Menstrual bleeding patterns in untreated women and with long-acting methods of contraception

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Abstract

The bleeding patterns recorded by women using one of two new types of long-acting hormonal contraception, a levonorgestrel-releasing vaginal ring or a monthly injectable, have been compared with those in an untreated group and those experienced by women using either a combined oral contraceptive (OC) or depotmedroxyprogesterone acetate (DMPA).

The frequency of bleeding was very similar between the combined pill users, the ring users and the untreated women, who all recorded an average of 3.2–3.3 bleeding/spotting episodes every 90 days. Monthly injectable users had slightly fewer episodes. Women using a monthly injectable or a vaginal ring had longer bleeding/spotting episodes (5 days) than combined pill users (4 days). However, the untreated women and DMPA users had the longest episodes, averaging 6 days. The median value of the within-woman mean length of bleeding-free intervals was 20.6 days among ring users, 22.3 days in the untreated group, 23.6 days among women given a combined OC or a monthly injectable, and 27.4 days in the DMPA group.

Women using any of the long-acting methods had more variable bleeding patterns than untreated women or combined pill users. Over a year of method use, however, the lengths of the bleeding-free intervals recorded by vaginal ring and monthly injectable users became more predictable. It is concluded that these newer methods do not produce the marked bleeding disturbances seen with DMPA.

This paper is based on a presentation given at the Seventh International Meeting of the Society for the Advancement of Contraception, which was held in Singapore on 4–11 November, 1990.
Introduction

The World Health Organization's Special Programme of Research, Development and Research Training in Human Reproduction has recently conducted large multicenter clinical trials to assess the efficacy and side-effects associated with two new types of long-acting hormonal contraception, a vaginal ring and two once-a-month injectables. The vaginal ring, which releases 20 μg of levonorgestrel daily for at least 90 days, was tested in 19 centers in 13 countries [1-4]. The monthly injectables, Cyclofem (medroxyprogesterone acetate, 25 mg, plus estradiol cypionate, 5 mg, previously known as Cycloprovera and HRP112) and HRP102 (noretisterone enanthate, 50 mg, and estradiol valerate, 5 mg) were studied in a randomized comparative clinical trial conducted in 12 countries [5-6]. All these preparations are now ready for, or undergoing, introduction into national family planning programs.

The bleeding disturbances induced by hormonal contraceptives are important because of their potential impact on acceptability. However, relatively little information on menstrual bleeding patterns among women using these newer contraceptives has yet been published [4,6]. Data on the variability of the patterns, both within-woman and between women, are particularly limited. In evaluating newer hormonal methods of contraception, there is a tendency to compare their bleeding patterns, informally, with those produced by combined oral pills. This is unfortunate, because the pattern induced by combined oral contraceptives does not entirely mimic a normal untreated pattern. The purpose of this paper, therefore, is to supplement previous descriptions of the bleeding patterns produced by the monthly injectables and vaginal ring, and compare them with those experienced by a group of untreated women and two treated groups, using either combined oral contraceptives or the three-monthly injectable, depot-medroxyprogesterone acetate (DMPA). Changes in the patterns with increasing length of method use are also examined.

Methods

Data collection

The data on menstrual bleeding patterns in untreated women were collected by Dr Alan Treloar in the United States. During the 1930s, he recruited a cohort of female students at the University of Minnesota, and asked them to complete calendar-year records showing the beginning and ending date of each menstrual period. At the end of each year, their completed records were collected, and they were issued with a new record card for the following year. When the participants had completed their studies, contact with them was maintained annually by mail. Data collection continued for over forty years; in time, some of the original participants’ daughters and friends were enrolled in the study, as they reached menarche. By 1967, when some of the results of the study were published [7], the dataset included information recorded by 2700 women over a total of 25 800 woman-years, on more than 275 000 menstrual cycles. The Special Programme has recently obtained a copy of part of this dataset.