

**Natureza do trabalho:** Resumo

TÍTULO

*USE OF PET-CT IN THE DIFFERENTIAL DIAGNOSIS OF NEUROLOGICAL DISORDERS*

DIEGO SARAIVA DE MELLO, ODAIR FELIPE ELSNBACH

CENTRO UNIVERSITÁRIO DA GRANDE DOURADOS, UNIGRAN, DOURADOS, MS, BRASIL

RESUMO

**Introduction:** The PET-CT is a form of diagnostic radiology that uses radioactive tracers and the principle of matching detection to measure biochemical processes within the tissues, merging the data detected with CT images. Unlike other imaging technologies such as computed tomography (CT) and nuclear magnetic resonance image (MRI), geared predominantly to anatomical definitions, the PET scan evaluates the metabolic activity of cells and providing images of body Biochemistry and function and may be used to supplement or even substitute these modalities. **Literature review:** The basic principle of PET is the instrumentation used is receiving information only. To obtain the images, it is necessary to administer to patients a radiopharmacology marked with a positron emitter. These have a very short radioactive half-life of no more than about two hours to the  $^{18}\text{F}$ . The PET-CT allows a differential diagnosis, early and accurate of neurological diseases, such as dementia, including depression of the elderly, Alzheimer's disease and Parkinson's disease to differentiate benign tremor (Costa et al., 2001). With such importance of method, it becomes essential to disseminate and encourage PET-CT studies because, according KOIFMAN (2012), technology advances more quickly than the human capacity of scientific validation of the diagnostic tool. **Conclusion:** The PET-CT is able to demonstrate biochemical changes even when there is still no structural abnormality evident in other imaging methods, allowing an early diagnosis and differentiated.