parameters of reaction and flow of materials from outside of the hot cell. The starting material was norverapamil, dissolved in it in acetonitrile. The [11C] CH3I bubbled (50 ml/min flow) in this solvent. The efficiency of the reaction was enhanced by using aluminium oxide/potassium-fluoride catalyst. The reaction mixture was heated for 10 minutes, when the reaction took place, then the reaction mixture was diluted with HPLC eluent and filtered from the catalyst. The generated [11C]verapamil was separated on preparative HPLC from other impurities and from the precursor. The collected fractions of [11C]verapamil was diluted with water and adsorbed on a C18 column. For elution small volume of ethanol was used to get concentrated solution, what later can be diluted with saline for biological investigation.

Results: In receptor binding studies the specific activity of [11C]verapamil is very important. In our experiments 100 ± 20 GBq/μmol was achieved, with the radiochemical purity of more than 98%. We had got large problem the separation from the precursor, because it can reduce the acummulation of radioactive verapamil in cells. We had optimized the separation what resulted of greater purity of the product.

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OVERWEIGHT IN DOGS AND IN HUMANS — WHAT DIFFERS?

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Background: Obesity is an enlarging problem is companion animals (dogs, cats) too similarly to the tendency observed in human population. Nowadays veterinary clinicians take a special emphasis to reach an early diagnosis and preceed in obesity diseases and metabolic disorders that develop as consequences. Parallely investigators often use the canine model in obes research based on genetical and physiological similarities. As in human beings also in dogs could be important to develop novel methods for measuring type-, and regionality obesitas, subcutaneous and visceral distribution of fat deposits. Not even in human obes patients is clear the distribution of fat in different deposits and their correlations to many metabolic disorders. However references are not perfectly consistent in the task, several data showed that quantity of abdominal fat deposits correlate closer with insulin resistency and insulin-resistency based metabolic disorders while subcutan fat sizes better correlate with serum leptin levels. In this present study we goaled to work-out a method available to examine the regional distribution of fat deposits and their metabolic effects in canine obes patients.

Material and methods: Suspected oncological patients altogether 25 dogs were underwent PET/CT whole body examinations and blood sampling for measuring the metabolic status. Following earlier published data we also choosed 2nd–3rd lumbal transversal slices to measure the subcutan fat diameter calculated the subcutan/visceral fat deposit rates too. Metabolic status was evaluated as follows: after 12 hours fasten glucose-, insulin-, thyroxin-, cortisol- and leptin levels were measured from serum samples. HOMA index was choosed to evaluate the level of insulin resistency in our patients.

Results: Our data showed basic differences in regionality of fat deposits. Canine obes patients had either visceral or subcutan type-deposits where major part of fat stayed. Serum leptin levels varied between 0.4–20.1 ng/ml. Elevated serum leptin levels correlated closely with visceral fat deposit quantities but not with subcutan ones. HOMA-IR index did not showed correlation with regionality neither with total fat quantities. It is clear that dogs having visceral-type fat deposits insulin sensitivity is worse (HOMA-IR: 0.15–2.42), and insulin level is higher (0.66–11.65 μU/ml). This tendency is higher (however not significantly) if we measure subcutaneous deposit at 3rd lumbal transversal images. Similar tendency (significant!) is seen in thyroxin levels (3.19–250 nmol/l) but in cortisol-, and leptin levels there is no correlation.

Conclusion: Further histopathological work to measure the fat cell sizes and leptin-receptor immunohistochemistry and blood chemistry is still ongoing for better understand the effects of fat deposit sizes and the regionality in dogs.

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INITIAL EXPERIENCES WITH MEDICHECK Q.C. KIT

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Background: The aim of the study was to look over the experiences with application of MEDICHECK Q. C. kit.

Material and methods: In the department prepared radiopharmaceuticals werre by a preliminary determined system examined.

Results: The examined radiofarmaceuticals generally fill reqiurements. The study is under way, for this reason it is impossible to give numerical data.

Conclusion: The MEDICHECK Q. C. kit seems an adequat tool in quality controll of radiofarmaceuticals.

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RADIOGUIDED LYMPH NODE BIOPSY OF A CHEMORESISTANT LYMPH NODE DETECTED ON INTERIM FDG PET-CT IN HODGKIN LYMPHOMA

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Background: Interim FDG PET has high prognostic value in Hodgkin lymphoma and can detect early inadequate therapy response. Positive findings may require histological clarification for further therapy guidance. However nonpalpable lesions may be difficult to localise intraoperatively. This case report presents the successful surgical biopsy with the Radioguided Occult Lesion Localisation (ROLL) technique of a chemoresistant lymph node detected by interim FDG PET-CT.

Material and methods: A 32 years old male patient was diagnosed with nodular lymphocyte-predominant Hodgkin lymphoma. Staging FDG PET-CT detected large right axillary lymph node conglomerate and splenic manifestation. Interim PET-CT following two cycles of ABVD chemotherapy revealed good metabolic response with the exception of one single axillary lymph node. A second "interim" PET-CT after two further cycles had similar result. A biopsy of the metabolically active nonpalpable lymph node was performed by using the ROLL technique with ultrasound guidance.

Results: The lymph node was successfully removed with a minimal invasive procedure. Histological evaluation revealed a transformation into T cell rich diffuse large B cell lymphoma. Based on this finding a relevant therapy change was introduced.

Conclusion: The ROLL technique is an appropriate method for the biopsy of chemoresistant non palpable lymph nodes suspected by interim PET-CT. The anatomic information given by the CT part of the combined PET-CT method has great relevance for a multimodality approach i.e. ultrasound guidance during ROLL procedure.