

Original research article

# Ten years of experience with Norplant implantation in southern Thailand

Sutham Pinjaroen<sup>a,\*</sup>, Oernporn Krisanapan<sup>a</sup>, Wachiraporn Benjawang<sup>a</sup>,  
Karanrat Soonthornpun<sup>a</sup>, Alan Geater<sup>b</sup>

<sup>a</sup>Family Planning Unit, Department of Obstetrics and Gynecology, Faculty of Medicine, Prince of Songkla University, Hat Yai, Songkhla 90110, Thailand

<sup>b</sup>Epidemiology Unit, Faculty of Medicine, Prince of Songkla University, Hat Yai, Songkhla 90110, Thailand

Received 3 February 2003; revised 3 October 2005; accepted 13 October 2005

## Abstract

**Purpose:** This study investigated clinical and contraceptive characteristics of a group of southern Thai women who had two consecutive Norplant implantations at Songklanagarind Hospital.

**Methods:** Seventy reinsertions were performed from 251 original Norplant implantations during the years 1986–1996. Four women had an exposed capsule within 3 months after reinsertion, and two of them subsequently had to have the capsule removed due to infection.

**Results:** Following implantation, the recipients had gradually increased body mass index and systolic blood pressure, which returned to baseline 6 months after discontinuance after 10 years of implantation. Long-term continuation rates were 76.7% and 74.0% at the end of the first and second 5-year periods, respectively.

**Conclusion:** The failure rate was 1.8% during the second period compared to 1.1% during the first period.

© 2006 Elsevier Inc. All rights reserved.

*Keywords:* Norplant; Ten-year follow-up; Continuation rate; Side effects

## 1. Introduction

Norplant implants are a set of six capsules filled with the progestin levonorgestrel. This was one of the nonpermanent contraceptive methods that was introduced by the Thai National Family Planning Program in 1986 to supplement then-available methods for those who wanted no more children but refused permanent methods. The capsules are effective for up to 5 years.

During July to October 1986, 251 women had Norplant implantation at the Family Planning Unit, Songklanagarind Hospital; most of them were from southern Thailand. From August to December 1991, these women had completed their five-year cycle, and the results were recorded and published in local journals [1,2]. Of this group, 81 desired a second insertion; after counseling about choice and benefit of alternative contraceptive methods, 11 clients who were satisfied with their family size accepted permanent methods

of contraception, but the other 70 women maintained their desire for a second Norplant implantation.

This study was undertaken to evaluate side effects, pregnancy rate and continuation rate of this second group of women who undertook a second five-year Norplant implantation.

## 2. Materials and methods

The study was conducted at the Family Planning Unit, Songklanagarind Hospital, southern Thailand. Two hundred fifty-one women received their first Norplant implantation between July and October 1986, and after completing their five-year period, 70 chose to have a second insertion and were followed up for a further 5 years. The final date for continuation rate assessment was December 31, 1996.

After the first 5-year period, each woman was counseled, the initial set of capsules was removed, and a new set of capsules was reinserted at the same incision but at an opposite angle. Data were collected on blood pressure and body weight. After both first and second Norplant insertions, follow-up visits were scheduled for the first week, the third and sixth months and yearly thereafter.

\* Corresponding author. Department of Obstetrics and Gynecology, Faculty of Medicine, Prince of Songkla University, Songkhla 90110, Thailand.

E-mail address: sutham.p@psu.ac.th (S. Pinjaroen).

Reminder mailing cards were sent or telephone calls made to each woman 1 month before each follow-up appointment. If there was no response after three contact attempts, the woman was classified as lost to follow-up.

### 2.1. Statistical analysis

Demographic characteristics were compared using the Student's *t* test and chi-square test. Kaplan–Meier life table analysis was used to estimate termination and continuation rates. Only 42 women who had complete yearly data for the 10-year period of Norplant insertion were analyzed for changes in blood pressure and body mass index. This was done by the generalized estimating equations method for repeated measures using STATA 7.0 (College Station, TX). The generalized estimating equations approach to linear regression was used to account for the lack of statistical independence between measurements within the same subject. Statistical comparisons among values in different months were made using the Wald test.

## 3. Results

Of the 251 women who had the first 5-year Norplant implantation, two were found to be pregnant at the first month of insertion due to incorrect menstrual history, and the implant was subsequently removed at the third and fifth months of pregnancy, with no subsequent complication and delivery of normal babies; they were excluded from all subsequent analyses. Seventy women opted for a second 5-year implantation. From the first 5-year group, 25 women (10.0%) were lost to follow-up, and from the second 5-year group, 12 women (17.2%) were lost.

### 3.1. Characteristics of the women

The characteristics of two groups who inserted Norplant one time and who inserted Norplant two times are shown in Table 1. The mean age at the time of insertion of the first Norplant of women who had only a single implant and those who subsequently had a second implant was 26.6 and 29.6 years, respectively. Most women of both groups were Buddhist, but the proportions of those who had only primary school education were multiparous and wanted no more children were greater in women who had Norplant inserted twice.

### 3.2. Side effects from Norplant implantation

#### 3.2.1. Blood pressure

There was an increase in the systolic blood pressure from baseline, with average systolic blood pressure increasing from 114.5 mmHg before the Norplant implantation to 121.6 mmHg at the end of 10 years. The diastolic blood pressure also increased from 72.1 mm Hg before implantation to 77.8 mmHg at the end of 10 years (Table 2).

Table 1

Distribution of socioeconomic and obstetrical history of women as percentage of all women and of one- and two-insertion groups

Characteristic	All women (n=251)	One insertion (n=181)	Two insertions (n=70) <sup>a</sup>	p value <sup>b</sup>
Age				<.00005*
<25 years	29.1	35.4	12.9	
25–29 years	36.7	38.1	32.9	
30–34 years	27.1	21.5	41.4	
≥35 years	7.2	5.0	12.9	
Mean±SD	27.4±4.8	26.6±4.6	29.6±4.6	
Religion				.718
Buddhist	88.8	88.4	90.0	
Muslim	11.2	11.6	10.0	
Education				<.0005
Primary	51.3	40.3	79.7	
Secondary	22.8	27.6	10.1	
Vocational or higher	25.9	32.0	10.1	
Occupation				.085
Housewife	17.0	18.1	14.3	
Agriculturist/laborer	56.3	52.0	67.1	
Professional/sales/business	26.7	29.9	18.6	
Living children				<.00005**
1	28.3	37.0	5.7	
2	38.6	37.6	41.4	
3	19.9	16.6	28.6	
≥4	13.1	8.8	24.3	
Median (first and third quartile)	2 (1, 3)	2 (1, 3)	3 (2, 3)	
Future plans				<.0005
Want no more children	57.8	50.8	75.7	
Want more children	41.0	48.6	21.4	
Not sure	1.2	0.6	2.9	

<sup>a</sup> Education level available for only 69 women.

<sup>b</sup> Values from chi-square test except for \**t* test, \*\*Mann–Whitney test.

#### 3.2.2. Body mass index

There was increase in body mass index from baseline, with average body mass index increasing from 23.2 kg/m<sup>2</sup> before Norplant implantation to 25.8 kg/m<sup>2</sup> at the end of 10 years (Table 2).

#### 3.2.3. Inflammation/infection at implant site

Following the second implantation, six women (8.6%) had inflammation at the implantation site. Among these, the Norplant capsules were exposed in four women, and in two, the Norplant capsules had to be removed due to infection (Table 3).

### 3.3. Continuation and termination

One hundred seventy of the 249 first implantation acceptors (68.3%) and 42 of the 70 second acceptors (60.0%) completed the term (defined as maintaining the implantation and being followed up to at least 58 months after insertion). Twenty-five of the 249 (10.0%) and 12 of the

Download English Version:

<https://daneshyari.com/en/article/3916167>

Download Persian Version:

<https://daneshyari.com/article/3916167>

[Daneshyari.com](https://daneshyari.com)