

Abstract

Intrauterine contraception has a number of important advantages over other forms of contraception and remains, therefore, an important method of birth control. However, side-effects and other drawbacks have reduced its overall acceptance. Also misconceptions and lack of updated scientific knowledge among the potential users and providers are major obstacles to the widespread use of intrauterine contraception. Ideally, an intrauterine device (IUD) should prevent pregnancy effectively, be well tolerated, not become displaced or expelled over time, cause a minimum of side-effects, be long-lasting, have a strictly local effect, and be easy to insert and remove. A group at the University of Ghent, Belgium, the International Study Group on Intrauterine Drug Delivery, has developed, since 1985, a totally new concept in order to improve current intrauterine contraceptive efficacy and enhance tolerance, by creating a harmonious relationship between the uterine cavity and the contraceptive 'foreign body'. The new concept (GyneFix) consists of a non-biodegradable suture thread made of surgical 00 monofilament polypropylene on which six copper tubes are threaded, providing a total surface area of 330 mm². The upper and lower tubes are crimped onto the thread to keep the tubes in place. The upper extremity of the thread is provided with a knot which serves as an anchor. The knot is implanted in the myometrium of the uterine fundus with a specially designed insertion instrument, thereby permanently securing the device in the uterine cavity. Since the initial clinical investigations, over 10,000 woman years of experience and up to 10 years' follow-up in international multicenter, non-comparative and comparative clinical trials have been collected. The clinical material also included a large number of nulligravid and nulliparous women. Due to the design characteristics of the GyneFix and its anchoring in the uterine fundus, an optimal tolerance and almost complete absence of expulsion were obtained. The constant release of copper ions in the upper part of the uterine cavity results in the high effectiveness of the anchored device. The effectiveness is higher than in the high-load conventional copper IUDs which have a risk of becoming displaced, partially or totally expelled in 10% or more (nulliparous women), resulting in a significant number of accidental pregnancies. The absence of frame and, as a consequence, its flexibility, explain the low incidence of side-effects and the very low incidence of complications, such as pelvic inflammatory disease and ectopic pregnancies. This new concept could be a major step forward in the acceptance of intrauterine contraception worldwide and increase its popularity. This article reviews the experience with the new concept for interval, postabortal and postpartum contraception.