Gynecological Endocrinology Patients Attending Siriraj Hospital at the Beginning of the New Millennium

Kitirat Techatraisak, M.D., Ph.D., Surasak Angsuwathana, M.D., Manee Rattanachaiyanont, M.D., Prasong Tanmahasamut, M.D., Pichai Leerasiri M.D., Suchada Indhavivadhana, M.D.

Department of Obstetrics and Gynecology, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok 10700, Thailand.

ABSTRACT

Objective: The purpose of this study was to analyse the spectrum of new patients with gynecological endocrine abnormalities presenting to a teaching hospital in Bangkok at the beginning of the new millennium. The data obtained may help policy makers, involved health care providers and medical educators plan for the future to best suit the Thai new health care system, medical research or contemporary medical education in a teaching hospital.

Methods: Only new patients attending the Gynecologic Endocrinology Clinic at Siriraj Hospital in the year 2000 (excluding natural and surgical menopause patients who separately attended the Menopause Clinic at that time) were included in the analysis. There were 492 new patients attending the clinic including newly referred patients from other departments at Siriraj Hospital or from other hospitals. Of these, 464 (94.3%) had complete records, full follow up and a conclusive final diagnosis. The data was analysed and presented in a descriptive manner.

Results: Among 464 patients, the most common presenting symptom was abnormal uterine bleeding (85.5% of cases). The five most common final diagnoses were: endometrial hyperplasia (18.9%), anovulatory dysfunctional uterine bleeding (14.4%), endometriosis with histodiagnosis (13.7%), polycystic ovary syndrome (5.1%) and premature ovarian failure (3.0%). Other uncommon diagnoses such as primary amenorrhea, which needs complicated investigations, caused by different etiologies (e.g. Mullerian agenesis, gonadal dysgenesis, androgen insensitivity syndrome), rare cases of secondary amenorrhea (e.g. late onset congenital adrenal hyperplasia, hypogonadotropic hypogonadism, pseudocyesis) were also seen at our clinic in the year 2000.

Conclusion: The Gynecologic Endocrinology Clinic of Siriraj Hospital had a great variety of number of cases and diagnoses, both common and uncommon. In most cases, problems could be evaluated and investigated at the outpatient clinic without admission. Treatments were also given and monitored effectively there. Only a few special investigations, such as chromosome analysis, CT or MRI were needed to obtain a final diagnosis. We expect to see a lower number of less complicated cases in the future who may be managed at a primary or a secondary care hospital. Nevertheless, knowledge about gynecological endocrinopathies are still of major importance for both undergraduates and postgraduates.

Keywords: Abnormal uterine bleeding; amenorrhea; endometriosis; chronic pelvic pain

Siriraj Med J 2007; 59: 294-297
E-Journal: http://www.sirirajmed.com

Gynecological endocrinopathies can be seen in women from puberty to postmenopause. Disorders may be the results of pathology in different components: the central nervous system, the pituitary gland, the ovaries or the Mullerian system[1]. Patients may present with a variety of symptoms or signs and are commonly seen in gynecology outpatients. The problems ranged from abnormal sexual development and puberty to problems related to infertility, contraceptive management and post-menopausal bleeding.

At the beginning of this new millennium, in the year 2000, there were 2495 visits to the Gynecologic Endocrinology Clinic[2]. At that time, the health care system in Thailand was under reform. The purpose of this study was to analyse the spectrum of common gynecologic endocrine abnormalities presenting to a teaching hospital in Bangkok at the beginning of the new millennium. The data obtained may help policy makers and involved health care

TABLE 1. The five most common presenting endocrine abnormalities among 464 new patients.

Ranking	Symptoms/ Diseases	No. of cases (%)
1	Abnormal uterine bleeding	227 (48.9%)
2	Secondary amenorrhea	109 (23.4%)
3	Endometriosis	64 (13.7%)
4	Chronic pelvic pain	44 (9.4%)
5	Primary amenorrhea	15 (3.2%)

administrators plan for the future to best suit the Thai new health care system.

MATERIALS AND METHODS

This study was a retrospective descriptive analysis. New patients attending the Gynecologic Endocrinology Clinic at Siriraj Hospital from 1 January to 31 December 2000 (excluding natural and surgical menopause patients who separately attended the Menopause Clinic at that time) were included in the analysis. There were 492 new patients including newly referred patients from other departments at Siriraj Hospital or from other hospitals attending the clinic during that time. Of these, 464 (94.3%) had complete records, full follow up and a conclusive final diagnosis. The data was analysed and presented in a descriptive manner.

RESULTS

On average, there were approximately 10 new patients attending the Gynecologic Endocrinology Clinic each week. Of these, over 90% had complete investigations and returned for follow-up and most were of reproductive age. The five most common presenting endocrine abnormalities are shown in Table 1. Abnormal uterine bleeding including secondary amenorrhea comprises nearly 75% of all the patients.

In the abnormal uterine bleeding group, endometrial hyperplasia was the most common diagnosis in this study. The average age of patients with endometrial hyperplasia was 44.1 ± 5.7 years (range 33-52 years). This occurred in only one patient who was postmenopausal. The ratio of anovulatory to ovulatory dysfunctional uterine bleeding (DUB), including only the patients with histodiagnosis, was approximately 5:1. Interestingly, chronic anovulation from various non-specific conditions was the main cause for secondary amenorrhea. Only a few patients in this group (overweight, underweight) had weight related secondary amenorrhea. The ten most common final diagnoses are shown in Table 2.

Details of the main diagnoses of the patients are shown in Table 3. Endometriosis with histodiagnosis and conservative treatment (excluding surgical menoapause) comprised 13.7% of patients in this study group. Patients with a symptom of chronic pelvic pain (CPP) without a final diagnosis (those without diagnostic laparoscopy, or surgery were still commonly seen in our clinic at that time (9.4%). Of all these patients in the CPP group, 78% had cyclic pelvic pain (dysmenorrhea), while 22% had non cyclic pelvic pain. The average age of patients with premature ovarian failure (POF) was 34.5 ± 4.3 years (range 25-39 years). Polycystic ovary syndrome (PCOS), occurred in 5% of all the patients, who presented with the symptoms of primary amenorrhea and abnormal uterine bleeding including secondary amenorrhea. The average age of PCOS patients was 23.8 ± 6.5 years (range 13-37 years). The youngest patient presented with DUB and hirsutism. The average age at the first visit for patients with primary amenorrhea in this study was 20.4 ± 3.9 years (range 16-32 years). Surprisingly of all the patients presenting with secondary amenorrhea, the longest period of amenorrhea before visiting our hospital was 6 years. This patient sought advice for fertility treatment.

Only a few patients with premature ovarian failure in this study had autoimmune diseases or had received chemotherapy, 2 cases with SLE and 1 case following chemotherapy. Both patients with SLE were diagnosed 3 years before presentation and had been amenorrhic for 8 months and 1 year before POF was diagnosed. The patient who received chemotherapy had POF after 1 year of completion of the treatment. Significant levels of thyroid antibody were not observed in any patients who had other final causes of POF which were not yet determined. POF patients presenting with amenorrhea in this report had this symptom from 3 months to 10 years (average 35.3 ± 3.4 months). Those patients who had been amenorrhic for 5,6 and 10 years sought investigation for infertility. Patients with hyperprolactinemia with or without galactorrhea or those who had galactorrhea with a normal prolactin level comprised a small percentage of patients (1.9%).

TABLE 2. The ten most common final diagnoses among 464 new patients.

Ranking	Symptoms/ Diseases	No. of cases (%)
1	Endometrial hyperplasia	88 (18.9%)
2	Anovulatory DUB*	67 (14.4%)
3	Endometriosis (with histodiagnosis, conservative treatment)**	64 (13.7%)
4	Polycystic ovary syndrome (PCOS)	24 (5.1%)
5	Premature ovarian failure (POF)	14 (3.0%)
6	Ovulatory DUB*	13 (2.8%)
7	Postpill amenorrhea	10 (2.1%)
8	Hyperprolactinemia ± galactorrhea ± pituitary microadenoma	9 (1.9%)
9	Mullerian agenesis	6 (1.2%)
10	Postmenopausal atrophic bleeding	6 (1.2%)

* Clinical DUB without histodiagnosis not included

** Excluding CPP without diagnostic laparoscopy, surgery or cases with surgical menopause

DISCUSSION

From experiences and retrospective data in our clinic, abnormal menstruation is the most common symptom seen among the patients. Abnormal uterine bleeding is the most common gynecological endocrinology problem among women of reproductive age Not surprisingly, endometriosis and chronic pelvic pain were seen in a large percentage of women while primary amenor-rhea, requiring more complete and special tertiary care investigations, accounted for only a small percentage of patients. The majority of patients in this latter group may still need to be referred to a teaching hospital.

Abnormal uterine bleeding comprised nearly half of the new patients in this study. When primary and secondary amenorrhea were added to this, the number increased to 85.5% of all patients. Uterine curettage

TABLE 3. Details of the main diagnoses of new patients.

Diagnosis	No. of cases (%)
Abnormal uterine bleeding	227 (48.9%)
DUB	118
Anovulatory DUB	67
Ovulatory DUB	13
Clinical DUB without histodiagnosis	37
Ovulatory bleeding	1
Endometrial hyperplasia	88
Simple endometrial hyperplasia	86
Atypical endometrial hyperplasia	2
Postmenopausal atrophic bleeding	6
Polycystic ovary syndrome (PCOS)	7
Chronic renal failure	3
Myoma uteri	3
Endometrial polyp	1
ITP	1
Secondary amenorrhea	109 (23.4%)
Chronic anovulation	47
Premature ovarian failure (POF)	15
Polycystic ovary syndrome (PCOS)	15
Postpill amenorrhea	10
Hyperprolactinemia ± galactorrhea ± pituitary microadenoma	9
Hypothyroidism	4
Hypogonadotropic hypogonadism	3
Pseudocyesis	2
Uterine synechia	2
Late onset congenital adrenal hyperplasia (LOCAH)	1
Postpartum breast feeding	1
Endometriosis	64 (13.7%)
Chronic pelvic pain (Cyclic & non cyclic without diagnostic laparoscopy or surgery)	44 (9.4%)
Primary amenorrhea	15 (3.2%)
Mullerian agenesis	6
Polycystic ovary syndrome (PCOS)	2
Turner syndrome	2
Cryptormenorrhea (Vaginal agenesis)	1
Congenital adrenal hyperplasia (CAH)	1
XX Gonadal dysgenesis	1
Hypogonadotropic hypogonadism	1
Incomplete androgen insensitivity	1
Others	5 (1.0%)
Galactorrhea without hyperprolactinemia	

or endometrial sampling is important in order to obtain a histological diagnosis and to exclude atypical hyperplasia which may progress to cancer[3]. This procedure can be easily performed in a general hospital in Thailand with standard primary or secondary care at the present time. Thus, lesser numbers of this group of patients are expected in the near future. Endometriosis is an exceedingly common gynecological disorder found in up to 71% of women who underwent diagnostic laparoscopy for pelvic pain and 84% of those who were evaluated for the combined symptoms of pelvic pain and infertility[4]. Endometriosis diagnosed histologically and treated conservatively and CPP not receiving diagnostic laparoscopy were commonly seen in the clinic at that time, comprising nearly one fourth of all the patients. Taking into consideration that some asymptomatic endometriosis may be found in patients undergoing diagnostic laparoscopy for other indications such as infertility[5], the overall prevalence of endometriosis must be higher. At present, diagnostic laparoscopy can also be performed at a standard secondary care hospital in Thailand. Although CPP causes patients significant anxiety and concern about their well being, ability to function on a day-to-day basis both at home and at the workplace and their quality of life, almost 10% of patients with CPP were reluctant to undergo diagnostic laparoscopy. In contrast, Mathias et al. found that in 61% of women with CPP, no determining etiological factors were identified[6]. Laparoscopy of the pelvis remains a mainstay in the diagnosis of pelvic endometriosis and adhesions in patients with CPP. It is too invasive and expensive for early diagnosis and is not without limitations and risks[7]. This study also excluded a number of cases of endometriosis who underwent hysterectomy with bilateral oophorectomy (surgical menopause cases) who mostly attended the Menopause Clinic.

PCOS may present with menstrual problems of primary amenorrhea, secondary amenorrhea and oligomenorrhea[8]. The majotiry of PCOS patients in this study presented with secondary amenorrhea (68.1%). Interestingly, the average age of PCOS patients in this study, 23.8 ± 6.5 years, was much lower than that reported in many studies. Balen et al. reported an average age of 31.5 years in 1,741 women with POCS[9].

Antilla et al. also reported an average age of 30.4 ± 3.5 years in PCOS women with gestational diabetes mellitus[10]. The other published data by Koivunen et al. also reported a higher average age of 33.6 ± 5.1 years in women with PCOS in a population-based study from Finland[11]. Thus, Thai women with PCOS may present earlier than in other populations. Larger number of patients are needed in order to explain the differences observed in this data.

The average age of POF in this study was 34.5 ± 4.3 years, comparable to a previous report by our group in the year 2000[12]. In that study, 16% of women with POF who presented with secondary amenorrhea were patients with abnormal X chromosomes, Turner syndrome and triple X-syndrome or mosaic Triple X-syndrome patients. However, in this study, patients with Turner syndrome presented with primary amenorrhea only and no Triple X-syndrome patients were identified. Hyperprolactinemia, the commonest pituitary disorder inducing amenorrhea, accounts for up to 20% of all cases of amenorrhea[13]. Here, we observed a much lower percentage of patients with hyperprolactinemia as a cause of amenorrhea.

Other uncommon diagnoses such as primary amenorrhea from different etiologies (e.g. Mullerian agenesis, gonadal dysgenesis, androgen insensitivity syndrome), secondary amenorrhea (e.g. late onset CAH, hypogonadotropic hypogonadism, pseudocyesis) were also seen in our clinic in the year 2000. Mullerian agenesis is still the most common cause of primary amenorrhea in our clinic, comparable with a previous report from our hospital by Rattanachaiyanon et al[14]. The average age of primary amenorrhic patients in this report was comparable to that previous report. Many of Thai women still delayed investigations for the cause or diagnosis of primary amenorrhea. Primary and secondary amenorrhea, resulting from nutritional stress or anorexia nervosa may be seen affecting adolescent girls and young women with peaks occurring between the ages of 13 and 14 years and between the ages of 17 and 18 years[15], were not observed in this study.

CONCLUSION

The Gynecologic Endocrinology Clinic of Siriraj Hospital had a great variety of cases and diagnoses, both common and uncommon, to use as educational and research materials. In most cases, problems could be evaluated and investigated at the outpatient clinic without admission. Treatments were also given and monitored effectively there. Only a few special investigations, such as chromosome analysis, CT or MRI were needed to obtain a final diagnosis. We expect to see a lower number of less complicated cases who may be managed at a primary or a secondary care hospital. Nevertheless, knowledge about gynecological endocrinopathies are still of major importance for both undergraduates and postgraduates. Factual knowledge and a systematic approach to solve clinical problems must be exercised.

REFERENCES

1. Speroff L and Fritz MA. Neuroendocrinology. In: Clinical Gynecologic Endocrinology and Infertility. 7th ed. Philadelphia: Lippincott Williams & Wilkins, 2005: 145-85.
2. Annual Statistical Report 2000. Division of Medical Records and Statistics, Department of Obstetrics and Gynecology, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok.
3. Speroff L and Fritz MA. Dysfunctional uterine bleeding. In: Clinical Gynecologic Endocrinology and Infertility. 7th ed. Philadelphia: Lippincott Williams & Wilkins, 2005: 547-71.
4. Koninckx PR, Meuleman C, Demeyere S, et al. Suggestive evidence that pelvic endometriosis is a progressive disease, whereas deeply infiltrative endometriosis is associated with pelvic pain. Fertil Steril 1991; 55: 759-65.
5. Balash J, Creus M, Fabregues F, et al. Visible and non visible endometriosis at laparoscopy in fertile and infertile women and in patients with chronic pelvic pain. A prospective study. Hum Reprod 1996; 11: 387-91.
6. Mathias SD, Kuppermann M, Libermann RE, et al. Chronic pelvic pain: Prevalence, health-related quality of life, and economic correlates. Obstet Gynecol 1996; 87: 321-7.
7. Brosens IA, Campo R, Gords, et al. An appraisal of the role of laparoscopy: Past, present, and future. Intl J Gynecol Obstet 2001; 74 (Suppl 1): S9-S14.
8. Lachelin GCL. Oligomenorrhea and hirsutism; The polycystic ovary syndrome. In: Introduction to Clinical Reproductive Endocrinology. Butterworth-Heinemann, 1991: 73-88.
9. Balen A, Conway G, Kaltsas G, et al. Polycystic ovary syndrome: the spectrum of the disorder in 1,741 patients. Hum Reprod 1995; 10: 2107-11.
10. Antilla L, Karjala K, Pentilla TA, et al. Polycystic ovaries in women with gestational diabetes. Obstet Gynecol 1998; 92: 13-6.
11. Koivunen R, Laatikainen T, Tomas C, et al. The prevalence of polycystic ovaries in healthy women. Acta Obstet Gynecol Scand 1999; 78: 137-41.
12. Techatraisak K, Dangrat C, Vateekul S, et al. Premature ovarian failure (POF): Cytogenetic and SRY analyses. Siriraj Hosp Gaz 2000; 52: 810-5.
13. Ginsberg J and Prelevic GM. Amenorrhea and oligomenorrhea. In: Ginsberg J, ed. Drug Therapy in Reproductive Endocrinology. London: Arnold, 1996: 36-51.
14. Rattanachaiyanon M, Kunathikom S, Angsuwattana S, et al. Primary amenorrhea: A retrospective study at Siriraj Hospital. J Med Assoc Thai 1997: 619-25.
15. Katz MG, Vollenhoven B. The reproductive endocrine consequences of anorexia nervosa. Br J Obstet Gynecol 2000; 107: 707-13.