

# Colonic Polyps And Carcinomas:-A Prospective Comparison Of Single And Double Contrast Barium Enema In Some Patients.

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In very early stage, colorectal Carcinomas present as polyps. Their early detection is therefore of paramount importance. Since the histological picture of a polyp cannot be ascertained from an X-ray film, the diameter appears to be the most suitable indication of the Malignancy of a lesion. A prospective study was conducted to find out whether a single contrast (SC) or a double contrast (DC) Barium Enema examination is more sensitive diagnostic method for examination of the colon. The examination was performed in two phases. First of all a single contrast study using a barium sulphate suspension, followed by insufflation of air for a double contrast study and both the examination methods were performed in the same patient.

This study was carried out in the department of radiology K.E.M.C/Mayo hospital Lahore over a period of two years. 425 patients 213(51%) females 212(49%) males, their ages ranged from 14 to 87 years. 60 patients (14%) were of 50 years, 200(47%) of 65 years, 150(35.3%) of 40 years of these 408 patients were selected for this study. SC examination performed by one group of radiologists and results are recorded same patients were studied with DC by another group of radiologists the third group of radiologists compared both SC and DC findings on either of the two were confirmed on surgery and histopathology and were called true positive study showed that no significant difference exists between SC and DC for carcinomas, on the contrary DC is far more informative for colonic polyps.

## Material And Methods

The colon was examined in 425 patients 213 women and 212 men and age ranged from 14 to 87 years. Out of these 408 were included in the study. 500 ma modern fluoroscopy unit with barium in disposable bag as contrast agent

After proper preparation of patient. Patient was placed in left lateral position. Catheter is inserted into rectum gently barium was introduced into rectum and column was visualised on monitor. I.V injection of buscopan was given infusion of barium was commenced and checked on monitor intermittently infusion was terminated when barium reached hepatic flexure. Contrast then drained and air insufflated. Films of the patients taken in various positions to outline the lesions. The single contrast (SC) of the colon was performed under fluoroscopic control and where possible with compression. Various films were obtained in different projections including radiograph of the caecum and rectum, a general view of the entire colon and a post evacuation film. A barium suspension of low density but high viscosity provided excellent coatings on double contrast (DC) examination. After the single contrast (SC) study, the examiner completed a questionnaire in respect of demonstration of the colon, presence or absence of polyps and carcinomas. The double contrast (DC) study was then performed by other Radiologists who had not been involved in the single contrast (SC) study. Films were again obtained in different projections after which an identical questionnaire as for (SC) was completed.

Finally, the Radiographs of the (SC) and (DC) studies

were evaluated independently by a third observer who had not participated in either of the preceding examinations and results documented in the questionnaire. To permit a comparison of (SC) and (DC) in respect of positive findings, any positive findings obtained with at least one of these methods were compared with the endoscopic, surgical, histological findings and/or with the findings of the third observer. When a positive finding from one or both of the radiological studies was confirmed by one or more of the above mentioned examinations, it was regarded as true positive. Polyps with a diameter of less than 5mm were not taken into account

## Results

13 Carcinomas, 3 cases of polyposis, one case of multiple sigmoid adenomas and 41 solitary polyps were demonstrated with one or both of the Radiological methods. Of the 41 solitary polyps 31 were confirmed by endoscopy or surgery. Of these 31, 21 were also confirmed by histology (18 Adenomas one Juvenile polyp, 2 Carcinomas) The 2 Carcinomas presented as smaller lesions with a diameter of 16 and 17 mm in the rectum and sigmoid. The multiple sigmoid adenomas and 6 rectal polyps were missed by (SC), but identified by (DC) examination. Conversely, none of the rectal polyps and Carcinomas missed by (DC). Apart from the rectal polyps (SC) missed 16 out of 35 lesions. This resulted in a detection rate of 54% for (SC) and of 89% for (DC). This difference was significant.

## Discussion

The evaluation showed that no significant difference exists between (SC) and (DC) as regards demonstration of Carcinomas of the colon. In contrast, (DC) proved to be distinctly superior in the detection of polyps. Most misinterpretations were made in the caecal part and the sigmoid, both of which are very difficult to examine. A barium suspension with a lower density could increase the diagnostic value of (SC). (DC), however requires a higher viscosity suspension to allow diagnosis of small lesions.

## Conclusion:

From this study the authors believe that double contrast (DC) study should become the routine screening method for polypoid lesions in the entire large bowel, and complementary single contrast (SC) studies be performed in problem areas like the caecum and the sigmoid

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