SY7-003

The thyroid adverse effects of novel anti-neoplastic agents
S. Corsello (Pr) *, A. Prete (Dr)
Université Cattolica del Sacro Cuore, Roma, Italy
* Corresponding author.
E-mail address: corsello.sm@mclink.it (S. Corsello)

Novel anti-neoplastic agents, including targeted therapies and immunotherapies, show promising results in managing both solid and hematological malignancies: their mechanisms of action include direct effect on signaling of tumor cells, anti-angiogenic effects and host’s immune system activation leading to enhanced anti-tumor response. However new typical side effects have emerged including thyroid dysfunction, which can manifest as development of thyroid auto-immunity, primary hypothyroidism, and thyrotoxicosis.

Immune checkpoint inhibitors (monoclonal antibodies targeting different ligands on T-cells and tumor cells), have shown striking results in improving prognosis of patients with metastatic melanoma and are now under investigation for several malignancies. These drugs lead to T-cell reactivation against tumor cells and host cells, causing both anti-neoplastic response and autoimmune adverse events. Autoimmune thyroid disease includes primary hypothyroidism, thyrotoxicosis and euthyroid Graves’ ophthalmopathy. In this setting, hypothyroidism may be a consequence of autoimmune hypophysitis as well. Tyrosine-kinase inhibitors, currently used for gastrointestinal stromal tumors, renal carcinoma and other malignancies, frequently lead to thyroid dysfunction and many mechanisms have been advocated, including capillary regression within the thyroid gland, direct toxic effects on thyrocytes and peripheral effects on thyroid hormone metabolism. Other immunotherapies, such as denileukin difitox, alemtuzumab and lenalidomide can cause thyroid adverse effect as well.

Thyroid dysfunction can be associated with non specific signs and symptoms which can overlap with the effects of either anti-cancer therapies or the underlying disease. Therefore clinicians should be aware of thyroid adverse effects of novel anti-neoplastic agents, in order not to overlook a condition that potentially affects patients’ morbidity and mortality.

Disclosure of interests The author has not supplied his declaration of conflict of interests.

http://dx.doi.org/10.1016/j.ando.2015.07.040

SY8-003

Os and FGF23
D. Prié (Pr)
Université Paris-Descartes Inserm U1151, Assistance Publique hôpitaux de Paris, hôpital Necker-Enfants Malades, Paris, France
Adresse e-mail : dominique.prie@inserm.fr

Le Fibroblast Growth Factor 23 (FGF23) est une hormone peptidique sécrétée par les ostéocytes et les ostéoblastes. Il circule dans le plasma, sa concentration est comprise entre 10 à 50 pg/mL. Son rôle physiologique est de contrôler la concentration plasmatique de phosphate, et peut être le contenu intracellulaire en phosphate, et la concentration de calcitriol. Le FGF23 agit sur le rein, il diminue la réabsorption rénale de phosphate, il inhibe la production et augmente le catabolisme du calcitriol. Ceci permet de maintenir la phosphatémie dans des valeurs normales. Le FGF23 s’oppose également à la sécrétion de PTH. La production de FGF23 par l’os est stimulée par le calcitriol et les apports en phosphate. Le FGF23 agit en se fixant sur un récepteur constitué d’un FGF récepteur et de la protéine Klotho. Klotho est exprimée à la surface des cellules et est ancrée dans la membrane par un court fragment transmembranaire. Klotho est principalement exprimée dans le rein, le muscle, le cerveau et la glande parathyroïde. Klotho est également présente dans le plasma. Cette forme circulante de Klotho proviendrait du clivage enzymatique de la protéine transmembranaire. Le rôle physiologique du Klotho circulant est encore mal connu. La surproduction de FGF23 induit une hypophosphatémie, une calciurie diminuée qui n’augmente pas et une diminution osseuse. À l’opposé l’absence de FGF23 efficace s’accompagne d’une hyperphosphatémie avec hypercalciurie, d’une calcémie élevée freinant la sécrétion de PTH et de calcifications tissulaires. L’expression FGF23/Klotho est modifiée en particulier au cours de l’insuffisance rénale.

Disclosure of interests The author has not supplied his declaration of conflict of interests.

http://dx.doi.org/10.1016/j.ando.2015.07.042

SY8-002

Osteocalcin, glucose tolerance and diabetes
P. Pozzilli (Pr)
Università Campus Bio-Medico, Via Alvaro del Portillo 21, Rome, Italy
E-mail address: p.pozzilli@unicampus.it

Osteocalcin (OCN), a marker of bone formation, is known to regulate glucose metabolism and influence the risk of developing adverse metabolic outcomes. Available evidence from cross-sectional studies, supports inverse associations of serum total OCN with risk of adverse metabolic outcomes.

A recent meta-analysis demonstrated that both OCN and undercarboxylated OCN are similarly and negatively correlated with FPG an HbA1c in humans. The negative correlations between unOCN and glucose metabolism appear to be more pronounced in males than in females.

Diabetic osteopathy is an upcoming complication of diabetes characterized by osteoporosis, increased risk for bone fractures and alterations in bone metabolism. In a cross-sectional study we conducted on 93 diabetes patients, OCN levels are inversely associated with HbA1c and BMI, supporting the hypothesis that a poor glycemic control can impair osteoblast function.

Type 2 diabetes (T2D) is associated with impaired bone strength, although it is characterized by normal or elevated bone mineral density. Fracture risk is higher in older adults with T2D and may be influenced by treatments for diabetes. Several therapeutic strategies are available to achieve the best outcomes in the management of diabetes but these have different effects on bone metabolism. Oral anti-diabetic drugs have different effects on bone metabolism. Several therapeutic strategies are available to achieve the best outcomes in the management of this disease but these have different effects on bone metabolism. Both diabetes and osteoporosis represent a significant burden in terms of healthcare costs and quality of life.

Disclosure of interests The author has not supplied his declaration of conflict of interests.

http://dx.doi.org/10.1016/j.ando.2015.07.043