Immediate postplacental insertion of the intrauterine device: a review of Chinese and the world’s experiences

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Abstract

The postpartum period is an ideal time to begin contraception, as women are more highly motivated to adopt contraception at this time and it is convenient for both patients and service providers. For intrauterine device (IUD) contraception, this period offers other advantages, such as ease of insertion and minimal adverse impacts on breastfeeding. Among early studies, most postpartum insertions were performed anywhere from a few hours to seven days or more after delivery, and retention of the IUD in the uterus was poor. Since the 1970s, immediate postplacental insertion (IPPI), i.e., IUD insertion performed within 10 minutes after placental delivery, has been advocated, and fairly low expulsion rates have been reported. Up to now, IPPI has not been widely accepted in clinics because its expulsion rate still appears to be higher than that of interval insertion. In order to further study IPPI and perfect this contraceptive technique, it is essential to comprehensively review IPPI results and compare the Chinese experience with that of the rest of the world.

Introduction

The postpartum period is an ideal time to begin contraception, as women are more highly motivated to adopt contraception at this time and it is convenient for both patients and service providers. For intrauterine device (IUD) contraception, this period offers other advantages, such as ease of insertion and minimal adverse impacts on breastfeeding [1].

In the middle 1960s, postpartum IUD insertion was one of the contraceptive measures evaluated by the Population Council and other groups [2,3]. Among early studies, most postpartum insertions were performed anywhere from a few hours to seven days or more after delivery, and retention of the IUD in the uterus was poor.
Since the 1970s, immediate postplacental insertion (IPPI), i.e. IUD insertion performed within 10 minutes after placental delivery, has been advocated, and fairly low expulsion rates have been reported [4]. Today, IPPI has not been widely accepted in clinics because its expulsion rate still appears to be higher than that of interval insertion. In order to refine our understanding of IPPI, we comprehensively review IPPI results and compare the Chinese experience with that of the rest of the world. Lessons learned worldwide regarding the method of insertion, training of insertors, type of IUD used, and timing of IPPI insertions could have a critical impact on the improvement of this contraceptive method.

A review of the world's experience

The World Health Organization (WHO), Family Health International (FHI) and Dr Thiery's group in Belgium have conducted extensive studies in IPPI, and their findings are reviewed below.

The multicenter study by WHO

A multicenter IPPI clinical trial was coordinated by WHO in the late 1970s and conducted at six international centers, with a study population of 841 women [5]. At each center, one of three IUD types, the Postpartum T, the Lippes Loop D (LLD) and the Copper 7-200 (Cu7-200), was randomly assigned to each woman, and inserted immediately following delivery of the placenta. The Postpartum T, a T-shaped copper IUD, was specially designed by the Population Council for postpartum use. The insertion methods varied among the six centers: normal inserter, long postpartum inserter, or digital placement.

No uterine perforations were reported among the study subjects. At 12 months, the Postpartum T, LLD and Cu7-200 pregnancy rates were 5.6, 12.1 and 7.2 per 100 women, respectively; and the expulsion rates were 41, 44, and 35 respectively (Table 1). The study was terminated prematurely by WHO because the pregnancy and expulsion rates exceeded the stopping rules set in the study protocol, namely pregnancy rates below 3 per 100 woman-years, and an expulsion rate below 20.

In spite of the rather disappointing results, some useful insight can be gained from the findings. First, the discontinuation rates of the three IUDs were not the same. The one-year expulsion and removal rates for 'other medical reasons' of LLD were significantly higher than those of Copper 7 (p <0.025). The pregnancy rate associated with LLD was also higher than that of the Copper 7 IUD. There was a statistically significant difference in the total discontinuation rates of the LLD compared to the Copper 7 (p <0.01), but there were no significant differences between the Postpartum T and the other two devices in this respect.

Second, there were considerable differences in expulsion rates between centers. Of the six centers, Santiago had particularly low expulsion rates at 12 months with all three devices (Postpartum T, 17.7; LLD, 10.2; Copper 7, 9.6) compared with Brussels...