INTRODUCTION

Transvaginal sonography is a routine imaging tool for all patients attending an infertility outpatient clinic **(Ando et al., 2004).**

Transvaginal Sonography (TVS) is a noninvasive modality that provides excellent imaging of the uterus and endometrium. It is relatively painless, well accepted by patients and can be performed either in the office or at a hospital at a relatively low cost. However, TVS have produced high number of equivocal findings and not all polyps or submucous fibroids can be excluded. It has also been reported that patients are subjected to further investigations **(Lalchandani and Phillips, 2003).**

Small structural abnormalities can be missed on TVS and differentiation between endometrial and myometrial abnormalities are not always possible **(Ando et al., 2004).**

Saline Infusion Sonography (SIS), although initially used to investigate tubal patency, has been increasingly used for investigation of the uterine cavity. Because it is an easy, fast and well tolerated diagnostic method, SIS would be indicated in situations in which conventional TVS is not able to assure uterine cavity normality or in which TVS detects abnormality, but is incapable of defining its nature **(Ismail et al., 2005).**

Saline infusion sonography gives a more detailed picture of the uterine cavity when compared with traditional sonography, as injected saline solution distends the uterine cavity and act as a contrast agent. It can

provide a specific diagnosis and an unnecessary diagnostic hysteroscopy can be avoided **(Ismail et al., 2005).**

Until recently, routine office endometrial biopsy and transvaginal ultrasonography (US) performed to evaluate double – layer thickness of patients with postmenopausal bleeding and dysfunctional uterine bleeding.

These procedures were often inadequate for evaluation because approximately 50 % of cases of abnormal uterine bleeding are caused by focal lesions such as polyps, submucosal fibroids, and focal lesions such as polyps, submucosal fibroids, and focal endometrial hyperplasia **(Bree et al., 2000).**

Pathological changes of the endometrium are a cause of infertility and should be investigated in infertile women. Various methods for assessing the uterine cavity in patients presenting with a history of infertility have been established transvaginal sonography is a sensitive, simple and non –invasive method that has been used routinely in the screening for uterine cavity pathologies. However, the nature of the lesion and exact localization of the lesion relative to the uterine cavity make accurate diagnosis difficult and some of the lesion relative to the uterine cavity makes accurate diagnosis difficult and some of the lesions may be missed or overlooked **(Revel and Shushan, 2002).**

With endometrial biopsy, uninvolved portions of the endometrium may be randomly sampled and focal intracavitary masses such as polyps may be skipped; with dilation and curettage, focal lesions may also be missed and only 60% of the surface of the endometrial cavity may actually be sampled **(Guven et al., 2004).**

Hysteroscopy allows direct visualizing of the uterine cavity where immediate biopsy of suspected lesions possible. Hysteroscopy has been considered as a gold standard method for detection of intrauterine pathologist **(Guven et al., 2004).**

Sonohysterography, US technique, in which the endometrial cavity is distended with saline, allows evaluation of the single layer of the endometrial lining and enables the radiologist to reliably distinguish focal from diffuse endometrial pathologic conditions **(Davis et al., 2002).**

Some patients with submucous fibroids are inappropriate candidates for hysteroscopic resection, especially when the fibroid extends from the endometrial cavity to the serosa. Because SIS is able to distinguish the endometrium and the myometrium, it is more suitable than hysteroscopic evaluation of the extension of submucous fibroid **(Davis et al., 2004 and Yucebilgin et al., 2004).**

AIM OF THE ESSAY

The aim of this work is to evaluate the role of Sonohysterography in endometrial and subendometrial lesions.