INTRODUCTION

Fecal incontinence is a life style-limiting condition with multiple etiologies **(Chatoor *et al*., 2007).** It is defined as recurrent uncontrolled passage of fecal material at an inappropriate time or in an inappropriate place more than twice a month. The reported prevalence values range from 1.4% in the general population to 46% in institutionalized elderly. It is possible that the real prevalence is even higher than reported as fecal incontinence is associated with high social stigma and people do not easily seek help for this disorder out of embarrassment **(Deutekom *et al*., 2006).**

Fecal incontinence has many causes and varies in severity from minor fecal soiling to frank incontinence of solid stool. Disruption of the anal sphincter results most commonly from vaginal delivery, occurs in 30% of parous women, and is associated with symptomatic incontinence in about 80% of cases **(Steele and Campbell, 2005).**

Diagnostic tools are used to determine the exact cause of the fecal incontinence complaints and aim to guide future therapy. In the evaluation of fecal incontinence clinicians can use a large variety of diagnostic tools, including anorectal function tests and anorectal imaging techniaues after medical history and physical examination **(Deutekom *et al*., 2006).**

Imaging has a central position in the assessment of the integrity of the external and internal anal sphincter muscles, since physical examination is not reliable. At present, two eridoanal imaging techniaues are used endoanal ultrasonography (EUS) and endoanal magnetic resonance imaging (MRI). Both imaging techniques have been shown to be accurate in mapping defects of the external anal sphincter. Recently external phased-array magnetic resonance coils is applied **(Terra *et al*., 2005).**

EUS is a very good tool to demonstrate anal sphincter defects of both the EUS and the IAS. The size of the sphincter defect in combination with other anorectal function tests results (low anal pressures, normal rectal, compliance) without diarrhea form an indication to perform an anal sphincter repair. EUS has good reproducibility, compares well with surgery, and has equal results with external anal sphincter (EAS) defects and possibly better results with internal anal sphincter (IAS) defects than does MRI. Atrophy detection is also possible but requires more research. Three-dimensional EUS gives more insight into the anatomy and therefore may demonstrate defects better, but it is probably more the ease of viewing the image. Volume measurements for the anal sphincters have no value **(Deutekom *et al*., 2006).**