



ACNE, ROSACEA, AND RELATED DISORDERS (INCLUDING HIDRADENITIS SUPPURATIVA)

## THE FINDINGS OF 18F-FLUORODEOXYGLUCOSE POSITRON EMISSION TOMOGRAPHY-COMPUTED TOMOGRAPHY(18F-FDG PET/CT) SCAN IN 32 PATIENTS WITH HIDRADENITIS SUPPURATIVA IN NORTHERN PENINSULAR MALAYSIA: A PILOT STUDY

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**Introduction:** Hidradenitis suppurativa (HS) is a chronic inflammatory disease of the pilosebaceous follicle occurs in genetically susceptible individuals with an underlying immune dysregulation. It has been found to be associated with metabolic syndrome, autoimmune diseases and malignancies.

**Objective:** To describe the role of 18F-FDG-PET/CT in HS patients.

**Materials and Methods:** This is a cross-sectional hospital-based study conducted in 3 tertiary hospitals in Northern Peninsular Malaysia from December 2016 to May 2017. We enrolled HS patients aged 18 years and above who consented for a 18F-FDG PET/CT scan which was subsequently performed in Hospital Pulau Pinang by a nuclear medicine physician. Age- and gender-matched control comprised of patients without skin diseases were selected.

**Results:** A total of 32 HS patients were recruited with a mean age of 31.4 years(range:18-56). Male to female ratio was 5:1. Numerous cutaneous inflammatory foci were detected by 18F-FDG-PET/CT in clinically unapparent sites (27/32 cases). However, it did not detect any associated systemic inflammation at the vasculature, cardiac or liver. Despite no clinical lesions, 18F-FDG PET/CT scan detected a significantly higher uptake over the nasal, mandibular and scalp regions at 90.6%, 93.8% and 50% respectively compared to control group. (p=0.001) This may suggest an over-activation of inflammatory drive at folliculopilosebaceous unit in HS patients. Three patients (9.4%) had higher thyroid uptake (SUV ranging from 3.1 – 11.9) and two were confirmed to have papillary thyroid





carcinoma while one refused further workout. All three had no clinical goiter and were biochemically euthyroid. Thyroid autoantibodies screening showed normal anti-thyroperoxidase level, while one had high anti-thyroglobulin antibody level. Both patients with thyroid carcinoma underwent total thyroidectomy.

Conclusions: 18F-FDG PET/CT scan may be useful to map disease burden for optimal treatment modality, however it's availability and cost is an issue. The association of thyroid carcinoma in HS warrants further evaluation.

