Summary and conclusion

Colorectal cancer is major health problem. Colorectal polyp is one of the most important risk factor and there is compelling evidence that most (if not all) cancers of the colon, except those that develop in inflammatory bowel disease, arise in adenomatous polyp (adenoma carcinoma sequence).

Early detection of colorectal carcinoma leads to marked improvement of the survival rate. Physicians concerned with the detection and therapy of colorectal cancer predict that this disease will become the center of the next great effort in cancer screening.

The limitations of the fecal occult blood testing and sigmoidoscopy warrant consideration of the barium enema or colonoscopy for screening of colorectal carcinoma, especially in patients at high risk for the disease.

Disease staging is generally considered an important prognostic factor for patients undergoing curative surgery for colon and rectal cancers, and pathologic grade offers additional prognostic informations. Diagnostic and therapeutic radiologists should know the classifications and staging of colorectal malignancies.

For evaluating primary colorectal malignancies U/S and CT are useful in assessing and staging patients suspected of having extensive disease and in deciding whether a patient will benefit from various types

of treatment therapies. TRUS is able to assess the depth of the rectal wall involvement as well as detection of small perirectal lymph node, however the non-passable rectal lumen due to presence of intraluminal mass or marked lumen narrowing is considered the major factor, which prevent the proper tumor staging. Pelvi-abdominal U/S and CT can assess the colorectal malignancy and detect the enlarged pelvi-abdominal lymphadenopathy and distant metastases. pelvi-abdominal U/S and CT lack the ability to assess depth of neoplastic involvement within bowel wall. This limitation is the major factor, which, combined with inability to diagnose metastatic tumor foci in normal sized nodes, the inability to differentiate between enlarged lymph node due to tumor invasion or associated inflammatory reaction and micro invasion of perirectal fat, prevents optimal tumor staging.

This study indicates that U/S and CT are accurate methods of detecting colorectal cancer (sensitivity rates are 88.2% & 91.2% and accuracy rate are 87.5% & 90% for U/S and CT respectively), and reliable methods of staging (accuracy are 57.6% & 63.6% for U/S and CT respectively). The good results of detection of colorectal cancer (T) may be due to that all cases of this study were all suspected cases of CRC tumors by barium enema, endoscopy and PR examination or known cases of CRC under follow up, as well as most of the cases have advanced disease state.

CT is superior to U/S in identifying extraluminal component of neoplasms and their spread to adjacent organs. CT is superior in detection of pelvic and distant lymphadenopathy.

Patients with colon cancer may be poor surgical candidates; in these patients U/S and CT provided an accurate assessment of the extent of

disease within the pelvis and demonstrated its spread to distant sites, thus permitting a choice of the appropriate port for irradiation. The success of subsequent chemotherapy and irradiation could be determined in each of these patients by follow-up U/S and CT studies, which could be compared to the base-line study before treatment.

In conclusion, because colon cancer is potentially curable and decisions on treatment are based largely on the extent of disease. U/S and CT might not be used as a primary method of examination the colon as superficial tumors without an intraluminal mass or bowel wall thickening may be missed by these technique; But U/S and CT are recommend for preoperative evaluation of any patient in whom endoscopy and barium-enema examination suggest colorectal tumor.