Gynaecological and obstetric audit at a G&O Emergency Department

A. Lukic[1], M. Signore[1], M. T. Sassi[2], G. Vetrano[1]

[1]Institute of Obstetrics and Gynecology, University "La Sapienza", Rome
[2]Dept. of Obstetrics and Gynecology, University of Chieti, Chieti (Italy)

Summary

The present study takes into account only the patients that are sent home because their conditions do not require emergency hospitalization in order to try to understand the reasons why a woman seeks emergency treatment at a G&O emergency service.

Key words: Gynaecological and Obstetric Emergency Department; Emergency medical service; Hospital statistics and numerical data.

Introduction

The Obstetric and Gynaecological Admission and Emergency Service is an intra-hospital structure operating round the clock with the task of diagnosis, treatment and observation of gynaecological and obstetric emergencies. An emergency is defined as an acute or traumatic pathological event requiring immediate treatment [1].

The activities of an Obstetric and Gynaecological Admission and Emergency Service may be divided into:

1. Scheduled admissions and hospitalization;
2. Gynaecological and obstetric consultation for patients from other services;
3. Emergency service for external patients.

After emergency treatment has been given it may happen that:

– The patient requires hospitalization, and is therefore transferred to an ordinary ward in the same hospital or directly to the appropriate labour room;

– Clinical, instrumental and laboratory examination has excluded any obstetric or gynaecological pathology, so that the patient is transferred to the DEA (Emergency and Admissions Department) in order to be despatched to the relevant non G&O ward (neurology, surgery, orthopaedics, urology...);

– The patient is sent home as her condition does not require hospitalization. For these patients, further diagnostic tests are scheduled at outpatient services.

The present study takes into account only this latter group of outpatients who have been sent home in order to try to understand the reasons why a woman seeks emergency treatment at a gynaecological and obstetric emergency service.

Materials and Methods

Between 1/10/98 and 31/09/99 some 3,608 women approached the Special Admissions and Emergency Service of the Obstetric and Gynaecological Clinic of the "La Sapienza" University of Rome seeking emergency treatment. All these patients were subsequently sent home as their clinical condition did not require hospitalization.

The patients' age ranged from 3 to 90 years: 5.1% were under the age of 18, 49.9% were aged 18 to 30 years, 39.8% were aged 30 to 50 years and only 5.2% were over 50. Seventy-four percent of the women were of Italian nationality.

The women were subdivided into two groups:

– 2,146 patients with gynaecological "emergencies" (60% of the women);

– 1,462 patients with obstetric "emergencies" (the remaining 40%).

All the patients included in the present study were subjected to the same diagnostic procedures: reception, previous medical history, gynaecological or obstetric or senological examination, instrumental examinations (pelvic ultrasound, cardiotocography...) or laboratory tests (urine stick, rapid pregnancy test, PROM test...).

In several cases requiring consultation with other specialists (dermatology, surgery, neurology, infectious diseases, orthopedics...) or specific tests not performed routinely in our department, the patients were referred to other services operating inside the hospital.

At the conclusion of the diagnostic procedures, the patients were sent home as they were not affected by any disorder requiring immediate emergency admission to hospital.

The emergency physician then scheduled further pre-admission outpatient examinations for several patients, or else included the data referring to those with ascertained diagnoses directly in the operations list.

Lastly, the emergency physician also prescribed medical treatment for patients requiring emergency treatment at home, with the relevant follow-up instrumental and laboratory clinical tests to be carried out later, preferably in our outpatient department.

These data were then analysed to evaluate the most frequent causes leading these women to spontaneously go to a gynaecological and obstetric emergency department, although not in need of emergency hospitalization.

Results

In Table 1 a description is given of the types of gynaecological "emergencies" observed in 2,146 patients.

Our case studies show that the symptom most frequently mentioned by the patients was pelvic pain (40%).

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Table 1. — *Gynaecological "Emergencies".*

Symptoms/Causes	No of cases	%
Blood Loss	501	
Hypermenorrhea-Menorrhagia-Menometrorrhagia	165	
Metrorrhagia	260	23.3%
Abnormal uterine bleeding in postmenopause	70	
Abnormal uterine bleeding associated with an IUD	6	
Pelvic Pain	855	
Uterine fibroma	19	
Pelvic endometriosis	8	
Adnexitis	9	
Dysmenorrhea	34	
Ovarian cyst	20	40%
Genital prolapse	5	
Endometritis	40	
Cervicitis	5	
Non specific pelvic pain	715	
Infection of the lower female genital tract	332	
Vulvitis by HSV	12	
Bartholin's gland abscess or cyst	52	15.4%
Acute vaginitis	18	
Acute vulvo-vaginitis	250	
Breast pathology	71	
Mastitis	56	3.3%
Breast benign nodule	13	
Breast cancer	2	
Various	387	
Postcoital emergency contraception request	77	
Amenorrhea/oligomenorrhea	111	
Urinary disorders	139	
Postcoital laceration	5	18%
Laparotomic wound dressing	11	
Foreign body in vagina	27	
Sexual assault	9	
Inguinal trauma	4	
Hemorrhoids	4	

Further examination of patients complaining of this symptom (pelvic ultrasound, pregnancy test, urine test...) led to the following diagnoses being made: dysmenorrhea (34 cases), ovarian cysts (20 cases), adnexitis (9 cases), uterine fibroma (19 cases), pelvic endometriosis (8 cases), endometritis (40 cases), cervicitis (5 cases), genital prolapse (5 cases). In 83.5% of the cases of pelvic pain (715 cases) no objective gynaecological disorder was observed at the time of the examination. Some of these patients (150 cases = 21%) were at a fertile age, did not use hormonal contraception and, at the time of the examination, claimed to be in a periovulatory period with a diagnosed suspected ovulatory crisis. Five hundred and one women (23.3%) displayed ongoing or reported blood loss and 14.3% of the cases involved women in postmenopause. Six women reported blood loss associated with an interuterine device (IUD) to the emergency physician. In all these cases the IUD was removed.

Three hundred and thirty-two patients (15.4%) reported symptoms compatible with infection of the lower female genital tract.

In only 3.3% (71) of cases was any breast pathology found. In most cases inflammatory type alterations were involved and only two cases involved recently diagnosed breast cancer.

In 18% (387 cases) of the gynaecological emergencies the causes were various. In 139 cases various types of urinary disorders were reported (hematuria, stranguria, disuria, pollakiuria). The urine tested positive for leukocytes and blood in all cases, while the Giordano manoeuvre proved positive in only 23 subjects. One hundred and eleven patients complained of a more or less delayed monthly period, with or without other disorders, such as pelvic pain, acne, headaches. All patients were subjected to a pregnancy test, which was found to be positive in 40% of cases. Seventy-seven patients, aged between 16 and 39 years went to the gynaecological and obstetric emergency service to request postcoital emergency contraception. The reason given was condom rupture during sexual intercourse in each case. Nine women declared they had suffered sexual assault. The age of these patients was between eight and 38 years: four were minors. In the emergency ward a complete general and gynaecological examination was done of the patients and vaginal and/or rectal smears were taken, depending on the declaration made by the patient. In only one case did the pregnancy test, carried out as a routine in all sexually active patients, prove positive.

Shown in Table 2 are the most frequent causes of obstetric "emergencies" observed in the 1,462 pregnant women received by the emergency service, 400 of whom (27.3%) were in the 1st trimester of pregnancy, 299 (20.4%) in the 2nd trimester and 763 (52.3%) in the 3rd trimester.

The majority of these patients showed signs of a threatened miscarriage in the 1st or 2nd trimester (520 cases = 36%). An internal miscarriage was detected and demonstrated by ultrasound testing in 18 cases (1.2%). Two hundred and seventy-eight patients (19%) reported uterine contractions. Thirty-eight patients (3.1%) instead reported not having any further perception of fetal movements after the 20th week of pregnancy. Suspected early membrane rupture (PROM) was found in 40 cases (2.7%), while cardiotocographic monitoring was required in 174 cases (12%).

Eighteen patients (1.2%) were in a suspected, although unconfirmed, hypertensive condition (PIH), while four cases tested positive to toxoplasma and cytomegalovirus infection.

Suspected, although unconfirmed, threatened preterm birth was found in five patients (0.3%). Other relatively common symptoms mentioned by pregnant women visiting the emergency services were lipothymia (1.8%), epigastralgia, nausea and vomiting (5.1%), while other pregnant women [5] reported possible suspected retarded fetal growth (IUGR).

Lastly other pregnant women complained of disorders not directly related to their pregnancy. These pathologies were of variable interest from the internal medicine point of view and either preceded or arose during pregnancy. Forty-seven pregnant patients (3.9%) visited the emer-

Table 2. — *Obstetrics "Emergencies" (1,462).*

Causes	No of cases	%
Threatened abortion (I and II trimester)	520	35.6
Internal abortion	18	1.2
Nausea, vomiting, epigastralgia	75	5.1
Abnormal perception of fetal movements	38	2.6
Suspected threatened preterm birth	5	0.3
Suspected early membrane rupture (PROM)*	40	2.7
Suspected retarded fetal growth (IUGR)	5	0.3
Generalized pruritus	15	1.0
Suspected hypertensive condition (PIH)	18	1.2
Suspected gestational diabetes	1	0.06
Suspected polyhydramnios	4	0.3
Positive toxoplasma and cytomegalovirus infection tests	4	0.3
Autoimmune thrombocytopenia	3	0.2
Uterine contractions	278	19
Cardiotocographic monitoring	174	11.9
Puerperal disorders	9	0.6
Abdominal trauma	47	3.98
Hematuria-stranguria	19	1.3
Renal colic	11	0.8
Lipothymia	26	1.8
Headache-Dizziness	19	1.3
Lower genital tract infections	48	3.3
Fever	17	1.2
Mastitis	5	0.3
Lumbosciatic neuralgia	6	0.4
Bronchial asthma	5	0.3
Cardiac arrhythmia	2	0.1
Biliary colic	3	0.2
Constipation	6	0.4
Uterine fibroma	4	0.3
Skin disorders	22	1.5

*Suspected preterm or premature rupture of membranes (PROM, P-PROM).

gency service after abdominal trauma caused by a road accident or an accidental fall. Forty-eight patients (3.3%) were found to have symptoms possibly due to infection of the lower female genital tract. Other symptoms frequently found in the pregnant patients were: hematuria, stranguria, headaches, dizziness, fever, skin disorders, bronchial asthma, cardiac arrhythmia.

Discussion and Conclusions

Ninety percent of the users of the gynaecological and obstetric emergency service were aged between 18 and 50 years. These figures are in good correlation with the pathologies investigated and the reproductive activity characterizing this cross section of the female population.

One-third of the women examined in the emergency service consisted of non Italians, partly because their access to the hospital is facilitated by its location in the city centre near the state railway and underground stations.

Requests for specialist treatment came more frequently from patients with gynaecological disorders (60%) while more than half the obstetric patients were in the third trimester of pregnancy, which is often associated with labour.

Table 1 shows how the group of gynaecological patients visiting the emergency service as a result of pelvic pain and abnormal blood loss accounts for two-thirds (63%) of the users.

These pathologies affecting the female population are in fact equally frequent in the literature [2].

Unlike us, other authors have reported a high percentage of infections of the lower genital tract in the patients examined (15% vs. 50% cases) [3].

Diagnosis and treatment of pelvic pain in women of reproductive age is often a difficult matter. Indeed, increasing use is made in the literature of the definition of "non specific abdominal pain, NSAP" [4]. The need thus arises to also include pelvic pain within this definition.

The percentage of non specific pelvic pain observed in our case histories is high and can only partly be accounted for in terms of a diagnosis of dysfunctional ovarian pathology (21%).

A differential diagnostic examination of pelvic pain due to extra gynaecological causes, as well as a search for a gynaecological diagnosis by means of outpatient examinations, was scheduled for all the patients before sending them home. It should be emphasized that more than half the patients complaining of "pelvic pain" who visited the gynaecological emergency service were affected by "non specific pelvic pain".

Breast pathology was instead observed almost exclusively during pregnancy or puerperium.

In our experience, emergency service treatment in the broad sense, performed for example in the case of post-coital lacerations, foreign bodies in the vagina, reported sexual violence and inguinal trauma accounts for only a minority of cases [5].

Several infections accompanied by intense painful symptoms, abundant unexpected blood loss, misplaced IUD, and acute intense pelvis pain were not characteristic of the majority of women observed by us. Many of them actually presented a non acute pathology, lending itself to outpatient treatment, which required planned diagnostic examinations.

Pregnant patients could be divided into two groups: 1st and 2nd trimester patients and 3rd trimester patients.

The pathological conditions most frequently found in 1st and 2nd trimester pregnant patients were related to threatened miscarriage and internal miscarriage. It should be stressed that the patients did not require urgent hospitalization as, at the time of their visit, they did not display any significant blood loss and their general health condition was satisfactory. These findings are in agreement with those reported in the literature [6]. Indeed, in non gynaecological emergency services, more than half the gynaecological cases are accounted for by these two pathologies.

Seven hundred and sixty-three (52.3%) pregnant patients were in their 3rd trimester and also the symptoms they were complaining of were closely related to the alterations and the monitoring of the uterine contractile activity and to the mother's and the foetuses welfare. Suspected obstetric disorders leading the patients to

request an emergency examination at the obstetric emergency service can only in a few cases be related back to the real need of patients with high-risk pregnancies (monitored at our high-risk pregnancy centre). Many requests for treatment may indeed be related to other factors:

1) insufficient or inadequate pregnancy monitoring (nomads, third-world immigrants without health service coverage, unrecognized pregnancies, etc.);

2) misinterpreted physiological events (leucorrhea, tachycardia, orthostatic hypotension, Braxton-Hicks uterine contractions);

3) patient over-anxiety possibly related to a previous reproductive event or indirect experience (friends, the media, etc.) which materializes in a sudden urge to make sure the baby 'is all right'.

In conclusion, in most cases, obstetric and gynaecological "emergencies" do not represent events calling for emergency treatment. They often involve simple outpatient consultations carried out by the emergency services, mostly at inconvenient and unsuitable times (for example, at night) in order to sidestep the practice whereby these examinations are performed in the outpatient service, by appointment, often involving a waiting list and usually, although not in the case of pregnancy, as a user part-paid service ('ticket').

In future, social problems must also be taken into account when planning health reforms, with special reference to the organization of emergency service departments in a constantly changing, multiethnic society.

The workload with which emergency service staff has to cope, burdened as they are by a large number of tasks unrelated to true emergencies, could weigh upon the services provided by the emergency department to the detriment of true emergencies.

Lastly, the flow of patients to the emergency service has an effect on both the time spent waiting for treatment [7, 8] and the efficiency of the emergency staff in cases of real emergencies.

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Address reprint requests to:
LUKIC ANKICA, M.D.
Via Michele Amari, 47
00179 Roma (Italy)