

# CONTRAST MEDIA FOR RADIOLOGICAL EXAMINATION IN GASTROINTESTINAL TRACT LEAKAGE.

## An experimental and clinical study

Radiologische contrastmiddelen bij gastro-intestinale lekkage.  
Een experimenteel en klinisch onderzoek.

### PROEFSCHRIFT

ter verkrijging van de graad van doctor

aan de Erasmus Universiteit Rotterdam  
op gezag van de rector magnificus  
prof. dr. A. H. G. Rinnooy Kan  
en volgens besluit van het college van dekanen.  
De openbare verdediging zal plaatsvinden op  
woensdag 15 april 1987 om 15.45 uur

door

ABIDA ZAHRA GINAI-KARAMAT

geboren te Lahore - Pakistan.

# Stellingen

1. The final selection of contrast medium is the responsibility of the radiologist analogous to a surgeon's responsibility for selecting appropriate suture material (Dodds et al. 1982).
2. A double contrast radiological examination of colon performed on a patient with a well cleaned colon is a very sensitive diagnostic tool for detection of colon carcinoma and polypoid growths and should therefore be the primary method of diagnosis.
3. Radiological examination is essential to uncover or confirm the presence and the extent of many gastrointestinal iatrogenic complications.
4. Without a thorough knowledge of normal radiological anatomy and its variants the training in radiology is completely inadequate.
5. The relevant clinical history and physical findings of a patient as well as the biochemical results if already known are of paramount importance for adequate, effective and optimal functioning of the radiologist.
6. A well conducted double contrast upper gastrointestinal radiological study and a well performed upper gastrointestinal endoscopy can be considered diagnostically comparable in a large majority of cases and are complementary techniques. The choice of one or the other technique, in individual patients, should be carefully made.
7. Gastrografin can give rise to severe pulmonary oedema and may even cause death on aspiration. Gastrografin, therefore, should not be used as a contrast medium for evaluation of patients in whom the possibility of leakage or aspiration to the lungs is considered.
8. Hytrast is a highly toxic contrast agent particularly in the peritoneum of the rat and also gives very severe reaction in the lung, mediastinum and pleura of rat. The clinical use of Hytrast as a contrast medium should, therefore, be abandoned.
9. Lower osmolality water-soluble contrast media Hexabrix, Amipaque and Omnipaque are safer than high osmolality Gastrografin for radiological evaluation of leakage from the gastrointestinal tract.

10. The use of pure barium sulphate (without any additives) should be avoided as it flocculates rapidly and causes poor coating in the gastrointestinal tract, which can lead to serious diagnostic errors.
11. The newer imaging techniques such as CT (computer tomography) and ultrasound may be able to define larger mass lesions in the gastrointestinal tube, but as to the precise characteristics of these masses alternative radiological methods are frequently required.
12. A videorecording of the swallowing act made with an appropriate contrast medium is the only reliable method for detection of complex abnormalities in the swallowing mechanism.