presentation may help identify patients with reversible dilated cardiomyopathy and other complications.

**Bone and Mineral Metabolism**

**NEW FRONTIERS IN BONE AND MINERAL METABOLISM**

**The Effects of Hormone Therapy on Premature Ovarian Failure Following Allogenic Hematopoietic Stem Cell Transplantation: A Single-Center Experience**

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**OR29-03**

**Background:** With increasing survival rates after hematopoietic stem cell transplantation (HSCT), it has become important to evaluate methods of improving patients’ quality of life. Most female patients of childbearing age experience premature ovarian failure after transplantation, which results in decreased quality of life and an increase in fracture risk due to rapid bone loss. We analyzed the effects of hormone therapy (HT) on serum follicle stimulating hormone (FSH), serum estradiol, and bone mineral density (BMD) in young female HSCT recipients.

**Methods:** This retrospective cohort study included 234 female patients who underwent allogenic HSCT between April 2009 and April 2018 at our center. The maximum age at the time of transplantation was 40 years, and patients were followed up for at least 3 years. Of the 734 patients who were initially screened, 360 patients aged <18 years and 8 who were transferred to another institution after transplantation were excluded from the study. There were 93 patients who died within 3 years of transplantation, while 30 were lost to follow-up.
and 9 were followed-up for less than 3 years. Changes in hormone levels and BMD, according to HT regimen, were evaluated in 234 patients. **Results:** The mean age at transplantation was 30.47 ± 6.55 years. Out of 234 patients, 170 (72.6%) patients received HT, starting treatment at a mean of 15.1 ± 8.2 months after transplantation. A significant increase in estradiol level was observed in patients receiving HT (p < 0.001); no difference was observed between the 3 different types of HT regimen (p = 0.534). After 2 years of HT, BMD was significantly increased at all measurement sites: lumbar spine 5.8 ± 6.26% (p < 0.001), femoral neck 3.4 ± 17.78% (p = 0.037), total hip 2.1 ± 7.15% (p = 0.001). Again, there was no difference in changes between the HT regimens (p = 0.646 for lumbar spine, p = 0.840 for femoral neck, and p = 0.855 for total hip). These changes were significant even in patients with graft versus host disease (GVHD) or steroid exposure. **Conclusion:** In patients with premature ovarian failure following allogenic HSCT, HT effectively lowered serum FSH and increased serum estradiol levels. HT significantly increased BMD regardless of the history of GVHD or steroid exposure. These changes in hormones and BMD were independent of the HT regimen.

**Pediatric Endocrinology**  
**PEDIATRIC ENDOCRINE CASE REPORTS II**

**Prepubertal Gynecomastia Secondary to Excessive Soy Consumption**

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**MON-079**

Enlargement of breast tissue in males, or gynecomastia, is a rare condition in prepubescent boys. While the majority of cases are idiopathic, we describe an 8-year-old patient who developed unilateral gynecomastia secondary to marked dietary soy consumption. Soy products, particularly those consumed by our patient, contain high levels of phytoestrogens which have been documented in limited case studies to contribute to abnormal development of breast tissue in adolescent and adult males. To our knowledge, this is the first documented case of gynecomastia occurring in a prepubescent patient resulting from excessive intake of dietary soy. Importantly, we also report a complete resolution of gynecomastia upon exclusion of dietary products containing significant amounts of soy. While soybeans and soy-derived products can be an important source of nutrition for some, those with abnormal sensitivity to phytoestrogens may benefit from limiting dietary soy consumption to avoid potential adverse effects, including gynecomastia.

**Thyroid**

**THYROID NEOPLASIA AND CANCER**

**Characterization of the Angiogenic Factor SFRP2 in Papillary Thyroid Carcinoma**

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**MON-532**

Over the last decade, there has been an average annual increase of 3.1% in thyroid cancer diagnosis in the U.S. Papillary thyroid carcinoma (PTC) accounts for 80% of all thyroid cancer diagnoses. However, few molecular markers exist to identify clinically aggressive phenotypes. The angiogenic factor, secreted frizzled-related protein 2 (SFRP2), is associated with a poor prognosis in several malignancies including breast cancer and melanoma. The role of SFRP2 in PTC has yet to be investigated. The aims of this study were to determine the differential expression of SFRP2 in PTC, benign thyroid adenomas, normal thyroid tissue (from patients without cancer), and normal adjacent tissue (NAT) (non-cancerous tissue from patients with PTC) and investigate the role of SFRP2 in tumor development in two PTC cell lines, PTC classical variant (PTC-CV) and PTC follicular variant (PTC-FV), upon treatment with a humanized anti-SFRP2 monoclonal antibody (hSFRP2 mAb). Immunohistochemistry (IHC) was performed using human tissue protein microarrays including 226 PTC, 79 benign adenomas, 112 NAT, and 30 normal thyroid tissue samples. In-vitro proliferation and apoptosis experiments were performed on MDA-T41 (PTC-CV) and MDA-T68 (PTC-FV) cell lines by treating with hSFRP2 mAb, Xolair IgG control, and a vehicle control. SFRP2 expression was significantly higher in PTC compared with benign adenomas and normal thyroid (mean expression scores 9, 6, and 1, respectively; p<0.05). SFRP2 expression was significantly higher in NAT than normal thyroid (mean expression score 4 and 0, respectively, p<0.05). Apoptotic rates were increased by 40% and 62% in the PTC-CV hSFRP2 mAb treatment group compared with the Xolair and vehicle treatment groups, respectively (p<0.05). Apoptotic rates were increased by 126% and 59% in the PTC-FV hSFRP2 mAb treatment group compared with the Xolair and vehicle treatment groups, respectively (p<0.05). Treatment with hSFRP2 mAb had no significant effect on proliferation in either cell line. In conclusion, SFRP2 expression is significantly higher in PTC than in benign adenomas and normal thyroid tissue. SFRP2 expression in NAT is significantly higher than in normal thyroid tissue and not significantly different from benign adenomas. SFRP2 expression in nonmalignant tissue adjacent to PTC could be due to expression in the tumor microenvironment. Treatment with a novel hSFRP2 mAb increases apoptotic rates in two different PTC cell lines. These data suggest that SFRP2 is involved in tumorigenesis of PTC.

**Reproductive Endocrinology**

**HYPERANDROGENISM**

**No Difference in Breastfeeding Rates in Women with Polycystic Ovary Syndrome**

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**SUN-018**

No Difference in Breastfeeding Rates in Women with Polycystic Ovary Syndrome

**Objective:** Women with PCOS have increased rates of obesity and gestational weight gain compared to women