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DIAGNOSIS OF SJÖGREN SYNDROME USING  $^{99m}\text{Tc}$  PERTECHNETATE. K.Nagase, M.Tanaka, T.Kondo, T.Omino, Y.Arakawa, H.Hohshido, H.Hashimoto and S.Hirose. Juntendo University, Tokyo.

Sjögren syndrome, characterized by the decrease of secretion volume of lacrimal and salivary glands, is a chronic inflammation disease resulting in dried conjunctivitis. It is reported that many cases of this syndrome are complicated by diffuse collagen disease such as chronic articular rheumatism. Diagnosis of Sjögren syndrome by lacrimal gland is relatively easily performed by Shirmer test and the like while in case of salivary gland test, excretion volume of saliva is measured by gum test. In our hospital, uptake volume of  $^{99m}\text{Tc}$  pertechnetate into parotid and submaxillary glands 30 minutes after injection and its secretion volume into salivary gland are being studied in comparison with those by gum test. Excretion volume of saliva shows a good correlation with that of RI. Excretion volume of saliva and contrast view of parotid glands are also being studied on some cases on which we are ready for presentation.

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A TRIAL FOR ESTIMATION OF STEROID THERAPY FOR SJÖGREN'S SYNDROME BY SIALOSCINTIGRAPHY. S.Tsutsui, H.Shibatsuji, Y.Honda, M.Yoshimoto, K.Iwata, I.Fushimi, H.Takahashi, K.Dohi and S.Hamada. Nara Medical University, Nara.

As has already been reported in the previous reports, sialoscintigraphy--peak time, uptake rate and reaction rate to tartaric acid--was useful for the diagnosis and evaluation of grading Sjögren's syndrome (Sjs). The purpose of this study is to estimate therapeutic value of steroid therapy to Sjs by means of serial scintigraphy, after intravenous injection of  $\text{Tc-}^{99m}$  pertechnetate to 25 cases with Sjs, various parameters were measured. Tartaric acid was orally administrated at 50 minutes after the injection. Appearance time of oral activity became shorter in 50% of the cases and peak time of submandibular gland was shorted in a few cases after the therapy. Uptake rate, maximal salivary-blood flow ratio and reaction rate to tartaric acid were increased after the therapy. Uptake rate in mild cases and reaction rate to tartaric acid in severe cases were more sensitive.

It is concluded that serial sialoscintigraphy is useful examination for the estimation of steroid therapy to Sjs.

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THE EXAMINATION OF GLYCINE- $1\text{-}^{13}\text{C}$ -CHOLATE, BREATH TEST USING INFRARED ANALAZER--CLINICAL APPLICATION  
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The  $^{13}\text{C}$ -breath test is useful for clinical diagnosis of some malabsorption syndromes. In the condition of bacterial over growth, administrated Glycine- $1\text{-}^{13}\text{C}$ -cholate is deconjugated and comes to  $1\text{-}^{13}\text{C}$ -Glycine in the intestine, after absorbed and metabolized, it is discharged as  $^{13}\text{CO}_2$  expired air.

This time, we brought this test to a 28 years old male patient who was operated for ileus in 3 years old, after that the patient was suffered from anemia off and on and blood transfused for several times, who also suffered from hypocholesterinemia. Barium enema showed that he has a ileocolonic fistura.

During fasting time, we measured the  $^{13}\text{CO}_2$  in the patient's expired air after administrated Glycine- $1\text{-}^{13}\text{C}$ -cholate 500 mg at 30 min. interval. The  $^{13}\text{CO}_2$  expired curve has increased after 3 hrs., and the peak has decreased little by little within 11 hrs..

Above finding shows that malabsorption occurred because of micell phase dysformation.

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ANALYSIS OF GASTROINTESTINAL FUNCTION BY RADIOLABELED TRACER STUDIES. M.Noguchi, I.Kaneko, T.Kogure, K.Sugito, H.Ogata, M.Takano, Y.Maruyama and Y.Sasaki. Toho University, Meiji College of Pharmacy and Gunma University, Tokyo and Gunma.

Gastrointestinal transit is important function to be studied by radioactive tracer method in various conditions. In order to compare the gastrointestinal transit of different forms of drugs insoluble tablets and pellets were labeled with  $\text{I-}^{131}$  and  $\text{Tc-}^{99m}$ , respectively. The study was performed in 5 healthy volunteers. Gastric emptying differed in each case ranging from 1 to 4 hours. However, the time to reach the terminal ileum was similar which was 4 to 5 hours. Thereafter the time to move into the colon differed probably because of the difference to pass Bauhin's valve. We also intended to evaluate the movement and spread of intrarectal suppository base by the tracer technique in 5 healthy volunteers. Technetium- $^{99m}$  was incorporated in the suppository with different kinds of base. At 4 hours after administration, 40 to 54% (mean 45%) of suppository base remained at the inserted region. The distance of ascension varied from 5 to 11.5cm (mean 7.7) and seems to inversely correlated with the time between defecation and dosing. Radiolabeled tracers and imaging procedures described here may provide useful means to assess the gastrointestinal motility and absorption, which affect bioavailability of drugs.