Introduction

INTRODUCTION

Colorectal cancer is one of the commonest causes of cancer death. Despite advances in surgery, chemotherapy and radiotherapy, only modest improvement in the overall mortality have been achieved in the last 10 years *(Maxwell- Armstrong et al 1998).*

The development of colorectal carcinoma is the result of a slow process, taking at least 10 years to evolve from normal colonic mucosa. Consequently, symptoms of the cancer are in large part related to tumor size and location *(Steele and Mayer, 1995).*

Barium enema examination of the colon has proved to be safe and accurate method for detecting colorectal polyps and cancer. The study must be performed and interpreted with the highest standards so that it remains a valuable examination that is regarded with confidence with clinicians, radiologist, and patients. The detection rates of significant polyps and carcinoma by using barium exanimations are in the range of 92% to 100% *(Smith, 1997).*

Over the years, radiographic evaluation of the colon and rectum has expanded from fluoroscopy to cross sectional imaging, to three dimensional imaging techniques which are now available for detecting and staging primary and recurrent colorectal neoplasms as magnetic resonance imaging (MRI), transrectal ultrasonography (TRUS) and

computed tomography (CT). Many of these methods are still evolving techniques, are being modified, and their efficacy is being confirmed *(Thoeni, 1997).*

Although both endoscopic and double contrast radiographic examinations readily evaluated mucosal lesions, neither can determine the depth of the tumor infiltration nor detect tumor spread to distant sites. CT scan of the abdomen and pelvis can determine the thickness of the colonic wall and the relationship of the colon to the other abdominal and pelvic structures or organs, and detect metastasis to lymph nodes, adrenal glands liver and bony structures or adjacent musculature *(Zerhoniti et al, 1996).*

Helical CT scan has the advantages of fast volume scanning associated with optimal bolus delivery, absence of artifact related to the motion, absence of missed slices, and availability of reformation in multiple planes *(Thoeni 1997).*

The major advantage of TRUS is its ability to demonstrate the various layers of colon wall and thus the depth of tumor mural presentation. Depth of infiltration is determined by disruption of the different layers of the rectal wall. TRUS can also demonstrate the intraluminal component of the colorectal tumors as polypoid or exophytic mass but its primary purpose is to detect the mural or nodal abnormalities *(Thoeni 1997).*