
BRIEF REPORT

Postcoital contraception at a tertiary-level hospital emergency department: 3 years' experience

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CONFLICT OF INTEREST:

None

Objective: To describe our experience dispensing postcoital contraceptives (PCCs) in the emergency department over a 3-year period.

Material and methods: Descriptive study of patients asking for PCCs in the emergency department between October 2004 and September 2007. We collected data on age, number of times a PCC was sought, time between requests, contraceptive method used and the reason for failure, and delay.

Results: We attended 1006 women with a mean (SD) age of 24.3 (6.8) years; 13.4% were minors and 16.8% were over the age of 30 years. A PCC had been needed previously by 48.3% of the patients (74% of them once before, 17.8% twice before; and the remainder, 3 or more times before). The women who needed these agents more than once were younger (21 [6.5] years vs 24.7 [7.3] years, $P=.028$). Recurrence within 6 months (143 cases [35.4%]) was also more common among younger women (22.9 [6.5] years vs 24.8 [5.9] years, $P=.003$). The most common reason for contraceptive failure was condom breakage (78% of the cases). Delay in seeking a PCC was 12 (19) hours. In only 2 cases had the 72-hour limit passed. The time elapsed was longer for women under the age of 18 years (16 [18] hours) and over the age of 30 years (15 [17] hours) than for women in the intermediate age bracket (12 [19] hours) ($P=.009$).

Conclusions: Women who seek a PCC in the emergency department are usually young and have used these agents before. It is important to educate this population that PCCs are not a contraceptive option for routine use, but rather one to resort to on rare occasions. [Emergencias 2010;22:40-43]

Key words: Levonorgestrel. Emergency contraceptives. Postcoital contraceptives. Morning-after pill.

Introduction

Emergency contraception (ECC) is the postcoital prevention of pregnancy after unprotected sexual intercourse^{1,2}. The methods available for ECC are mechanical (intrauterine device) or pharmacological, but the convenience of the latter makes it the most widely used. In 2001 the use of levonorgestrel (LNG) was authorized in Spain as a method of ECC³ (two doses of 750 mg 12 hours apart or a single dose of 1,500 mg). It is safe and effective and there are no absolute contraindications for use^{1,2}.

In 2004, the Departament de Salut de la Generalitat of Catalunya³ launched a plan to facilitate free access to ECC at Emergency Departments to all women requesting it. We present our experience in attending women seeking ECC during 3 years.

Method

We performed a descriptive study covering the period October 2004 to September 2007. We recorded all requests for ECC made at the ED of Hospital de l'Esperança in Barcelona. This is a first level ED, providing continuous ambulatory attention with about 20,000 emergencies a year; 40% of these are medical area pathologies, which include ECC.

Data collected included age, number of times that ECC was requested including the current request, time elapsed since the last request, contraceptive method used and causes of failure, and delay in the making the request.

Statistical analysis was performed using Windows SPSS version 15.0. The variable age is presented as mean and standard deviation; and delay

time in requesting ECC as median and interquartile range (IQR) since a normal distribution of values could not be assumed.

The comparison of means was performed using analysis of variance (ANOVA) with nonparametric tests (Kruskal-Wallis or Mann-Whitney U) when not normal. Differences with a *P* value less than 0.05 were considered statistically significant.

Results

During the study period 1,006 women seeking ECC were treated, representing about 335 cases per year. Mean patient age and standard deviation (SD) was 24.3 (6.8) years with a range of 13-49 years). One hundred and thirty five patients (13.4%) were minors, of whom 34 (25.2%) were under 16 years of age. There were 169 (16.6%) women aged over 30 years (Table 1).

Nearly half (48.3%) the patients admitted previous request for ECC; of these, 74% once, 17.8% twice and the rest three or more times. No differences were found in the average age of the repeating patients with respect to non-repeaters, although among the former, women with three or more previous requests for ECC were younger than those with fewer previous requests [21 (6.5) vs 24.7 (7.3) years, *P* = 0.028].

Table 2 shows the time between the last ECC and the current request assistance in 404 cases recorded. Comparison of repeat requests for ECC within 6 months (early) [143 cases (35.4%)], versus later [261 cases (64.6%)] showed that the average age of the former was significantly lower [22.9 (6.5) vs 24.8 (5.9) years, *P* = 0.003].

Method of contraception was recorded for 486 cases; 78.8% had used a condom, 17% no protection, and hormonal contraception was used in only 3.5% of the cases.

The alleged cause of failure was condom rupture in 78% of cases and dislodgement in 18%.

The time delay in requesting ECC was [median (IQR)] 12 (19) hours; 31% of the women visited the ED within 6 hours, but 18.5% did so after 24 hours; only two cases exceeded the limit of 72 hours. There were no differences in the delay between repeating and non-repeating women, the number of times they had requested ECC, or time elapsed since the last visit for ECC. However, there were differences when the delay was analyzed according to patient age. Both women under 18 (18 cases, 16 hours) and over 30 years (17 cases, 15 hours) requested ECC later than women in the 18-24 year age group (19 cases, 12 hours)

Table 1. Distribution of age groups

Age	Frequency	Percentage
Under 16 years	34	3,4%
16 to 17 years	101	10,0%
18 to 24 years	448	44,5%
25 to 30 years	254	25,2%
Over 30 years	169	16,8%
Total	1006	100,0%

and those in the 25-30 year age group (18 cases, 12 hours) (*P* = 0.009)].

Discussion

There are 11 previous studies on ECC in our setting, published between 1997 and 2008⁴⁻¹⁴. Of these, only three included LNG^{8,12,14}. Table 3 shows a summary of these studies. Mean patient age in the present study [24.3 (6.8) years] is consistent with that reported in the literature⁴⁻¹⁴. However, the percentage of minors (13.4%) is far from the 35% reported by Lete⁹ and closer to that reported by Aguinaga⁶ (12.3%) and Ruiz Sanz⁷ (9.9%). Two other studies had much lower percentages¹¹⁻¹⁴. The differences may be due to differences in populations studied. Although the percentage of minors is not very high, this is an additional problem when facilitating emergency contraception due, among other reasons, to ethical objections by professionals and the difficulty in interpreting the concept of "mature minor". On the other hand, a surprising result was the 16.8% of cases being over 30 years, at an age where the problem of contraception should be resolved, which represents the highest so far in the reports published^{8,11,13,14}.

A notable finding was that nearly half of the ECC patients admitted previous request for ECC. This is close to the 60% found in a recent series by Sarrat et al¹⁴, but far higher than those of previous series^{4,6,8-13} (5.5-34.8%). In addition, 26% of these women had required ECC on more than one occasion, especially among the youngest. This might reflect that easy access to ECC means

Table 2. Time since last event of emergency contraception (ECC)

Time last ECC	Frequency	Percentage
Less than 1 month	41	8.5%
1 to 6 months	102	21.0%
6 to 12 months	84	17.3%
Over 12 months	177	36.4%
Total	404	83.1%
Data lost	82	16.9%

Table 3. Studies published in Spain 1999-2008 on emergency contraception (ECC)

Study by (first autor)	1997		1999		2002		2002		2002		2003		2004		2004		2005		2006		2008		2008	
	Gayoso ⁴	Espínos ⁵	Aguinaga ⁶	Ruiz Sanz ⁷	Cárdenas ⁸	Lete ⁹	Checa ¹⁰	Vergara ¹¹	Martínez ¹²	Santamaría ¹³	Sarrat ¹⁴	Clemente												
Study period	1.5 years	-	3 months	1 year	9 months	8 months	9 years	1 year	4 months	2 years	1 year	3 years												
Nº Patients	220	487	163	384	446	4390	-	89	400	132	1129	1006												
LNG	NO	NO	NO	NO	Yes	NO	NO	NO	Yes	NO	Yes	Yes												
Age (years)	22	22.6	22	23.9	21.3	23	23.4	4.4	23	22.9	21	23												
Minors (%)	-	-	12.3	9.9	-	35.1	-	4.4	-	-	-	7.3												
>30 years (%)	-	-	-	-	13	-	-	6.2	-	13.6	6.1	20.1												
Repeat requests (%)	5.3	-	27.6	-	12	18.8	7	34.8	6.2	24.4	60	49.3												
ECC Delay (hours)	23.21	-	-	31.5	-	-	-	-	16	14.5	-	12												
Request within 24 hours (%)	-	-	64	-	91	-	-	80	-	-	68	81.5												
Condom use (%)	-	-	85	95	-	-	-	89	-	80	77	78.8												
Condom breakage (%)	75	81.9	89.5	85.9	83	68.7	79.5	91	-	75.8	79.3	78												
No protection (%)	-	-	8.8	11.5	15	-	16.3	9	-	17.7	7	17												

Gayoso⁴ 1997, Centro de Orientación Familiar Novoa Santos, Orense; Espínos⁵ 1999, Servicio de Obstetricia y Ginecología Hospital de San Pablo, Barcelona; Aginaga⁶ 2002, Servicio de Urgencias Hospital de Donostia, San Sebastián; Ruiz Sanz⁷ 2002, Área IV del Instituto Madrileño de la Salud, Madrid; Cárdenas⁸ 2002, Unidad de Urgencias hospital de Poniente, El Ejido, Almería; Lete⁹ 2003, Servicio de Ginecología Hospital Santiago Apóstol, Vitoria; Checa¹⁰ 2004, Servicio de Obstetricia y Ginecología Hospital del Mar, Barcelona; Vergara¹¹ 2004, Servicio de Urgencias de Atención Primaria de Usera, Madrid; Martínez¹² 2005, Institut Clínic de Ginecología, Obstetricia y Neonatología Hospital Clínic, Barcelona; Santamaría¹³ 2006, Centro de Salud de Santa María de Benquerencia, Toledo; Sarrat¹⁴ 2008, Servicio de Urgencias Hospital Clínic Universitario Lozano Blesa, Zaragoza. LNG: Levonorgestrel.

that some teenagers and young women are not using other more adequate contraceptive methods, especially barrier methods, despite the possible consequences.

Condom breakage or dislodgement was the most frequently mentioned reason. Virtually all series report this as the main reason for soliciting ECC, which suggests it is a common "excuse" to conceal the failure to use protection in intercourse. However, Ruiz Sanz⁷, after interrogating 30 women with suspected condom rupture, found only one case admitting unprotected intercourse. In fact, 15% of condom use is associated with problems and 31% of people acknowledge having had some type of condom problem¹⁵.

However, the predominance of weekend ECC requests, the high incidence of repeat requests associated with multiple and early recurrences, the high frequency of condom rupture and the 17% unprotected sex suggest that ECC has become common practice to replace safer alternatives.

The delay in soliciting ECC was 12 hours, similar to that reported in the most recent series^{12,13}, indicating a good level of awareness of the need to request ECC at an early stage. This need is the reason for facilitating access to ECC through the emergency services.

However, the high incidence of repeat requests, the percentage of minors and the fear that ECC may decrease the use of safer contraception methods suggest that it could be more advisable to offer this service at a more specialized care level, such as family planning centers, where medical personnel are more specifically trained.

This study shows that patients attending an ED to request ECC are young, with a considerable percentage being minors and not first-timers, so public information should be improved about this method being an exceptional measure of contraception to avoid a possible unwanted pregnancy.

As limitations of our study, we would highlight the fact that the data were obtained from a single hospital and registered in the ED so we were not always able to obtain 100% of the study variables data for each patient. However, the strengths of this study are that it covers a three-year period, which allowed us to include a large number of subjects, and that was performed in a first level emergency department, so that the patient profile obtained is very close to that of real patients.

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Anticoncepción de emergencia en un servicio de urgencias de primer nivel: experiencia de 3 años

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Objetivo: Describir nuestra experiencia de tres años en la dispensación en urgencias de la anticoncepción de emergencia (ACE).

Método: Estudio descriptivo desde octubre de 2004 a septiembre de 2007 de las pacientes que solicitaron ACE en nuestro servicio de urgencias. Se recogió la edad, número de veces que se había solicitado, tiempo transcurrido desde la última vez, método anticonceptivo utilizado y causa del fracaso, así como el tiempo de demora.

Resultados: Se atendieron 1.006 mujeres. La media de edad fue de 24,3 (6,8) años; un 13,4% eran menores y el 16,8% tenía más de 30 años. El 48,3% de las pacientes había requerido una ACE previa (el 74% en una ocasión, el 17,8% en dos y el resto en tres o más veces). Las mujeres con mayor número de reincidencias eran más jóvenes [21 (6,5) vs 24,7 (7,3) años; $P = 0,028$]. Las reincidencias en los primeros 6 meses [143 casos (35,4%)] eran también más jóvenes [22,9 (6,5) vs 24,8 (5,9) años; $P = 0,003$]. La causa más frecuente de fracaso fue la rotura del preservativo en el 78% de casos. La demora en la solicitud de ACE fue de 12 (19) horas y sólo en dos casos se superó el límite de 72 horas. Tanto las menores de 18 años como las de más de 30 años acudían más tarde que el resto [16 (18) y 15 (17) horas vs 12 (19); $P = 0,009$].

Conclusiones: Las mujeres que solicitan ACE en los servicios de urgencias suelen ser jóvenes y reincidentes, por lo que se debería mejorar la información acerca de que este método no es una medida más de anticoncepción, sino un método de utilización excepcional. [*Emergencias* 2010;22:40-43]

Palabras clave: Levonorgestrel. Anticoncepción de urgencia. Contracepción de urgencia. Píldora del día después.