AN EXPERIENCE WITH NEWLY DEVICED PEDIATRIC ECT BED.

Adult instruments are usually used for pediatric experimentation. To obtain good results in infants and children, however there are many drawbacks. In SPECT examination using rotation-type gamma camera, the size of normal bed is so wide for children. The efficiency is not satisfactory. We made an ECT bed which was 20cm wide, and had 7cm smaller radius than that of the normal bed, and was attached an instrument for fixing the children. Using this new SPECT bed, we could get better SPECT image and shorten the time of the examination.


For the purpose of applying a human gamma camera to small animals such as rats or mice, simple and easy improvements were brought on a pinehole collimator, for example a small pinehole lead block (the pinehole was 1.5mm in diameter) was attached to the inside of a human pinehole collimator.

In basic experiments using Tc-99m sodium pertechnetate, a small circled hot images of at least 1.0mm in diameter could be shown clearly. And two slender tubes (outer diameter was about 0.9mm), which were laid at intervals of 2.0mm, could be distinguished.

Furthermore, bone scintigraphy, salivary gland scintigraphy and thyroid scintigraphy in rats and mice were attempted using this collimeter improved. Clear images of all were obtained.

In addition, the experiments using the radionuclide emitted higher energy gamma rays were attempted.

THE EXAMINATION OF GLYCINE-1-13C-Cholate BREATH TEST USING INFRARED ANALYZER-CLINICAL APPLICATION.

The 13C-breath test is useful for clinical diagnosis of detecting some malabsorption syndromes. In the condition of bacterial over growth, administrated glycine-1-13C-cholate are deconjugated 1-13C-Glycine in the intestine and it flow out to 13CO2 Expired air after absorbed and metabolized. This time we bring this test to a 53 years old female patient who was diagnosed Progressive Systemic Sclerosis (P.S.S.) with Sjögren's syndome had chie complains of costipaton and dysuria, manifested anemia, hypoalbuminemia and hypocholesterinemia. During fasting time, we measured the 13CO2 in expired air after administrated glycine-1-13C-cholate 310mg at 30min. interval. The 13CO2 expired curve after administrated of 13C-compound demonstrated flat line. Clinical symptom and laboratory data of this patient was indicated bacterial over growth in alimentary tract. But we could not detect bacterial over growth in this case. This result may be due to the problem of expired air collection and the hypokinesia of the alimentary tract in this patient.