

ABSTRACTS

should be restricted to patients with early stage vulvar cancer with clinically uninvolved lymph nodes. Further studies are needed to evaluate the accuracy and clinical validity of this procedure.

16.6



AT0200399

Lymphoscintigraphy and Radioguided Biopsy of the Sentinel Node in Cutaneous Melanoma

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Aim: Lymphoscintigraphy associated with radioguided biopsy of the sentinel node (SN) is well established in clinical practice for melanoma .Metastasis in the sentinel node indicates the need for therapeutic lymph node dissection.The purpose of the present study was to examine the efficacy of lymphoscintigraphy and the biopsy in detecting metastasis in cutaneous melanoma.

Methods: Third-nine patients with clinically localized melanoma were investigated prospectively. A dose of 21.6-27.0 MBq (800-1000microCi) of ^{99m}Tc sulfur colloid was injected intradermally of the primary tumor site .Dynamic images were obtained until 40 minutes. The images were evaluated by two observers .Lymph nodes were identified and removed with the aid of the gamma ray detecting probe (GDP) after 1-2 weeks and undergone pathological analysis.

Results: Lymphoscintigraphy revealed sentinel node in 38 of 39 (97.4%) patients. Sentinel node biopsy detected metastasis in 6 of 38 (15.8%) patients.

Conclusion: The role of lymphoscintigraphy on detecting the sentinel node in cutaneous melanoma is well established and is an important tool in the clinical practice of oncology.

16.7



AT0200400

Comparison of Benzodiazepine Receptor SPECT and ¹⁸F-FDG PET Using a Coincidence Detection Camera in Patients with Temporal Lobe Epilepsy: Preliminary Results

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Aim: The aim of this preliminary study was to compare the results of benzodiazepine receptor (BDR) SPECT using ¹²³I-Iomazenil with those of ¹⁸F-FDG (FDG) PET obtained on a double-headed gamma camera with a coincidence detection system in patients with temporal lobe epilepsy (TLE).

Methods: We evaluated 6 patients (4 female, 2 male; age range 26-54 years, average 43.5 years) with therapy-refractory TLE due to mesiotemporal sclerosis or other focal brain anomalies. To delineate the epileptogenic zone, clinical evaluation, ictal and interictal surface EEG using the international 10-20 system, brain MRI, interictal CBF SPECT using ^{99m}Tc -ECD, BDR SPECT and FDG coincidence PET were performed. The CBF SPECT, BDR SPECT and coincidence PET scans were viewed independently by 2 observers considering the regional cerebral blood flow, BDR density and FDG uptake asymmetry in the temporal lobe visually as none (0), low (1), moderate (2) and high (3).

Results: Ictal and interictal EEG recordings located the epileptogenic focus in all patients in the temporal region. Both the BDR SPECT and the FDG coincidence PET located the epileptogenic focus correctly in circumscribed areas of the temporal lobe in all patients, whereas brain MRI revealed focal anomalies only in 5 of 6 cases. The lateralisation to the right (n=4) and left hemisphere (n=2) by interictal CBF SPECT, BDR SPECT and FDG coincidence PET corresponded to the EEG findings in all patients. The visual consideration of the asymmetry revealed a slightly but not statistically significant higher value for the FDG coincidence PET (observer 1: mean 2.333, SD 0.516; observer 2: mean 2.000, SD 0.632) than for the BDR SPECT (observer 1: mean 1.667, SD 1.033; observer 2: mean 1.833, SD 0.753). Visual consideration of the interictal CBF SPECT revealed mean values of 2.000 for both observers. The inter-observer variability was higher in the BDR SPECT than in the FDG coincidence PET and the interictal CBF SPECT, but the difference was not significant.

Conclusion: ^{18}F -FDG PET using a coincidence detection camera system shows slightly but not statistically significant higher subjective values of asymmetry in patients with medically intractable TLE than BDR SPECT. Thus, in institutions without a dedicated PET scanner, both methods provide useful additional functional information in the detection of epileptogenic foci, especially when combined with an additional interictal CBF SPECT.



AT0200401

16.8

Blood Flow Changes in Alzheimer's Disease Induced by Lactate

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Lactate, as metabolite of the glycolysis is a source of energy of the nerves. In vitro and in vivo experiments showed the neuroprotective effect of lactate and improvement of brain function after ischaemic injury. Intravenous infusion of lactate increases the global cerebral blood flow (CBF). In Alzheimer disease (AD) characteristic regional blood flow abnormalities and in the cerebrospinal fluid abnormal lactate levels were detected.

Aim: Since disturbed CBF and vasoregulation was found in AD the effect of intravenous Na-lactate on CBF and related metabolic parameters was examined in order to assess the CBF response in the AD brain.

Methods: In twenty (14 woman, 6 man, age +/- SD.: 74+/-7 years) patients with Alzheimer's disease (DSM IV, MMT.:13+/-6) self-control study was performed. rCBF SPECT (^{99m}Tc -HMPAO) investigations were fulfilled during 5mg/kg body weight 0.5 M Na-lactate infusion and in control state (0.9 % saline infusion) one week apart. The rCBF changes visually and by Statistical Parametric Mapping were analysed. ECG, blood pressure, heart rate, venous blood pH, pCO₂, bicarbonate, serum lactate and cortisol level were measured before and after the