



CODEN [USA]: IAJPBB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.1288750>Available online at: <http://www.iajps.com>

Research Article

**FALLOPIAN TUBES BLOCKAGE AND FERTILE WOMEN'S
ADENOMYOSIS: THE DETERMINATION OF ADENOMYOSIS
THROUGH SURGICAL INTERVENTIONS**¹Dr. Sundas Saleem, ²Sahar Amjad, ²Dr Nida Fatima¹WMO BHU Chaba Purana²Nishtar Hospital Multan**Abstract:**

Objectives: To find out Adenomyosis in twenty-three infertile women after passing them through a surgery and to carry out a microscopic examination of tissue for any disease.

Methodology: Twenty-three infertile women were passed through a surgery to observe the uterine fibroids—an abnormal growth of women uterus at Services Hospital, Lahore (Gynecology Dept) from September 2015 to January 2016.

Results: The women passing through the surgery were of age 26 – 47 with an average age of 37.3 years. Five patients with a percentage of 21.7% had a successful delivery before. Eighteen patients with a percentage of 78.3% had gone through abortion and 21.7% were facing the problem of primary infertility. Previous gynecological methods were based on dilatation and surgical scraping or cleaning or by using a suction aspiration to remove the uterine contents in seventeen patients, myomectomy was found in 5 patients, adhesiolysis for uterine synechiae in 3 patients. Two patients with bilateral tubal patency were suffering from Preoperative hysterosalpingogram. Only seventeen were having bilateral tubal blockage. 4 were suffering from Unilateral patency of the fallopian tube. Fifteen out of seventeen amongst those with bilateral tubal blockage were facing with corneal blockages. According to the modes of clinical presentation different cases were having different percentages. The abdominal and pelvic mass was 100%, dysmenorrhea or menstrual cramps 82.6%, excessive menstrual discharge 60.9%, pain during sexual intercourse was in 47.8% and uterine bleeding at irregular intervals in 34.8%. Thirteen patients having diffuse adenomyosis were observed to be Intra-operatively adenomyosis, 7 were facing with multiple focal adenomyosis and 3 with unifocal adenomyosis. Seventeen out of twenty-three patients were found to be suffering with Co-existing uterine fibroid. Co-existing endometriosis were found in 2 patients. It was found during surgery that only 7 patients were having significant pelvic adhesion.

Conclusion: Blockage of the fallopian tubes has association with adenomyosis in infertile women and also has a relation with leiomyomas—a noncancerous growth of the uterus.

Corresponding author:**Dr. Sundas Saleem,**

WMO BHU Chaba Purana

QR code



Please cite this article in press Sundas Saleem *et al.*, *Fallopian Tubes Blockage and Fertile Women's Adenomyosis: the Determination of Adenomyosis through Surgical Interventions*, *Indo Am. J. P. Sci.*, 2018; 05(06).

INTRODUCTION:

Adenomyosis is caused by the expansion of the cavity of uterus and stroma inside the uterine musculature. This is a curable gynecological condition. The study about the aetiopathogenesis of adenomyosis is still not completed, but despite that study revealed that deficiencies of a thin, extracellular membrane underlying epithelial tissue to defective membrane at a specific functional region of uterus have been assumed [1]. The physiology of abnormal or diseased organism is basically a hormonal disorder in new born child which results in defect of stromal and the middle layer of the uterine wall and ultimately causes predisposition to adenomyosis in adulthood [2]. The result of our assumption revealed that mechanical loss and disorder of the endometrial-myometrial interface resulted to adenomyosis, which further created the risk of injury to the uterus during childbirth or abortion [3 – 7]. Few other disorders which can be resulted were chronic endometritis, hereditary and hyperoestrogenemia [1 – 8].

Infertility in women cannot be linked to adenomyosis, because this condition is diagnosed from the very early decades of life. After the marriage most of the women are serious about their future and career building so that to have some extraordinary achievement in life which ultimately affects their attention towards first pregnancy and thus causes delay in the birth of first child with a subsequent increase in adenomyosis in women.

Many errors have been found in diagnosing adenomyosis in women. These erroneous results have causes many other problems with ultimate delay in diagnosis and establishing new institutions for treatment [9]. It's very difficult and expensive to manage adenomyosis. Misdiagnosis of adenomyosis

is termed as leiomyoma.in some situations surgical complexities are caused by the erroneous diagnosis of adenomyosis. To encounter the results caused by the misdiagnosis of adenomyosis, evaluation was carried out about the clinical results, demographic variables and results observed during operation of all the twenty-three infertile women whose adenomyosis was misdiagnosed as leiomyomata during the clinical assessment.

METHODOLOGY:

A study was conducted at Services Hospital, Lahore (Gynecology Dept) from September 2015 to January 20seventeen. The study aimed to have a review of the consecutive twenty-three infertile women that had gone through surgery. The purpose of surgery was to review the misdiagnosis of uterine fibroids and intra-operative diagnosis of adenomyosis uteri. A total of twenty-three patients were to be evaluated for infertility. Before the operation it was found that they have abdominal sonography and hysterosalpingography. During operation a small or large piece of tissue was removed and prepared for histopathologic examinations.

RESULTS:

The average age of the patients was 37.3 years ranging from 26 to 47 years. Nineteen out of twenty-three were of 35 years and above. Primary and secondary infertility were found in 5 and 18 patients respectively. Nineteen patients had been facing infertility for the last 10 years. Seventeen patients had a previous history of dilation and curettage or early loss of pregnancy by using manual vacuum aspiration. Three had previously gone through adhesiolysis for uterine synechiae. Five was found with Past history of myomectomy. Only 5 had a successful delivery in the past whereas 18 patients had previously gone through the process of abortions.

Table – I: Profile of patients

Variables	Number	Percentage	
Age (Years)	< 30	2	8.7
	30 – 40	14	60.9
	41 – 50	7	30.4
Type of infertility	Primary	5	21.7
	Secondary	18	78.3
Duration of infertility (Years)	1 – 10	4	17.4
	11 – 20	12	52.2
	21 – 30	7	30.4
Previous childbirth	Zero	18	78.3
	One	3	13.1
	Two	1	4.3
	Three	1	4.3
Previous abortions	None	5	21.7
	Spontaneous	5	21.7
	Induced	13	56.5
Previous / Intrauterine procedure	Dilatation and curettage/ MVA	17	73.9
	Adhesiolysis	3	13.1
	Myomectomy	3	13.1

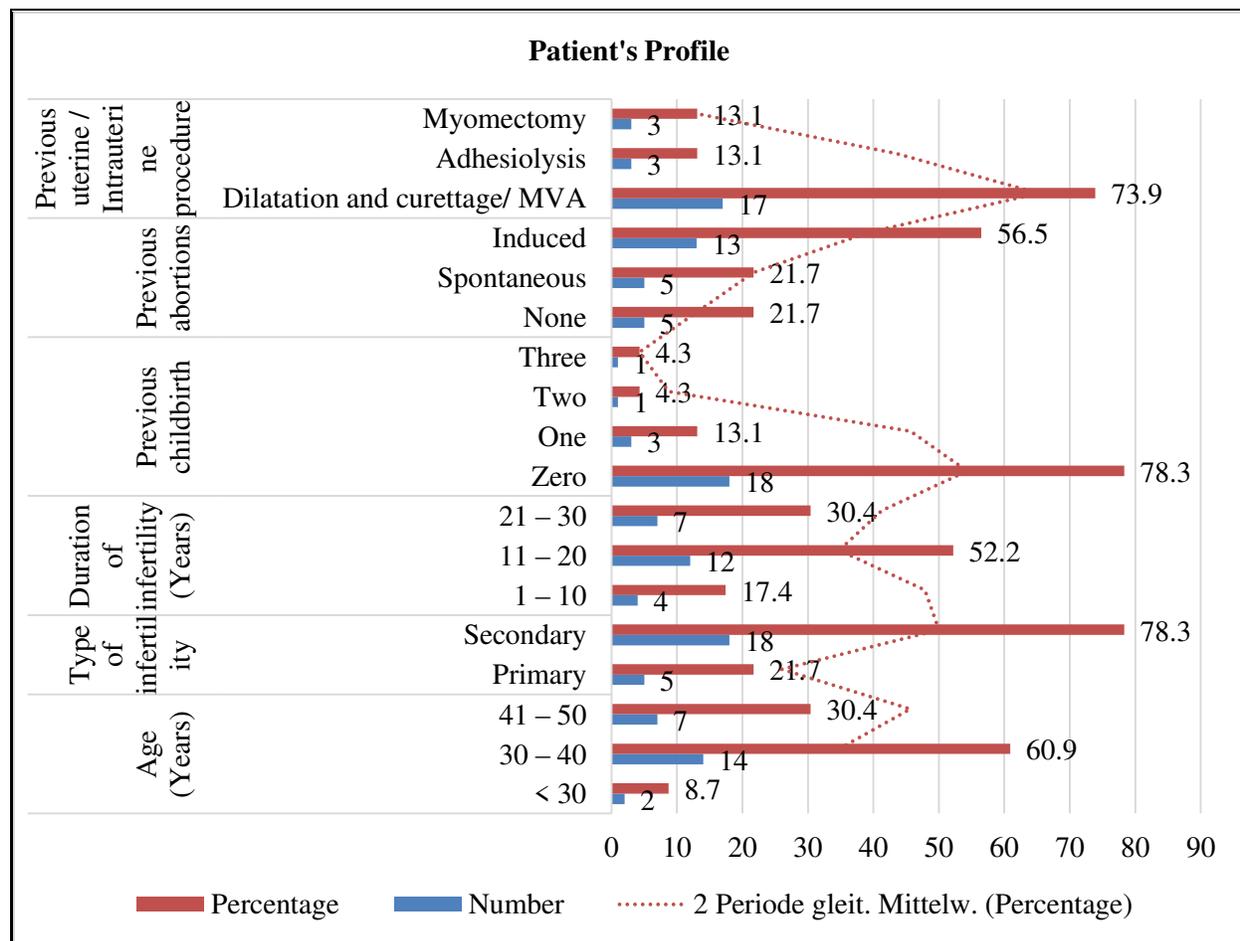
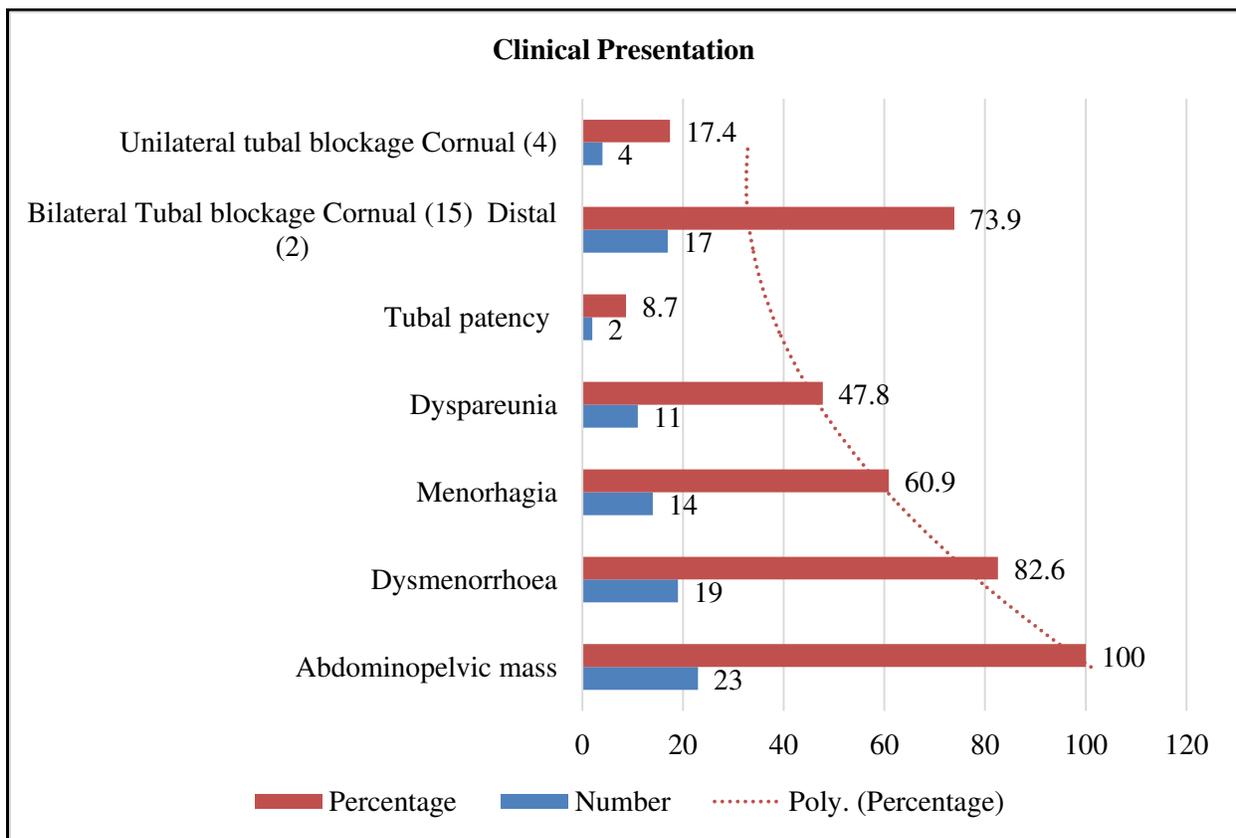
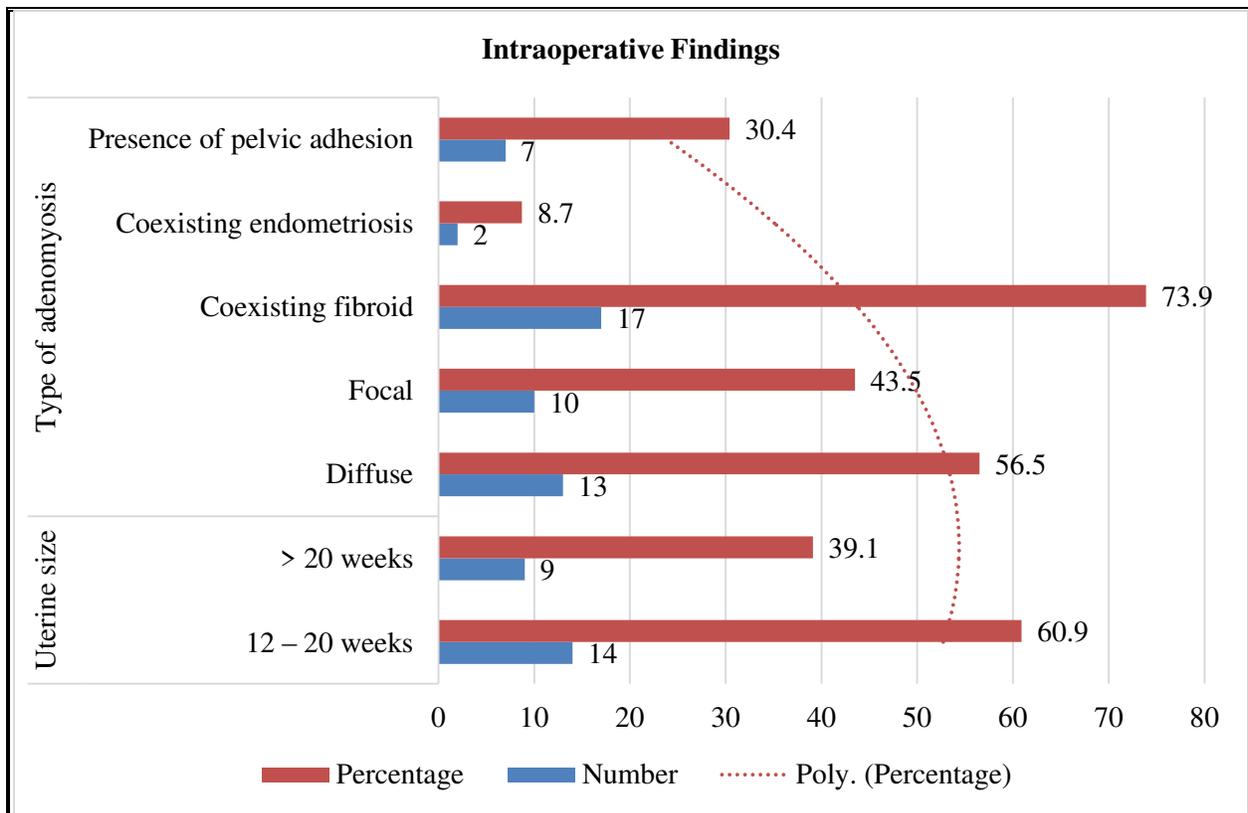


Table – II: Clinical Presentation

Variable		Number	Percentage
Symptoms and signs	Abdominopelvic mass	23	100
	Dysmenorrhea	19	82.6
	Menorrhagia	14	60.9
	Dyspareunia	11	47.8
Tubal finding on HSG Bilateral	Tubal patency	2	8.7
	Bilateral Tubal blockage Cornual (15) Distal (2)	17	73.9
	Unilateral tubal blockage Cornual (4)	4	17.4

**Table – III: Intraoperative Findings**

Variable		Number	Percentage
Uterine size	12 – 20 weeks	14	60.9
	> 20 weeks	9	39.1
Type of adenomyosis	Diffuse	13	56.5
	Focal	10	43.5
	Coexisting fibroid	17	73.9
	Coexisting endometriosis	2	8.7
	Presence of pelvic adhesion	7	30.4



The reports from clinical presentation showed the percentages of abdominal and pelvic mass 100%, dysmenorrhea or menstrual cramps 82.6%, excessive menstrual discharge 60.9%, pain during sexual intercourse was in 47.8% and uterine bleeding at irregular intervals in 34.8%. Before the operation seventeen patients with 73.9% were having blocked tube, 4 patients with unilateral fallopian tube blockage and only 2 with a percentage of 8.7% with openness and lack of blockage in the fallopian tubes. View of tubal blockage was corneal in 15 out of seventeen patients having bilateral tubal blockage and in the remaining 4 with unilateral tubal blockage. After the operation an evaluation of the HSG which were carried out earlier before the operation showed that only one patient HSG was having small skeletal element extending from the endometrium into the myometrium. Ten patients were found with diffuse adenomyosis and 10 with focal adenomyosis during the operation. Seventeen patients with coexisting uterine fibroid mostly with an insignificant fibroid seedling were observed. co-existing endometriosis and pelvic adhesion were found in 2 and 7 patients respectively. Six patients had partial local excision. All the twenty-three patients had gone through removal of some tissues from affected myometrial by surgery.

DISCUSSION:

The process of diagnosis of adenomyosis uteri is a tough diagnosis with erroneous results. The reason to this erroneous result is the similarity between clinical presentation and much other gynecological condition like leiomyoma and endometriosis. Care must be taken while making a diagnosis of adenomyosis because of the variable and low standard image diagnostic features of the adenomyosis on sonography and MRI [10]. Adenomyosis was normally diagnosed through pathological examination of hysterectomy specimen but due to the invention of TVS and MRI and its use for clinical purposes has facilitated the detection rate of adenomyosis. Both TVS and MRI are used for detecting and diagnosing of adenomyosis, but MRI is comparatively more sensitive than TVS [11]. During preoperative evaluation neither patients were having their MRI or TVS. They were having transabdominal sonography which is poor in resolution and sensitivity as compared to MRI and TVS. Results of our study revealed that the whole cases were erroneously diagnosed as leiomyoma [12, 13]. Adenomyosis is related to those women who had more than one production at a single birth. It almost found in premenopausal women [8, 9]. Out of twenty-three only 8.6% patients were multifarious

but all were premenopausal. 78.2% had gone through abortion which has confirmed the assumption of injury to endometrial-myometrial interface in the aetiopathogenesis of adenomyosis [14, 15]. Studies about adenomyosis have not yet explained the reason of why adenomyosis is associated with infertility. A functional unit known as MRI is very important during transportation of sperm, embryo implantation and placental development which is made up of basal layer of endometrium and middle layer of uterine wall. During the menstrual phase of women these functions are achieved by the retrograde contraction of sub-endometrial myometrium. Patients with tubal occlusion were of great importance in our study but it was not sure whether the block off was due to the blockage of the fallopian tube at the cornua by infiltrating adenomyosis tissues or by the mechanical suppression of the fallopian tube at the cornua [16 – 18]. During operation all patients had gone through biopsy of the myometrium with adenomyotic tissue which helped in the confirmation of diagnosis after histopathological examination. The partial excision of the affected myometrium was carried out in 6 patients which was the only method of treatment. Hysterectomy – the removal of a woman's uterus was not a part of our study. The reason was that they desired for fertility. Reduced uterine size was achieved postoperatively after experiment on one of the patients while using gonadotrophin-releasing hormone by the hormonal treatment. Hormonal treatment has successively been used in different surgeries resulting in a live birth. Another type of treatment being offered is the use of high-intensity focused ultrasound used to manage the adenomyosis [19 – 24].

After concluding our study, we understood that there is a close relation between those patients who had gone through the process of abortion and those who have gone through different procedures occurring inside the uterus. However, more study was required for further understanding of tubal occlusion.

CONCLUSION:

The women passing through the surgery were of age 26 – 47 with an average age of 37.3 years. Five patients with a percentage of 21.7% had a successful delivery before. Eighteen patients with a percentage of 78.3% had gone through abortion and 21.7% were facing the problem of primary infertility. Previous gynecological methods were based on dilatation and surgical scraping or cleaning or by using a suction aspiration to remove the uterine contents in seventeen patients, myomectomy was found in 5 patients, adhesiolysis for uterine synechiae in 3 patients. Two patients with bilateral tubal patency were suffering from Preoperative hysterosalpingogram. Only

seventeen were having bilateral tubal blockage. 4 were suffering from Unilateral patency of the fallopian tube. Fifteen out of seventeen amongst those with bilateral tubal blockage were facing with tubal blockages. According to the modes of clinical presentation different cases were having different percentages. The abdominal and pelvic mass was 100%, dysmenorrhea or menstrual cramps 82.6%, excessive menstrual discharge 60.9%, pain during sexual intercourse was in 47.8% and uterine bleeding at irregular intervals in 34.8%. Thirteen patients having diffuse adenomyosis were observed to be Intra-operatively adenomyosis, 7 were facing with multiple focal adenomyosis and 3 with unifocal adenomyosis. Seventeen out of twenty-three patients were found to be suffering with Co-existing uterine fibroid. Co-existing endometriosis was found in 2 patients. It was found during surgery that only 7 patients were having significant pelvic adhesion. Blockage of the fallopian tubes has association with adenomyosis in infertile women and also has a relation with leiomyomas – a noncancerous growth of the uterus.

REFERENCES:

1. Lyons EA, Taylor PJ, Zheng XH, Ballard G, Levi CS, Kredentser JV. Characterization of sub-endometrial-myometrial contractions throughout the menstrual cycle in normal fertile women. *Fertil Steril* 1991; 55:771-4.
2. DeVries K, Lyons EA, Ballard G, Levi CS, Lindsay DJ. *Am J Obstet Gynecol* 1990; 162:679-82.
3. Popp LW, Schwiendessen JP, Gaetje R. Myometrial biopsy in the diagnosis of adenomyosis uteri. *Am J Obstet Gynecol* 1993; 169:546-9.
4. Wood C. Surgical and medical treatment of adenomyosis. *Hum Reprod Update* 1998; 4:323-36.
5. Huang FJ, Kung FT, Chang SY, Hsu TY. Effects of short-course busrel in therapy on adenomyosis. *J Reprod Med* 1999; 44:741-4.
6. Silva PD, Perkins HE, Schauburger CW. Life birth after treatment of severe adenomyosis with a gonadotropin-releasing hormone agonist. *Fertil Steril* 1994; 61:17-2.
7. Lin J, Sun C, Zheng H. Gonadotropin-releasing hormone agonists and laparoscopy in the treatment of adenomyosis with infertility. *Chin Med J* 2000; 113:442-5.
8. Wang PH, Yang TS, Lee WJ, Chao HT, Chang SP, Yuan CC. Treatment of infertile women with adenomyosis with a conservative microsurgical technique and a gonadotropin-releasing hormone agonist. *Fertil Steril* 2000; 73:1061-2.

9. Ota H, Igarashi S, Sasaki M, Tanaka T. Distribution of cyclo-oxygenase-2 in eutopic and ectopic endometrium in endometriosis and adenomyosis. *Hum Reprod* 2001a; 16:561-6.
10. Ota H, Igarashi S, Tanaka T. Xanthine oxidase in eutopic and ectopic endometrium in endometriosis and adenomyosis. *Fertil Steril* 2001b; 75:785-90.
11. Byun JY, Kim SE, Choi BG, Ko GY, Jung SE, Choi KH. Diffuse and focal adenomyosis: MR imaging findings. *Radiographics* 1999; 19:161-70.
12. Tamai K, Togashi K, Ito T, Morisawa N, Fujiwara T, Koyama T. MR imaging findings of adenomyosis: correlation with histopathologic features and diagnostic pitfalls. *Radiographic* 2005; 25:21-30.
13. Devlieger R, D'Hooghe T, Timmerman D. Uterine adenomyosis in the infertility clinic. *Hum Reprod* 2003; 9(2):139-47.
14. Chopra S, Lev-Toaff AS, Ors F, Bergin D. Adenomyosis: common and uncommon manifestation on sonography and magnetic resonance imaging. *J Ultrasound Med* 2006; 25:6seventeen-27.
15. Siedler D, Laing FC, Jeffrey RB, JR Wing VW. Uterine adenomyosis. A difficult sonographic diagnosis. *J Ultrasound Med* 1987; 6:345-9.
16. Bohlman ME, Ensor RE, Sanders RC. Sonographic findings in adenomyosis of the uterus. *Am J Roentgenol* 1987; 148:765-6.
17. Azziz R. Adenomyosis: current perspectives. *Obstet Gynecol Clin North Am* 1989; 16:221-35.
18. Mori T, Ohta Y, Nagasawa H. Ultrastructural changes in uterine myometrium of mice with experimentally induced adenomyosis. *Experientia* 1984; 40:1385-7.
19. Udewela AS, Perera MAD, Aiqing L, Fraser IS. Endometrial–myometrial interface: relationship to adenomyosis and changes in pregnancy. *Obstet Gynecol Survey* 2000; 55:390-400.
20. Kuligowska E, Deeds L III, Lu K III. Pelvic pain: overlooked and underdiagnosed gynecological conditions. *Radiographics* 2005; 25:3-20.
21. Parrott E, Butterworth M, Green A, White INH, Greaves P. Adenomyosis – a result of disorder stromal differentiation. *Am J Pathol* 2001; 159:623-30.
22. Ota H, Igarashi S, Hatazawa J, Tanaka T. Is adenomyosis an immune disease? *Hum Reprod Update* 1998; 4:360-7.
23. Ota H, Igarashi S, Hatazawa J, Tanaka T. Immunohistochemical assessment of superoxide dismutase expression in endometriosis and adenomyosis. *Fertil Steril* 1999; 72:129-34.
24. Ota H, Igarashi S, Kato N, Tanaka T. Aberrant expression of glutathione peroxidase in eutopic and ectopic endometrium in endometriosis and adenomyosis. *Fertil Steril* 2000; 74:313-8.