RAQUEL FERREIRA FERRAZ DO LAGO DORIA

ALTERAÇÕES NO LOCAL DE INSERÇÃO E SATISFAÇÃO COM O MÉTODO ENTRE USUÁRIAS DE IMPLANTES CONTRACEPTIVOS SUBDÉRMICOS

Tese de Doutorado

ORIENTADOR: Prof. Dr. LUIS GUILLERMO BAHAMONDES

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Tese de Doutorado apresentada à Pós-Graduação da Faculdade de Ciências Médicas da Universidade Estadual de Campinas para obtenção do Título de Doutor em Tocoginecologia, área de Tocoginecologia

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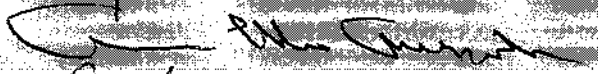
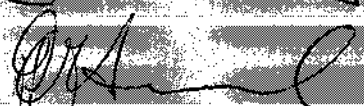
3. 
4. 
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Dedico este trabalho...

Ao Prof. Dr. Luis Bahamondes, meu mestre com carinho...,

¨O Mestre na arte da vida faz pouca distinção entre o seu trabalho e o seu lazer, entre a sua mente e o seu corpo, entre a sua educação e a sua recreação, entre o seu amor e a sua religião. Ele dificilmente sabe distinguir um corpo do outro. Ele simplesmente persegue sua visão de excelência em tudo que faz, deixando para os outros a decisão de saber se está trabalhando ou se divertindo. Ele acha que está sempre fazendo as duas coisas simultaneamente¨

Texto budista

Agradecimentos

À enfermeira Ximena Espejo Arce, por sua dedicação e competência dedicados ao Ambulatório de Reprodução Humana do CAISM.

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Em especial:

Aos meus filhos, Pedro e Camila, a quem tanto amo e dedico minha vida para que no futuro sejam pessoas felizes e consigam realizar seus sonhos, como estou realizando os meus...

¨A verdade é que a gente não faz filhos. Só faz o layout. Eles mesmos fazem a arte-final.¨
Luís Fernando Veríssimo

Ao meu amado Fabio, com quem tenho dividido alegrias, realizações, que tem sido meu confidente, amigo e companheiro. Obrigada, te amo...

Aos meus pais, Waldo e Marina, por terem me ensinado que a educação é a preparação para a vida, é a própria vida. Estão torcendo por mim onde quer que estejam agora...

Sumário

Símbolos, Siglas e Abreviaturas

ENG – Etonogestrel

IC – Intervalo de Confiança

IMC (Kg/m^2) – Índice de massa corpórea

LNG – Levonorgestrel

OR – *Odds Ratio*

PF – Planejamento Familiar

Resumo

Objetivos: Avaliar a prevalência de sinais e sintomas no local de inserção no braço e a opinião das mulheres com relação à satisfação com o método e com o novo padrão de sangramento em usuárias de implantes subdérmicos liberadores de levonorgestrel (LNG; Jadelle®) e etonogestrel (ENG; Implanon®). **Métodos**: Os totais de 233 e 226 mulheres foram aceitas nos grupos de implantes liberadores de ENG e LNG, respectivamente. Os sinais locais foram avaliados pela inspeção e as mulheres foram questionadas sobre queixas relacionadas ao local do implante aos 14 dias e 3, 6, 12, 24 e 36 meses após a inserção no Brasil e na República Dominicana. O mesmo grupo, somente de mulheres brasileiras, sendo 120 no grupo das usuárias de implantes liberadores de ENG e 127 no grupo liberador de LNG, deu sua opinião com relação à satisfação com o método contraceptivo e com o novo padrão menstrual, através de um questionário desenvolvido para o estudo. Os questionários foram aplicados pessoalmente aos 3 e 6 meses, e em seguida a cada 6 meses, até 36 meses após a inserção**. Resultados**: Dor e outros sintomas (principalmente prurido) foram as queixas mais frequentemente relatadas (~20%) e foram observadas em uma proporção semelhante entre as usuárias de Implanon® e Jadelle®, e parestesia foi relatada com menos frequência.

Hiperpigmentação foi três vezes maior entre as usuárias de Jadelle® do que em usuárias de Implanon® ($p< 0,0001$) e foi mais prevalente entre as usuárias não-brancas. Todos os sintomas e sinais foram relatados muito mais frequentemente por mulheres dominicanas. Embora todos os sinais locais apresentassem uma tendência a diminuir com o tempo de uso, não houve diferenças significativas quando comparadas as ocorrências aos 12, 24 e 36 meses de uso de ambos os tipos de implantes. No entanto, as usuárias do Jadelle® não apresentaram declínio na ocorrência de hiperpigmentação. O modelo de regressão logística ajustada pela cor e índice de massa corporal (IMC; kg/m^2) mostrou que as mulheres brancas usuárias de Implanon® apresentaram risco (OR) menor de hiperpigmentação quando comparadas às usuárias de Jadelle® (OR 0,26; IC 95% 0,14-0,48; OR 0,34; IC 95% 0,14-0,81), respectivamente. Não houve correlação entre dor, parestesia e hiperpigmentação e a utilização dos dois tipos de implantes. Hiperpigmentação foi mais prevalente entre usuárias de Jadelle® de pele escura. Em relação à satisfação foram analisados 1200 questionários. A maioria das usuárias dos dois tipos de implantes estava satisfeita com o método, e a insatisfação foi de aproximadamente 15% ao longo dos 3 anos de observação. Além disso, cerca de 70% das mulheres declararam que a utilização dos implantes trouxe benefícios e só aproximadamente 5% referiram que o uso provocou danos. Com relação ao novo padrão menstrual, as usuárias estavam muito satisfeitas ou satisfeitas em aproximadamente 70%, independente do tipo de implante. A vida sexual das usuárias não apresentou alteração em mais de 70% das usuárias, independentemente do tipo de implante. As usuárias indicariam o método para outra mulher e em sua grande maioria o método foi aprovado pelo marido.

Conclusões: Informar as usuárias de implantes sobre sinais e sintomas no local de inserção do implante indica uma boa qualidade de atendimento; no entanto não é necessário avaliar o local de inserção a cada visita em usuárias assintomáticas. Os resultados sobre a opinião das usuárias quanto à satisfação com o método foram similares aos de trabalhos anteriores. No entanto, os resultados devem ser interpretados com cautela porque as mulheres que participaram deste estudo não eram usuárias comuns de uma clínica de planejamento familiar, o que levou a maior orientação durante todo o estudo. Não se pode ignorar a possibilidade de que a alta satisfação seja uma consequência da insatisfação com outros métodos contraceptivos.

Palavras-chave: Implantes subdérmicos, Jadelle®, Implanon®, alterações locais, dor, mudanças da pele, padrão menstrual, opinião da satisfação.

Summary

Objectives: The study was conducted to assess the prevalence of local signs and symptoms at the insertion site in the arm, and the evaluation of the women's satisfaction with the method and with the new bleeding patterns among users of subdermal releasing-implants, levonorgestrel (LNG, Jadelle®) and etonogestrel (ENG, Implanon®) systems. **Methods:** A total of 226 and 233 women were enrolled in the ENG and the LNG group, respectively. Local signs were evaluated and women were questioned regarding complaints related to the insertion site at 14 days and 3, 6, 12, 24, and 36 months after insertion in Brazil and Dominican Republic. The same Brazilian women were randomly enrolled in the satisfaction study of ENG group (120) and the LNG group (127), respectively. The opinion of satisfaction with the bleeding pattern and with the method was evaluated through a questionnaire developed for the study. The questionnaires were applied face- to-face at the 3, 6, and every 6 months thereafter up to 36 months after insertion. **Results:** Pain and other symptoms (mostly pruritus) were the most frequently reported complaints (~20%), and were observed in a similar proportion among both Implanon® and Jadelle® users; paresthesia was less frequently reported. Hyperpigmentation was three fold higher among users of Jadelle® than Implanon®

users ($p< 0.0001$) and was more prevalent among non-white users. All symptoms and signs were reported much more frequently by Dominican women. The logistic regression model adjusted by race and body mass index (BMI; kg/m^2) showed that users of Implanon® and white women presented lower risk of hyperpigmentation when compared to Jadelle´s users (OR 0.26, 95% CI 0.14-0.48; OR 0.34, 95% CI 0.14-0.81, respectively). There was no relation between pain, paresthesia and hiperpigmentation and the use of the implants. Hiperpigmentation was more prevalent between users of Jadelle® in non-white women. The total number of questionnaires for the satisfaction study was 1,200. The results showed that most of these users of contraceptive implants were satisfied with both implants at the different visits and the regret with the method did not reach ~15% at any time through the 3 years of observation. In addition, almost 70% of the women declared that the use of the implants offered benefits for her and only ~5% referred that the use provoke harm for her. Regarding the women's response to changes in their bleeding patterns following insertion of the implant, the percentage who stated that they were very satisfied or satisfied was 70% in both methods. There was no change in the reported frequency of sexual intercourse during use of the implants and no change in their libido. Moreover, all the women in both groups stated that they would recommend the method to a friend or relative and most of them declared that their partner approved of this contraceptive method. **Conclusions:** Although information relating to local symptoms and signs at the implant site should be provided to current and potential users as a component of good quality of care, we do not recommend evaluation of the insertion site at every visit in women with no complaints. The results about satisfaction with the

method are in agreement with previous findings. However, the results must be interpreted with caution because the women are participating in a research study and were not common clients of a family planning clinic. We cannot ignore the possibility that the high satisfaction was a consequence of dissatisfaction with alternative methods.

Key-words: contraceptive implants, Jadelle®, Implanon®, local signs, pain, changes in skin, bleeding patterns, opinion of satisfaction.

1. Introdução

O implante contraceptivo tem significado um avanço importante dentre os métodos contraceptivos nos últimos anos. Tema de muitos estudos em clínicas de planejamento familiar em todo o mundo, estima-se que 11 milhões de mulheres já tenham utilizado implantes contraceptivos (1), e que existam quatro milhões de usuárias (2). Os primeiros estudos com implantes anticoncepcionais datam da década de 60, quando eram utilizadas cápsulas do elastômero polidimetilsiloxano (Silastic) contendo baixas doses de progestogênios, que se difundiam através desta membrana (3).

O primeiro implante liberador de levonorgestrel (LNG), desenvolvido pelo Population Council no final da década de 70, foi o Norplant®. Este implante é constituído de seis cápsulas de silicone de tamanhos iguais contendo 36mg de LNG cada uma, totalizando 216mg. Cada cápsula mede 34mm de comprimento e 2,4mm de diâmetro em um tubo flexível de silicone, com extremidades vedadas por silicone.

Inserido cirurgicamente no antebraço, através de trocáter sob anestesia local, sua eficácia contraceptiva dura cinco anos, podendo chegar até sete (4). A liberação da droga é imediata, sendo maior no início do uso. Durante o primeiro ano, a taxa de LNG encontra-se acima de 100µg/dia e diminui gradativamente para 60µg/dia. A liberação permanece constante até o quinto ano, terminando com 30µg/dia (5, 6).

O Norplant® está aprovado em mais de 60 países, com alta taxa de continuação, particularmente em países em desenvolvimento (7) e com a vantagem adicional de não apresentar os efeitos colaterais e riscos associados ao uso do estrogênio. Considerado bastante seguro, pode ser usado por um grande número de mulheres, já que as restrições médicas para seu uso são menores que para o uso de anticoncepcionais orais combinados, mesmo aqueles de baixa dosagem (8).

Apesar da segurança do método, os implantes provocam distúrbios nos ciclos menstruais (irregularidades), particularmente durante o primeiro ano de uso, e em alguns casos são a causa de descontinuação prematura do método (9, 10, 11, 12). Outros efeitos colaterais associados como cefaleia, mudanças de humor e tontura têm sido descritos, sintomas estes que também são relatados com o uso de outros métodos contraceptivos hormonais (13).

Estes efeitos ocorrem frequentemente em usuárias de implantes, mas não se sabe se essas associações são casuais ou atribuídas ao implante contraceptivo. Implantes contraceptivos exclusivos de progestogênio têm associação com uma

série de efeitos adversos (14). A relação de causalidade entre esses efeitos e o uso de implantes contraceptivos não está comprovada.

Os efeitos adversos mais relatados em estudos clínicos são alterações do padrão menstrual, cefaleia e acne. Outros efeitos como ganho de peso, vertigem e alterações de humor também são relatados com o uso destes implantes (14). Uma preocupação relatada no encontro internacional realizado no ano de 2002 para discutir diferentes aspectos dos implantes contraceptivos (15) foi em relação às inserções e remoções difíceis, e isto tem gerado certo descrédito entre leigos e até profissionais da saúde (16).

Um dos caminhos para enfrentar estes problemas foi o desenvolvimento de implantes contraceptivos com menor número de cápsulas ou bastonetes. Dois sistemas já estão aprovados em diversos países: Jadelle® e Implanon®.

O Jadelle® foi desenvolvido pelo Population Council. As taxas de LNG e o desempenho clínico são semelhantes aos do Norplant®. Consiste em dois bastões de silicone de 2,4mm de diâmetro e 43mm de comprimento. Cada bastonete contém 75mg de LNG (d(-)-13β-etil-17α-etinil-17β-hidroxigon-4-ene-3-um) um progestogênio sintético. O nível sérico de LNG cai rapidamente durante o primeiro mês pós-inserção, mas se estabiliza nos primeiros 12 meses, chegando a níveis acima de 175pg/ml (17).

O implante Jadelle® é aprovado em alguns países da Europa por cinco anos. Este implante é manufaturado por Bayer Schering Pharma Oy, Turku, Finlândia. Uma vez inserido, a dose diária de LNG é a mesma que com os seis

bastões de Norplant® durante os três primeiros anos de uso (3), e por inferência dos dados clínicos nos dois anos seguintes (17). A sua inserção e remoção são mais fáceis e rápidas quando comparadas às do Norplant®.

O Implanon® foi desenvolvido pela companhia farmacêutica Organon, Oss, Holanda (hoje Schering Plough), desenhado para fácil inserção e remoção, e é constituído por um bastonete de acetato de etileno vinil copolímero de 2mm de diâmetro e 40mm de comprimento. Este bastonete contém 68mg de etonogestrel (ENG) (13-ethyl-17-hydroxy-11-methylene-18, 19-dinor-17α-pregn-4-en-20yn-3-one), metabólito biologicamente ativo do desogestrel (15). O nível sérico de ENG calculado é de 60µg/dia nos primeiros três meses de uso, diminuindo para 30µg/dia no final dos dois primeiros anos de uso (18).

O Implanon® é aprovado para uso por até três anos (15), embora existam dados referentes ao uso por até cinco anos (19), em muitos países da União Europeia, Indonésia, Canadá, Brasil e Estados Unidos.

Dados disponíveis dos mais de 750.000 implantes inseridos no mundo sugerem que o Implanon® tem alta eficácia contraceptiva com poucas gravidezes relatadas. Desde a introdução do Implanon® em 1998, até março de 2007, foram relatadas 1.688 gestações, resultando em um índice de Pearl de 0,024 (dados registrados na Organon International, Roseland, NJ (20, 21).

Estes dados devem ser interpretados com cuidado, visto que não são provenientes de estudos controlados, portanto, não se pode ter o dado real do número de gestações em todo o mundo. As gestações poderiam ser atribuídas a

três causas: 1) inserção de implantes em mulheres que já estavam previamente grávidas ou inserção após o dia do ciclo recomendado; 2) uso concomitante de droga anticonvulsivante e de indutores da enzima conversora hepática e 3) falha na inserção do implante (7,8).

No entanto, todos os estudos sobre eficácia e segurança do Implanon® provêm de estudos patrocinados pela companhia que desenvolveu e comercializa este dispositivo. Não há nenhum estudo comparativo sobre estes novos dispositivos: Jadelle® e Implanon®.

Estudos que avaliam os efeitos, como as alterações no local da inserção dos implantes, são poucos. Em um estudo, Diaz *et al.* em 1991 (5) avaliaram os efeitos no braço (hematoma e cicatriz) aos sete e 30 dias após a inserção do implante Norplant® com seis cápsulas, e observaram resultados similares no grupo que recebeu o implante com prévia incisão com bisturi (420 mulheres) e no grupo que recebeu o implante diretamente com o trocáter (423 mulheres).

Outro estudo referente às alterações do braço foi realizado em 2003, quando 303 mulheres foram avaliadas por até 48 meses sobre as alterações no local de inserção dos implantes (Norplant®). O estudo mostrou que dor e parestesia foram inversamente associadas ao tempo de uso do implante. A hiperpigmentação do local de inserção esteve diretamente associada ao tempo de uso.

O que chamou atenção nesse estudo foi que, embora existam poucas referências sobre mudanças no local de inserção do implante, foi encontrado

que 36% das usuárias tinham algum sinal ou sintoma. No entanto, isto não pareceu preocupá-las (1).

Embora os efeitos locais da inserção do implante tenham implicações apenas cosméticas e não justifiquem a descontinuação do método, algumas mulheres podem apresentar certo desconforto. Existe a tendência em se dar pouca importância a esses efeitos locais, mas as mulheres têm o direito de serem informadas do risco de apresentar estes sinais e sintomas.

Um método contraceptivo eficaz, de longa duração e reversível, como os implantes subdérmicos, torna-se bastante atrativo para as mulheres. No entanto, alguns dos efeitos colaterais poderiam causar uma redução no uso ou na satisfação com o método (22). A causa médica mais comum para a remoção precoce dos implantes contraceptivos é o sangramento irregular (8). Por essa razão, a orientação realizada por profissionais de saúde às usuárias de métodos contendo somente progestágenos como os sistemas liberadores de LNG (seja em forma de implante ou intrauterino) têm sido enfatizados (23).

A maioria dos estudos envolvendo alterações do padrão menstrual com implantes liberadores de LNG é sobre o Norplant®. Estes estudos focaram geralmente na eficácia e satisfação na prevenção da gravidez e a satisfação foi medida por taxas de continuação e/ou por razões de descontinuação (24). Entretanto, existem poucos estudos sobre a satisfação de usuárias com esses dois tipos de implantes (25), e nenhum estudo similar avaliando esta segunda geração de implantes subdérmicos.

Portanto, o objetivo deste estudo foi avaliar a prevalência de sinais e sintomas observados no local de inserção dos implantes subdérmicos Jadelle® e Implanon® e comparar esses dois tipos de implantes. Avaliar ainda a opinião das usuárias em relação à satisfação com o método e com o novo padrão menstrual. As informações obtidas com o estudo serão de grande importância para o aconselhamento das atuais usuárias e no aconselhamento prévio à inserção em futuras usuárias.

2. Objetivos

2.1. Objetivo Geral

Avaliar a incidência de efeitos no local de inserção e a opinião com relação à satisfação com o método e o novo padrão menstrual em mulheres usuárias que receberam ao acaso um dos dois modelos de implantes contraceptivos subdérmicos: Implanon® e Jadelle®.

2.2. Objetivos Específicos

- Avaliar os sinais e sintomas como dor, adormecimento, formigamento, hiperpigmentação, hipopigmentação, retração e outros sinais, no local da inserção do implante Implanon® ou Jadelle® aos 14 dias, 3, 6, 12, 18, 24, 30 e 36 meses após a inserção.

- Comparar os sinais e sintomas observados no local da inserção com o tipo e implante: Implanon® ou Jadelle®.

- Comparar os sinais e sintomas no local da inserção com a cor da pele das mulheres.

- Comparar a satisfação ou não com o implante e o tipo de implante.

- Comparar a satisfação em relação às novas características do sangramento uterino com o tipo de implante.

3. Publicações

Artigo 1 – **Comparison of local signs and symptoms at the site of insertion of Implanon® and Jadelle® contraceptive implants in two countries**

Raquel F. Ferraz do Lago, Vivian Brache, Anibal Faúndes, Ximena Espejo-Arce, Aidelis Jorge, Leila Cochon, Margarita de los Santos, Luis Bahamondes

Artigo enviado para a Revista Contraception.

Artigo 2 – **Women's evaluation of their satisfaction with two contraceptive implant systems: Implanon® and Jadelle®, and with bleeding patterns**

Raquel F. Ferraz do Lago, Ximena Espejo-Arce, M. Valeria Bahamondes, Sara Castro, Ilza Monteiro, Luis Bahamondes*

Artigo enviado para a Revista Contraception.

3.1. Artigo 1

----- Original Message -----
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Sent: Friday, September 25, 2009 12:10 PM
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Comparison of local signs and symptoms at the site of insertion of Implanon® and Jadelle® contraceptive implants in two countries

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Running title: Local signs and symptoms at the insertion site of contraceptive implant users.

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Abstract

Objectives: The study was conducted to assess the prevalence of local signs and symptoms at the insertion site in the arm of 2 groups of users of either two levonorgestrel (LNG)-releasing rods or one etonogestrel (ENG)-releasing contraceptive rod in Brazil and Dominican Republic. **Study design:** A total of 226 and 233 women were enrolled in the ENG group and the LNG group, respectively. Local signs were evaluated and women were questioned regarding complaints related to the insertion site at 3, 6, 12, 24, and 36 months after insertion. **Results:** Pain and other symptoms (mostly pruritus) were the most frequently reported complaints (~20%), and were observed in a similar proportion among both Implanon and Jadelle users; paresthesia was less frequently reported. Hyperpigmentation was three fold higher among users of Jadelle than Implanon users ($p< 0.0001$) and was more prevalent among non-white users. All symptoms and signs were reported much more frequently by Dominican women. The logistic regression model adjusted by race and BMI (kg/m^2) showed that users of Implanon and white women presented lower risk of hyperpigmentation (OR 0.26, 95% CI 0.14-0.48; OR 0.34, 95% CI 0.14-0.81, respectively). **Conclusions:** Although information relating to local symptoms and signs at the implant site should be provided to current and potential users as a component of good quality of care, we do not recommend evaluation of the insertion site at every visit in women with no complaints.

Key-words: contraceptive implants, Jadelle, Implanon, local side effects, pain, skin changes.

1. Introduction

Contraceptive implants are one of the most effective, long-lasting, reversible methods in use worldwide [1, 2]. Early in the introduction of the 6-capsule levonorgestrel (lng) implant system (norplant®), it became evident that a reduction in the number of capsules was desirable, mainly because of possible removal difficulties associated with a larger number of implants. Thus, the population council developed a new 2-rod lng system, which provided comparable lng blood levels and clinical performance, that was introduced in the market with the brand name of jadelle® (bayer schering pharma, oy, turku, finland) [3]. Several years later, the pharmaceutical company organon, developed a single-rod contraceptive which delivered etonogestrel (eng) and which is marketed as implanon® (nv organon, oss, holland) [2].

The most common medical reasons for early discontinuation of contraceptive implants are bleeding irregularities [1-4]; local side effects at the insertion site of implants are rarely a reason for early discontinuations [5]. Few clinical studies report local side effects at the insertion site with the exception of rare complications like infections and expulsions of one of more implants.

The absence of reports contrasts with the apparent high frequency of local side effects. In one cross-sectional observational study conducted among 303 norplant users, almost half of the subjects reported pain, paresthesia or both after insertion, when directly asked about these symptoms. In that study, hyperpigmentation was observed in 35.6% and skin depression at the implant site in 22.4% of the women; both of these signs were associated with length of use, while hyperpigmentation was also associated with non-white skin color and skin depression with body mass index (bmi, kg/m2) [6]. Albeit, the study has the strength of the sample size but, on the other hand, it has the

limitation that it was cross-sectional. Consequently, prospective studies are desirable to evaluate these signs during long-term use. Furthermore, no similar study has been done evaluating the two second- generation contraceptive implant systems, which have the benefit of a reduced number of implants compared with norplant.

Thus, the objective of this study was to assess the prevalence of signs and symptoms observed at the site of insertion of jadelle® and implanon®, and to compare these two contraceptive implant systems. The possible association of these signs and symptoms with duration of use, color of the skin and bmi (kg/m^2) was also evaluated. The information obtained from this study would be of importance to actual users and should be offered by service providers to potential users as a relevant component of the pre-insertion counseling.

2. Material and methods

This prospective study was carried out from December 2003 through April 2007 in two different countries. A total of 226 and 233 women were enrolled in the Jadelle group and the Implanon group, respectively. All women included in the study, 259 in Brazil and 200 in Dominican Republic, were participating in a multicenter randomized clinical trial of two implantable contraceptives for women, Jadelle and Implanon, coordinated by the Special Programme of Research, Development and Research Training in Human Reproduction, Department of Reproductive Health and Research of the World Health Organization. The clinic in Brazil was the Human Reproduction Unit, Department of Obstetrics and Gynecology, University of Campinas (UNICAMP), Campinas, and the clinic in Dominican Republic was PROFAMILIA at Santo Domingo.

Approval was obtained from both local Ethics Committees and all volunteers signed an informed consent prior to entering in the study.

2.1. Criteria for selection of subjects and procedures

Women aged 18 and 44 years inclusive were admitted to the study if they requested implantable contraceptives and must fulfil the following eligibility criteria: be in good general health and if lactating, be 6 weeks or more beyond delivery. The exclusion criteria included: breastfeeding an infant less than 6 weeks old; blood pressure systolic >159 mmHg or diastolic >99 mmHg; current venous thromboembolism; current ischaemic heart disease; recovering from stroke; unexplained vaginal bleeding; personal history of breast cancer; women with known cervical cancer at the time of screening; active viral hepatitis; severe (de-compensated) cirrhosis of liver; benign or malignant tumour of the liver; current use of rifampicin or griseofulvin, or anticonvulsants [7].

Randomization was prepared by the World Health Organization. Sealed envelopes indicating the assigned implant system were sent to each participating center. These envelopes were opened at the time of enrollment, after confirming that all inclusion and exclusion criteria were met. All the insertions were performed within the first 5 days of the menstrual cycle, under local anesthesia, subdermally on the inner side of the upper non-dominant arm, 4 cm above the elbow, in the groove between the biceps and triceps (sulcus bicipitalis medialis). Physicians inserted Implanon with the pre-loaded packaged disposable trocar, while Jadelle was inserted using a gauge #10 Becton Dickinson trocar. After insertion, all women were scheduled to attend follow-up visits at 3, 6, 12, 24, and 36 months post-insertion.

The protocol consisted of inspection of the insertion site by one of the investigators at each visit in order to record any changes, such as hyperpigmentation, defined as darkening of the skin over the implant area and/or loss of subcutaneous tissue in the implant area, described previously as skin depression. Skin depression was evaluated with the arm extended, palm up [6]. Following inspection, the clinical investigator asked a single question: "Have you felt any discomfort in the arm in which you have your implants inserted?" The answers were recorded and later classified as, "no discomfort", "pain", "paresthesia" or "other". At each visit, women were weighed with light clothes and the BMI (kg/m^2) was calculated. The information regarding skin color was defined by a single observer in each clinic. Participants were classified as white, black and biracial (racial mix of black and white). All the information was recorded in case report forms designed for this study.

2.2. Statistical analysis

The local signs and symptoms were treated as dependent variables and were tabulated as frequency reported at each visit, while type of implant, skin color and BMI were treated as independent variables. We also evaluated the frequency of symptoms and signs throughout the duration of the study, comparing the prevalence at 12 *vs*. 24 and *vs*. 36 months of observation. The Mann-Whitney, χ^2 and Fisher exact tests were used to compare the different variables as appropriate. Logistic regression model was used to estimate the odds ratio (OR) and 95% interval confidence (IC) at 36 months of observation if a sign was ever reported by a woman. The variables in the model were type of implant, race (white/non-white), BMI ($\leq$25/$\geq$25), length of use (in months), and

country of residence (Brazil/Dominican Republic). All values are expressed as mean ± standard deviation (SD) and the significance was established at $p<0.05$.

3. Results

The participants in Brazil were older than the Dominican volunteers (27.1 ± 5.2 and 24.7 ± 4.3 years), they had less number of pregnancies (1.3 ± 1.0 and 2.5 ± 1.3 pregnancies), and the BMIs were similar in both countries (23.7 ± 3.7 and 23.6 ± 3.7), respectively. In the Dominican Republic, the majority of women (86.4%) were biracial and in Brazil almost the same proportion (84%) were white (Table 1).

In the aggregate, there were no significant differences between users of Implanon and Jadelle regarding age, race, BMI (kg/m^2), and number of pregnancies and deliveries. Almost 70% of users of both types of implants were in the age bracket between 20 to 29 years; 50-53% of them were white and 41-46% biracial, while two thirds had a normal BMI of < 25 (Table 2).

Users of Implanon and Jadelle who ever reported pain at insertion site was 16% and 22%, paresthesia was reported by 5.3% and 6%, other complaints (mostly pruritus) by 16.5% and 18.3%, respectively, all of them in a similar proportion. However, hyperpigmentation was reported three fold more frequently among users of Jadelle (23%) as compared to users of Implanon (8%) ($p< 0.0001$) (Fig. 1).

There were no significant differences when the frequency of symptoms was compared at 12 *vs*. 24, *vs*. 36 months of use between both implant systems; however, there was a tendency to a lower frequency of hyperpigmentation among Jadelle users before completing 12 months of use (Fig. 2). Large differences were observed between the proportions of women who reported symptoms in each country, with complaints

reported much more frequently by Dominican women (2 to 7 fold difference) mainly in relation to pain, hyperpigmentation and other signs (Fig. 3).

After the logistic regression model and adjustment by race and BMI, the risk of hyperpigmentation was lower for users of Implanon than for Jadelle users (OR 0.26; 95% CI 0.14-0.48), and for white women than for non-white women (OR 0.34; 95% CI 0.14-0.81). Dominican women reported higher rate of pain complaints than Brazilian women (OR 13.65; 95% CI 5.53-31.66). They also had a higher risk of hyperpigmentation at the implant site than Brazilian women, but it did not reach statistical significance (OR 1.75; 95% CI 0.77-4.01) (Table 3).

Slight loss of subcutaneous fat below the implant area (skin depression) was observed among 10 Jadelle and 5 Implanon users in the Dominican Republic, and the observation was seen mostly after the first year of use. In Brazil, the same effect was observed in 3 users of Implanon and 3 users of Jadelle, all at the 6th month of use and thereafter.

4. Discussion

Our results indicate that the frequency of local signs and/or symptoms among this group of young, non-overweight users of two contraceptive implant systems did not reach ~20% at any time during the 3 years of observation in neither of the two countries. The 36% of Dominican women who complained of pain at insertion was similar to a previous report from the same clinic and from a study in the United States (28.2 and 28%, respectively) in which women were questioned specifically about this symptom [6, 8]. In addition, a Chilean study with Implanon showed a prevalence of pain of 16.8% [9].

We have no obvious explanation for the difference in frequency of pain reported in this study between the clinics in Brazil and in the Dominican Republic. Differences in the rate of complaints reported by women in different clinics have been described [5]. Possible reasons may be the way providers probe the women for answers, differences in awareness, perception and tolerance of adverse events, and differences between clinical settings in the willingness or perceived capacity to complain [5,9-14]. It could also be related to a courtesy bias which makes women more reluctant to report complaints, and may vary from one clinic to another [15].

The percentage of almost 6% of the users of each type of implants who complained of paresthesia or numbness was much lower than in a previous study at the same Dominican clinic [6] when 29% of women had paresthesia-related symptoms. In that study, the 6-capsule implant system was used instead of the reduced number of implants used in the present study, which may explain the difference in the prevalence of the complaint. Another study, which found a similarly higher proportion of women with this complaint, was also done among women using the 6-implant system Norplant and was evaluated only up to 30 days of use [16].

We did not observe a significant increase of complaints of pain and paresthesia related to duration of use, neither did our results support the previous hypothesis [6] that the incidence decreases with longer period of use. The observation of a decrease in the prevalence of pain and paresthesia was from a cross-sectional study carried out in the Dominican Republic, where different women were observed at the various times of use [6]. It is possible that women with fewer side effects tend to use the implants for longer periods of time, giving the wrong impression of a decrease in the prevalence of complaints.

The prevalence of hyperpigmentation was significantly higher among Jadelle than Implanon users and among non-white women. Albeit, this symptom was not reported in other studies, the previous evaluation in the Dominican Republic observed a prevalence of ~36% [6] and was similar to the frequency observed in our study among the subgroup of the Dominicans (36.7%). There are no doubts from the findings of the previous Dominican study [6] and the present one that hyperpigmentation is less prevalent among white women (OR 0.34; 95% CI 0.14-0.81). We do not know why non-white users presented with more hyperpigmentation during use; it was not related to BMI and seems to be related to the amount of melatonin in the skin. Furthermore, it seems that hyperpigmentation is not only related to skin color but also seems to be more frequently associated with LNG-releasing implants than ENG implants, although the number of cases does not allow definitive conclusions.

The fact that the observation of the local side effects was carried out by different observers in two countries may be seen to be a weakness and could be responsible for a sizeable part of the differences observed in the prevalence of signs and symptoms between Brazil and the Dominican Republic. However, the fact that the differences between the two types of implant systems and race was maintained after controlling by country gives further strength to those findings.

An additional strength was the prospective design of the study, with women randomly allocated to two different implant systems. This study confirms that there are no significant differences regarding pain or paresthesia between the 1- or 2-implant systems; however, there was a higher frequency of hyperpigmentation among users with dark skin, while pain was significantly higher among Dominicans than Brazilians. However, one important limitation of our study is the potential limited applicability of

the findings to populations with a higher average BMI (as occurred in other countries like the US) and or higher percentage of black users (as occurred in African countries). Contraceptive implants are in use in many countries with a population with different characteristics than the described in the present study and clinicians must take into account this fact when counseled their population about the local signs or symptoms.

Although our study, did not specifically record the intensity of the symptoms, discontinuation rates can give us an indication of the severity or degree of inconvenience caused by the complaint. In this regard, it should be noted that very few women in this cohort discontinued implant use to local symptoms or signs in the arm. In the Dominican Republic and Brazil only 3/200 and 1/259 users, respectively discontinued due to pain/paresthesia.

The information relating to local symptoms and signs at the implant site should be provided to all potential users of implants as part of good quality of care. Although these complaints seldomly lead to discontinuation of the method, it is still relevant for women to know beforehand. Nevertheless, we do not recommend evaluation of the insertion site at every visit in routine clinical practice in users without spontaneous complaints.

Acknowledgements

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Table 1. Sociodemographic characteristics of the users of both contraceptive implants in Brazil and Dominican Republic

	Brazil		Dominican Republic		
Variable	**N**	**Mean ± SD**	**N**	**Mean ± SD**	**p-value***
Age (years)	259	27.1 ± 5.2	200	24.7 ± 4.3	< 0.0001
Gravidity	259	1.3 ± 1.0	200	2.5 ± 1.3	< 0.0001
Parity	259	1.2 ± 0.9	200	1.9 ± 1.0	< 0.0001
Weight (kg)	249	61.5 ± 9.9	200	58.7 ± 10.3	0.0020
Height (cm)	249	161.0 ± 6.2	200	157.6 ± 6.1	< 0.0001
BMI (kg/m^2)	249	23.7 ± 3.7	200	23.6 ± 3.7	0.8084
Ethnicity					0.7048**
White		216 (84.0%)		20 (10.1%)	
Black		14 (5.4%)		7 (3.5%)	
Biracial		27 (10.6%)		171 (86.4%)	

BMI: body mass index

*Mann-Whitney test; **Fisher exact test.

Table 2. Some sociodemographic characteristics according to the type of implant

	Study group						
	Total		**Implanon**		**Jadelle**		
	N	**(%)**	**N**	**(%)**	**N**	**(%)**	**p-value**
	459		**226**		**233**		
Country							0.7740#
Brazil	259	(56.4)	126	(55.8)	133	(57.1)	
Dominican Republic	200	(43.6)	100	(44.2)	100	(42.9)	
Age (years)							0.0505#
< 20	54	(11.8)	32	(14.2)	22	(9.4)	
20 – 24	183	(39.9)	89	(39.4)	94	(40.3)	
25 – 29	136	(29,6)	56	(24.8)	80	(34.3)	
≥ 30	86	(18.7)	49	(21.7)	37	(15.9)	
Ethnicity							0.2487*
White	236	(51.8)	113	(50.7)	123	(53.0)	
Black	21	(4.6)	7	(3.1)	14	(6.0)	
Biracial	198	(43.5)	103	(46.2)	95	(40.9)	
BMI (kg/m^2)							0.9858*
≤ 24.9	303	(67.5)	149	(67.1)	154	(67.8)	
25 – 29.9	121)	(26.9	61	(27.5)	60	(26.4)	
≥ 30	25	(5.5)	12	(5.5)	13	(5.7)	
Pregnancies							0.6394#
0 -1	203	(44.2)	99	(43.8)	104	(44.6)	
2 -3	206	(44.9)	103	(45.6)	103	(44.2)	
≥ 4	50	(10.9)	24	(10.6)	26	(11.2)	
Parity							0.9572#
0 – 1	252	(54.9)	121	(53.6)	131	(56.2)	
2- 3	185	(40.3)	95	(42.1)	90	(38.6)	
≥ 4	22	(4.8)	10	(4.4)	12	(5.2)	

#Chi-square test; *Fisher exact test

Table 3. Regression model of local signs in relation to different variables; odds ratio adjusted by race and BMI (kg/m²)

	Multiple OR (95% CI)		
	chance of Implanon in relation to Jadelle	**chance of white in relation to non-white women**	**chance of Dominican in relation to Brazilian**
Pain			
Absent	1.00	1.00	1.00
Present	0.69 (0.41 -1.16)	1.41 (0.61 - 3.23)	13.65 (5.53 – 33.663)
Paresthesia			
Absent	1.00	1.00	1.00
Present	0.71 (0.32 – 1.62)	0.48 (0.13 -1.83)	2.19 (0.62 – 7.77)
Others			
Absent	1.00	1.00	1.00
Present	0.82 (0.49 – 1.36)	0.73 (0.33 – 1.61)	4.81 (2.17- 10.64)
Hyperpigmentation			
Absent	1.00	1.00	1.00
Present	0.26 (0.14 – 0.48)	0.34 (0.14 – 0.81)	1.75 (0.77- 4.01)

OR: odds ratio; CI: confidence interval.

Variables in the model: type of implant (Jadelle vs Implanon), race (white/non-white), BMI (kg/m^2; <25/$\geq$25), length of use (in months), and country of residence (Brazil vs the Dominican Republic).

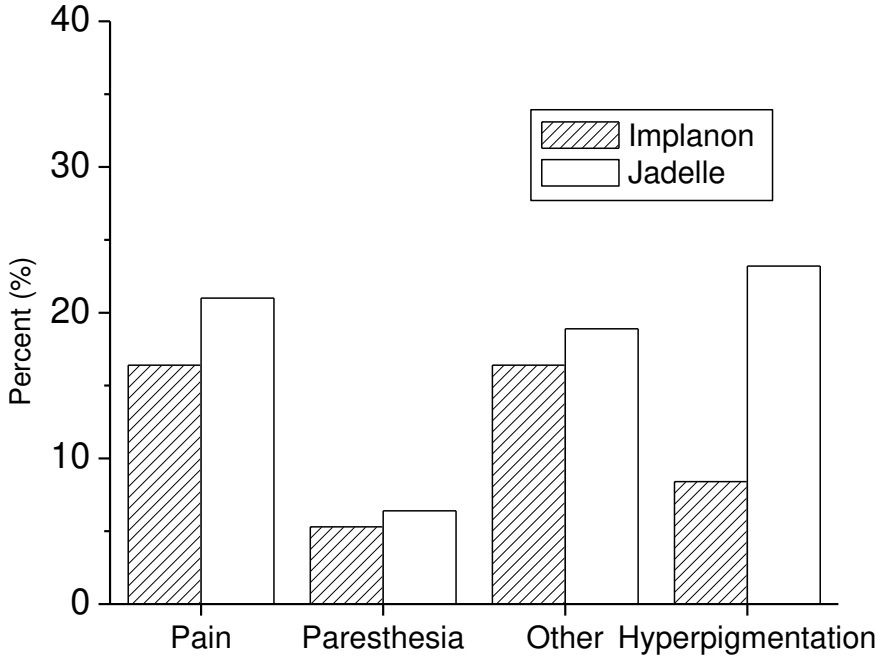

Fig. 1. Frequency of women who ever had a symptom or sign throughout the study.

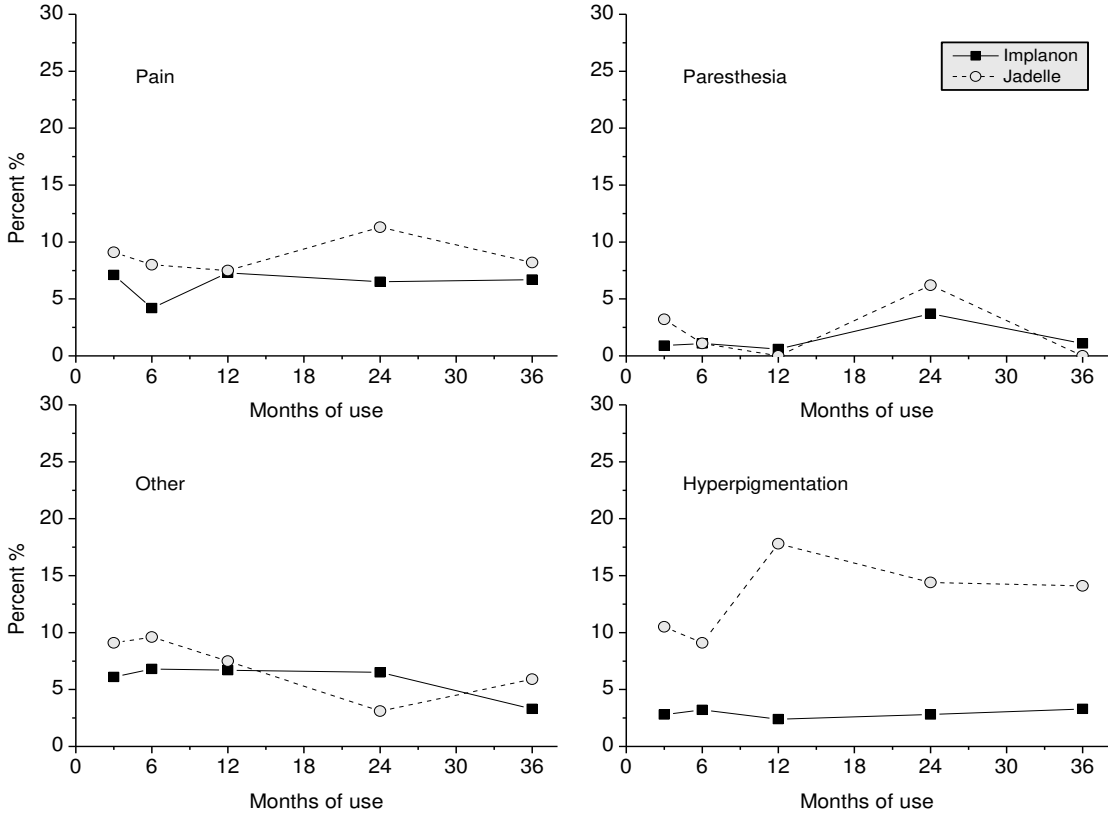

Fig.2. Local signs and symptoms among users of both types of implants through the 36 months of observation.

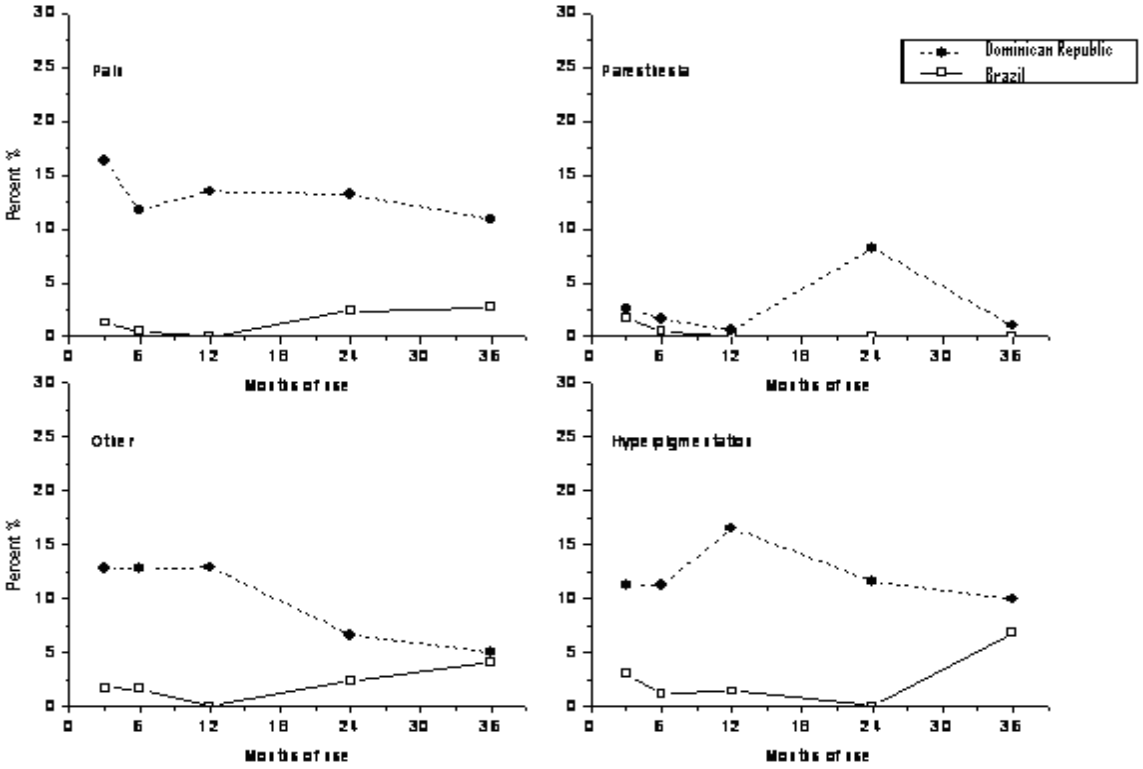

Fig 3. Local signs and symptoms reported by women from Brazil and the Dominican Republic through the 36 months of observation.

3.2. Artigo 2

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Women's evaluation of their satisfaction with two contraceptive implant systems: Implanon® and Jadelle®, and with bleeding patterns

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Running title: User satisfaction with contraceptive implants

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Abstract

***Background*:** Satisfaction with the contraceptive method and bleeding patterns was evaluated in women using two subdermal implants in Campinas, Brazil. ***Study Design*:** Women were randomly assigned to levonorgestrel- (n=120) or etonogestrel-releasing (n=127) implant systems. Satisfaction was evaluated using a specific questionnaire, applied face-to-face at 3 and 6 months and every 6 months thereafter until 36 months. ***Results*:** Analysis of 1,200 questionnaires showed that most users of either implant expressed satisfaction with the method and bleeding patterns at every visit and <15% expressed regret at any time. Almost 70% believed the implant to be beneficial, while 5% thought it harmful. Regarding changes in their sex drive most of the women reported no change at all in their libido and no change in the reported frequency of sexual intercourse. ***Conclusions*:** Although in agreement with previous findings, these results must be interpreted with caution, since these women, unlike the typical clients of a family planning clinic, were participating in a clinical trial and received intense counseling prior to initiation and throughout follow-up. Moreover, the high satisfaction rate may have resulted from dissatisfaction with alternative methods.

Key-words: contraceptive implants; Jadelle®; Implanon®; bleeding patterns; user satisfaction.

1. Introduction

Subdermal implants are one of the most effective, long-lasting and reversible contraceptive methods ever developed, having been used by millions of women since they were first approved [1]. However, it is now well-established that, in general, implants tend to interrupt or disturb bleeding patterns [2], resulting in premature discontinuation in a limited number of cases [3-5]. It is also well-known that counseling constitutes an essential component of women's health care and in contraceptive services it is indeed crucial. If women are not satisfied with their contraceptive method or if they do not consider it to be safe, they may discontinue its use prematurely [6].

Most of the clinical trials with contraceptive implants have reported data on their contraceptive efficacy, safety and side effects, including changes in bleeding patterns. However, although user satisfaction has been evaluated in many studies, it has habitually been shown as a function of continuation rates or according to reasons for discontinuation, based on the fact that discontinuation rates may reflect women's acceptability of a method and/or their perception of risks and their reactions to side effects [7-10]. Most of these studies were conducted with the 6-capsule levonorgestrel (LNG)-releasing system, (Norplant®), and only a few with the new single-rod etonogestrel (ENG)-releasing implant or the 2-rod LNG-releasing implant (Jadelle®), [11].

An increase is expected in the demand for contraceptive implant systems worldwide because their cost-effectiveness is advantageous in government family planning programs [12] as a consequence of the long-term use offered by the method [3,13]. In recent years, in addition to the 6-capsule LNG-releasing implant, a second generation of implants was introduced including the 2-rod LNG-releasing system and the single capsule ENG-releasing implant. However, few studies have been conducted on user

satisfaction with these two more recent types of implants [14] and moreover, no studies have compared satisfaction between users of these two models of subdermal implantable systems. Therefore, the objectives of this study were to evaluate satisfaction with the method and with the new bleeding patterns in users of two types of subdermal implants, the LNG- and ENG-releasing systems.

2. Material and methods

This prospective study was carried out between December 2003 and April 2007 at the Human Reproduction Unit, Department of Obstetrics and Gynecology, University of Campinas (UNICAMP), Brazil. Institutional Review Board approval was obtained and all volunteers signed an informed consent form prior to enrollment in the study.

A total of 247 women, who were participating in a multicenter randomized clinical trial of two implantable contraceptives for women, a LNG- releasing implant (Jadelle®, Bayer Schering Pharma Oy, Turku, Finland) and an ENG-releasing implant (Implanon®, Organon, Os, The Netherlands), coordinated by the Special Programme of Research, Development and Research Training in Human Reproduction, Department of Reproductive Health and Research of the World Health Organization (WHO), were included in the study.

2.1. Criteria for the selection of subjects and procedures

Women 18 to 44 years of age requesting implantable contraceptives were admitted to the study if they complied with the inclusion criteria of being in good general health and, if lactating, that delivery had taken place at least 6 weeks previously. Exclusion criteria consisted of: breastfeeding an infant less than 6 weeks old; systolic blood pressure >159 mmHg or diastolic pressure >99 mmHg; venous thromboembolism; current

ischemic heart disease; recovering from a stroke; unexplained vaginal bleeding; a personal history of breast cancer; women with known cervical cancer at the time of screening; active viral hepatitis; severe (uncompensated) cirrhosis of the liver; benign or malignant liver tumor, and current use of rifampicin or griseofulvin, or anticonvulsants [3].

Women who requested an implant and were willing to accept the model randomly allocated to them were included in the study. The randomization procedure was prepared by the WHO. Sealed envelopes indicating the designated implant system were sent to the clinic. These envelopes were opened at the time of enrollment, after confirming that all inclusion and exclusion criteria had been met. All insertions were performed within the first 5 days of the menstrual cycle, under local anesthesia, subdermally on the inner side of the upper nondominant arm, 4 cm above the elbow, in the groove between the biceps and triceps (sulcus bicipitalis medialis). Physicians inserted Implanon® with the pre-loaded packaged disposable trocar, while Jadelle® was inserted using a 10-gauge trocar (Becton Dickinson). After insertion, all women were scheduled to attend visits at 3, 6, 12, 18, 24, 30, and 36 months post-insertion.

At each visit, all women answered a questionnaire in which they were asked whether they were satisfied with their contraceptive implant, and a visual analogue scale (VAS) graded into 5 categories (very satisfied, satisfied, moderately satisfied, dissatisfied, and very dissatisfied) was applied [15]. The same 5-grade VAS and a simple descriptive satisfaction scale were used to obtain information on the characteristics of each woman's bleeding pattern at the time of the interview, her satisfaction with the method or regret at having opted for it, any benefits or disadvantages perceived by the woman, satisfaction with the new bleeding pattern, any inconvenience experienced in using the method, any change in sex drive, the opinion of the woman's partner with respect to the implant,

whether she would recommend the method to other women, and whether she wished to continue using the method. All data were recorded in case report forms specifically designed for this study.

2.2. Statistical analysis

The type of implant was treated as an independent variable. The opinion of the user with respect to her satisfaction, regret, perceived benefits or disadvantages, any inconveniences experienced with use of the method, any changes in sexual behavior, the opinion of the woman's partner with respect to the implant, whether she would recommend it to other women, and whether she wished to continue using it were treated as dependent variables and were analyzed for each visit. In addition, if reported at all by a woman at any time during the 36 months of observation. Fisher's exact test and Yates χ^2 test were used to compare the different variables, as appropriate. Also, all variables were evaluated as an overall variable in which the worst classification recorded at any of the visits was the one taken into consideration. In addition, a Cochran test was applied to test the trend through the 7 visits regarding the different domains in satisfaction with the implant. However, due to the small number of cases in visits 4 and 5 we tested using two models: the model 1 with visits 1 to 3 and the model 2 with visits 1, 2, 3, 6 and 7. Also, a multivariate analysis was performed in order to test if any variations occurred between the two types of implant. All values are expressed as means ± standard deviation of the mean (S.E.M.) and significance level was established at $p< 0.05$.

3. Results

An overall data set was obtained from 120 users of Implanon® and 127 users of Jadelle®; however, the number of observations was different at each evaluation time point and numbers declined over time due to premature discontinuations and loss to follow-up. Number of subjects was lower at the visit 4 and 5 than the other visits probably because these visits were coincident with summer holiday (visit 4) and winter school break (visit 5). The age of participants was 27.1 ± 5.2 years (mean ± SD); mean number of pregnancies was 1.3 ± 1.0 and mean parity was 1.2 ± 0.9. Mean body mass index (BMI; kg/m^2) was 23.7 ± 3.7. Most of the women (84%) were white (data not shown).

Table 1 shows the responses of the women with respect to their satisfaction with the implant at the different follow-up visits and in accordance with the type of implant system. The proportion of women who declared that they were very satisfied or satisfied with the method ranged from 81,3% to98.1% and from 86,8% to 97.4% , in Implanon® and Jadelle® users, respectively. When the satisfaction rate were evaluated as an overall variable in which the worst classification recorded at any of the visits was the one taken into consideration, 80.0% of Implanon® users and 81.1% of Jadelle® users stated that they were satisfied or very satisfied with the method. The analysis of satisfaction for visits 1, 2 and 3 showed significant differences through the time only for Jadelle users ($p< 0.033$). However, the same analysis for visits 1, 2, 3, 6 and 7 showed significant difference only for Implanon users ($p< 0.010$). Nevertheless, the multivariate analysis did not show any significant difference between both implant systems and satisfaction of the women through the study (data not show).

Evaluation throughout the different follow-up visits showed that 2.6-18.8% of Implanon® users and 0.9-10.0% of Jadelle® users stated that they regretted having opted

for the study method. The percentage of women who expressed regret at having chosen the method at any visit was 15.1% and 9.4% for Implanon® and Jadelle® users, respectively without significant differences (Table 2).

The women were also asked at each visit whether they believed that use of the contraceptive implant offered any benefit to them or whether they believed it was causing them harm. The women who stated that they believed that they benefitted from using the method ranged from 76.9% to 93.3% and 73.0% to 90.5% of Implanon® and Jadelle® users, respectively. When the women's opinions were evaluated as an overall variable in which the worst classification recorded at any of the visits was the one taken into consideration, 68.7% and 62.0% of Implanon® and Jadelle® users, respectively, stated that they believed they benefitted from the method (Table 3).

Regarding the women's response to changes in their bleeding patterns following insertion of the implant, the percentage who stated that they were very satisfied or satisfied ranged from 68.8% to 85.8% and 64.8% to 83.2% of Implanon® and Jadelle® users, respectively. When the women's opinions were evaluated as an overall variable in which the worst classification recorded at any of the visits was the one taken into consideration, 47.3% and 50.5% of Implanon® and Jadelle® users, respectively, stated that they were very satisfied or satisfied (Table 4). However, around 25% of users in both groups complained about their bleeding pattern and ~35% reported other complaints (data not shown).

The women's answers with respect to changes in their sex drive, if any, after insertion of the contraceptive implant indicated an improvement in a range of 19.2-40.4% and 13.9-33.3% of Implanon® and Jadelle® users, respectively. However, when we take into account all the answers through the entire duration of the study only 3.3%

and 3.9% of women in the Implanon® and Jadelle® groups, respectively, reported an improvement. Nevertheless, 72.7% and 75.8% of Implanon® and Jadelle® users, respectively, reported no change at all in their libido (Table 5). There was no change in the reported frequency of sexual intercourse during use of the implants (data not shown).

Overall, 62.8% of Implanon® users and 57.5% of Jadelle® users declared that their partner approved of this contraceptive method. Moreover, at the end of the study both groups of implants stated that they would recommend the method to a friend or relative (data not shown in tables).

4. Discussion

Our results showed that most of the women using either one of the two contraceptive implant systems were satisfied with the method at all the different follow-up visits and no more than ~15% of women in either of the two groups regretted having chosen the method at any given time during the 3 years of observation. Furthermore, ~70% of the women declared that use of implants conferred benefits, while only ~5% believed that it was in some way detrimental to them. These results are in agreement with a UK-based study [11] in which 82% of women using the LNG-releasing implant reported the experience as positive.

These results must, nevertheless, be interpreted with caution. The women participating in this trial are subjects enrolled in a research clinical trial, not the typical clients of a family planning (FP) clinic and they received intense counseling prior to insertion of the implant and throughout the duration of the study at each visit. Also, we cannot ignore the possibility that the high satisfaction rates found in this study were a consequence of dissatisfaction with the other methods available [16].

Counseling is an important aspect of FP, and women's choice and satisfaction depend on the counseling provided [11]. This is particularly true in Brazil where contraceptives are provided free of charge to women within the public health care network, as also occurs in the UK [11]. Consequently, women are more likely to choose a contraceptive based on the characteristics of the method and their reproductive needs and not as a function of cost. However, this situation also means that discontinuation and initiation of a new method is also not determined by the cost.

Continuation and user satisfaction are influenced by side effects [13]. In a US-based study [17] with Norplant implants users, 70% described changes in bleeding patterns and weight gain and headaches were the most frequently reported side effects. At the one year follow-up, ~11% of women decided to discontinue. Less satisfied women and those who reported more side effects were women who discontinued the method early.

A UK-based study [18] with Implanon users showed that health care providers, friends and relatives were the main sources of information regarding the contraceptive implant. Despite the occurrence of the same previously reported side effects [17] the experiences of most of the responders were favorably with the method, reflecting users' satisfaction. The fact that the women in this study stated that they would recommend the method to a friend or relative is important, since this is one of the important sources of information available to women [18-20].

Regarding satisfaction with the characteristics of their new bleeding patterns during use of the implant, ~70-85% of users of both types of implant declared that they were satisfied or very satisfied with their bleeding pattern. Bleeding irregularities are the most common side effects in users of contraceptive implants and represent the most common reason for early discontinuation [5,11,13,17,18,21]. However, this side effect

does not affect post-insertion acceptability of the method and is related to counseling prior to insertion and during use. Counseling is the most important factor in a woman's acceptability of bleeding irregularities during contraceptive use [11].

In addition, it has been showed that although bleeding disturbances is common in users of contraceptive implants, the average total blood loss is similar to or less than that experienced by normally menstruating women [22] and the majority of studies showed no significant changes in hemoglobin levels [23]. One of our limitations are that we did not use menstrual diary and hemoglobin measurement [23] which would provide a more accurate picture of bleeding pattern. The counseling given through the years of the study may have positively affected satisfaction rates as observed previously [24,25].

In addition, 72.7% and 75.8% of users of Implanon® and Jadelle®, respectively, reported no change in their sex drive or in the frequency of sexual intercourse following implant insertion. Studies on sexuality during implant use are sparse in the literature. Only one Pakistani study, has evaluated the sexuality of Norplant users. They reported that only 7.7% of users mentioned changes in their sexual behavior, including a reduction in libido, pain or bleeding during sexual intercourse and being afraid to engage in sexual activities [26]. Nevertheless, the small sample size in that trial does not permit comparison with the findings of the present study.

Availability of data on this issue may, however, be important, since information on the effect of implants on sexuality could be included in the counseling provided to women prior to initiation of the method, considering that if the implant system was found to negatively affect sexuality, this would constitute an important factor in the acceptability of the method. However, the possibility of a courtesy bias or that the women may have been embarrassed when questioned on this issue cannot be excluded.

These data may be related to the fact that 62.8% and 57.5% of users of Implanon® and Jadelle®, respectively, declared that their partner approved their use of the method.

Contraceptive implants have been used by millions of women [27]. Use of the two new implant systems Implanon® and Jadelle® is growing rapidly due to long-term duration, high efficacy, safety, reversibility, ease of insertion and removal, and low rate of side effects. However, it is necessary to take into account women's attitudes, perceptions and satisfaction with the method and with their new bleeding pattern in order to reduce early discontinuation and improve continuation rates.

In conclusion, satisfaction rate was high with both implant systems and similar to previous reports with Norplant implants [28]. In addition, satisfaction with the new bleeding patterns was also high. However, among other limitations, these women are participants of a clinical trial, and satisfaction or dissatisfaction with the contraceptive method may not reflect what actually occurs during general use [29]. Although contraception is available at no cost in public health care services in Brazil, implants are unavailable throughout most of the public health care network and offering a novel contraceptive method to women unable to pay for it in the private sector could have affected their satisfaction with the method [30,31].

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Table 1. Women's response with respect to their satisfaction with the implant

Time of evaluation and type of implant	N		Women´s responses (%)						p-value#
			Very satisfied/satisfied		Moderately satisfied		Very dissatisfied/ dissatisfied		
	I¶	J¥	I	J	I	J	I	J	
Visit 1	115	117	94.8	97.4	3.5	1.7	1.8	0.9	0.611
Visit 2	105	102	98.1	97	0.0	2.0	1.9	1.0	0.190
Visit 3	75	82	96	96.3	2.7	2.4	1.3	1.2	0.289
Visit 4	16	18	81.3	94.5	6.3	5.6	12.9	0.0	0.281
Visit 5	38	38	84.2	86.8	5.3	10.5	10.6	2.6	0.489
Visit 6	52	50	86.5	88.0	9.6	12.0	3.8	0.0	0.112
Visit 7	58	64	91.3	89	5.2	9.4	3.4	1.6	>0.999
Overall evaluation*	120	127	80	80.4	8.3	15.0	11.7	4	0.035

I¶ Implanon users

J¥ Jadelle users

*Evaluation based on the patient's worst classification at any of the visits

#Comparison of categories: very satisfied vs. other (Yates χ^2 test for 2 x 2 tables)

Table 2. Percentage of users who regretted having selected the method at different visits and according to the type of implant

	Type of implant			
Visit		**Implanon®**	**N**	**Jadelle®**
Visit 1	15	2.6	117	0.9
Visit 2	4	5.8	103	1.9
Visit 3	5	4.0	82	1.2
Visit 4	6	18.8	18	5.6
Visit 5	8	2.6	37	2.7
Visit 6	2	3.8	50	10.0
Visit 7	8	6.9	64	4.7
Overall evaluation*	20	15.1	127	9.4

*Expressed regret at having chosen the method during at least one follow-up visit.

Table 3. Distribution of users according to perceived benefits or harm associated with the use of the implant, by visit and type of implant

Time of evaluation and type of implant	N		Women´s responses (%)						p-value#
			Benefits		Equal benefits and harm		Harm		
	I[¶]	J[¥]	I	J	I	J	I	J	
Visit 1	114	116	89.5	90.5	6.1	6.0	0.9	0.9	0.965
Visit 2	105	104	93.3	87.5	4.8	10.6	1.9	1.0	0.231
Visit 3	75	81	90.7	87.7	9.3	9.9	0.0	2.5	0.729
Visit 4	16	18	81.3	83.3	6.3	16.7	12.5	0.0	>0.999
Visit 5	38	37	84.2	73.0	15.8	24.3	0.0	0.0	0.365
Visit 6	52	47	76.9	78.7	23.1	19.1	0.0	0.0	>0.999
Visit 7	54	60	79.6	75.0	16.7	18.3	0.0	3.3	0.715
Overall evaluation*	115	121	68.7	62.0	23.5	28.1	4.3	5.0	0.344

I[¶] Implanon users

J[¥] Jadelle users

#Comparison of categories: Benefits vs. other (Yates χ^2 test for 2 x 2 tables)

*Evaluation based on the worst response given at any visit.

Table 4. Women's response regarding the characteristics of their new bleeding patterns, according to visit and type of implant

Time of evaluation and type of implant	N		Women´s responses (%)						p-value#
			Very satisfied/satisfied		Moderately satisfied		Dissatisfied		
	I[¶]	J[¥]	I	J	I	J	I	J	
Visit 1	112	115	85.8	80	8.0	12.2	5.9	7.9	0.212
Visit 2	103	104	84.5	77.8	12.6	13.5	2.9	8.6	0.534
Visit 3	75	81	74.7	81.4	16.0	12.3	9.3	6.2	0.400
Visit 4	16	18	68.8	83.4	12.5	16.7	12.5	6.3	0.693[§]
Visit 5	38	37	68.4	64.8	18.4	21.6	13.2	13.5	0.404
Visit 6	52	46	65.4	71.7	21.2	13.0	13.4	15.2	0.284
Visit 7	54	61	70.4	80.4	20.4	4.9	9.3	14.7	0.730
Overall evaluation*	112	119	47.3	50.5	26.8	25.2	25.9	24.4	>0.999

I[¶] Implanon users

J[¥] Jadelle users

*Evaluation based on the worst classification made at any of the visits

#Comparison of categories: very satisfied vs. other (Yates χ^2 test for 2 x 2 tables)

[§]Fisher's exact test

Table 5. Distribution of users' responses with respect to sex drive and according to visit and type of implant

Time of evaluation and type of implant	N		Women´s responses (%)				p-value#
			Improved		Unchanged		
	I[¶]	J[¥]	I	J	I	J	
Visit 1	112	116	34.8	31.9	58.9	61.2	0.743
Visit 2	104	104	19.2	15.4	76.9	74.0	0.582
Visit 3	75	79	14.7	13.9	78.7	82.3	>0.999
Visit 4	16	18	31.3	33.3	50.0	61.1	>0.999
Visit 5	38	37	31.6	24.3	57.9	59.5	0.658
Visit 6	52	46	40.4	32.6	40.4	52.2	0.557
Visit 7	56	61	25.0	31.1	60.7	63.9	0.594
Overall evaluation*	120	127	3.3	3.9	72.7	75.8	>0.999[§]

I[¶] Implanon users

J[¥] Jadelle users

*Evaluation based on the worst classification made at any of the visits

#Comparison of categories: improved vs. other (Yates χ^2 test for 2 x 2 tables)

[§]Fisher's exact test

4. Discussão

Diante do número crescente de usuárias de implantes contraceptivos em todo o mundo, estudos clínicos multicêntricos randomizados são cada vez mais importantes para que provedores de saúde disponibilizem esse método contraceptivo com segurança e eficácia.

A segunda geração de implantes disponível trouxe vantagens com relação à sua inserção. Entretanto, estudos relacionados aos efeitos colaterais, satisfação e eficácia são necessários para que sua ampla divulgação seja feita e seu uso cada vez mais difundido como opção às mulheres de um método seguro, cômodo, eficaz e de longa duração.

No presente estudo prospectivo, não se observaram mudanças significativas na incidência de complicações durante o uso dos métodos. Durante todo o seguimento do estudo as mulheres estavam satisfeitas e aproximadamente 70% das usuárias sentiram-se beneficiadas com este tipo de método.

Os resultados deste estudo indicaram que os sinais e sintomas no local de inserção do implante subdérmico não chegaram a 20% nos dois países em que o

estudo foi realizado. Apenas cerca de 15% das mulheres nos dois diferentes grupos de implantes lamentaram ter escolhido o método durante os três anos de observação. Além disso, aproximadamente 70% das usuárias sentiram-se beneficiadas com este tipo de método, enquanto apenas 5% acreditavam que de alguma forma foi prejudicial a elas.

No primeiro estudo foi observado que quase uma de cada 5 mulheres do total da coorte relataram dor no local de inserção e não houve diferenças significativas entre as usuárias de Implanon® ou Jadelle®. Parestesia ou adormecimento foi observado em uma taxa semelhante entre usuárias de ambos os tipos de implantes e ocorreu em uma taxa muito baixa (5,9%) das usuárias.

No entanto, ambos os sintomas foram muito mais frequentemente relatados por mulheres dominicanas do que brasileiras. A diferença nas taxas de queixas relatadas por mulheres em diferentes clínicas poderia estar relacionada à forma com que os profissionais interrogam as mulheres, diferenças de sensibilidade, percepção e tolerância de eventos adversos e diferenças entre as usuárias das clínicas, como já foi relatado em estudos prévios (1, 14, 26, 27). O preconceito ou o viés de cortesia poderia ser possível, pois tornaria as mulheres mais relutantes em expor as queixas (25).

A hiperpigmentação ocorreu em cerca de 20% das usuárias e foi significativamente maior entre usuárias não brancas de Jadelle® do que em usuárias de Implanon®. Não há qualquer dúvida das conclusões do estudo anterior realizado na mesma clínica da República Dominicana (1) e do presente

estudo com relação a este sinal, mas não se sabe por que, especificamente, este grupo apresentou mais hiperpigmentação e parece estar relacionada à quantidade de melanina da pele e/ou ao esteróide liberado pelo implante contraceptivo e, neste caso, o LNG teria mais influência do que o ENG, embora o número de casos não possa permitir conclusões definitivas.

O primeiro estudo tem limitações. Foi realizado em dois países, com diferentes observadores, o que poderia interferir nos resultados. No entanto foi prospectivo, com dois modelos diferentes de implantes alocados aleatoriamente entre as usuárias. As queixas na sua maioria são amenas e não levam à descontinuação do método. Assim, pode-se concluir que não é necessário avaliar o local de inserção em cada visita de usuárias que não têm queixas, mas as usuárias devem ser informadas antecipadamente sobre possíveis ocorrências de sinais e sintomas no local de inserção do implante, já que isto indicaria uma boa qualidade do atendimento. Nas clínicas de Planejamento Familiar (PF) orientação é um aspecto importante, pois a escolha do método e a satisfação obtida dependem em grande parte desta orientação (28).

No segundo estudo, os resultados foram muito positivos com altas porcentagens de satisfação das usuárias. Estes resultados estão de acordo com o de estudo prévio realizado no Reino Unido (28), em que 82% das mulheres usando o implante liberador de LNG relataram sua experiência de forma positiva.

No Brasil, os métodos contraceptivos são fornecidos gratuitamente às mulheres na rede básica de saúde pública como também ocorre no Reino

Unido (28). Consequentemente, a escolha do contraceptivo é baseada nas características do método e nas necessidades reprodutivas do casal/mulher e não em função do custo. Isso leva a crer que a interrupção de um método e o início de outro não são determinados pelo seu preço. Embora a contracepção esteja disponível gratuitamente nos serviços de saúde pública os implantes não estão, e oferecer um método anticoncepcional para mulheres incapazes de pagar por ele poderia ter afetado sua satisfação com o método (29).

Estas mulheres eram participantes de um ensaio clínico e satisfação ou insatisfação com o método anticoncepcional poderiam não refletir o que realmente ocorre durante a utilização geral em clinicas de PF (30). Elas receberam orientação intensa antes da inserção do implante e durante toda a duração do estudo, recebendo informações e orientações sobre os efeitos colaterais e outras questões relacionadas ao uso de implantes em cada visita. A insatisfação com os outros métodos contraceptivos disponíveis poderiam ter causado elevadas taxas de satisfação observadas neste estudo (31).

As fontes de informação sobre os métodos anticoncepcionais geralmente provêm de profissionais de saúde, amigos ou parentes e a opinião destas pessoas interfere na escolha do método. Um estudo realizado no Reino Unido (32), com usuárias de Implanon® que responderam a um questionário, confirmou este dado. Apesar dos efeitos colaterais citados como sangramento irregular, ganho de peso, oscilações de humor e dor de cabeça estarem presentes neste estudo, a maioria das usuárias mostrou-se favorável ao método quando comparado a outros métodos anticoncepcionais, refletindo a satisfação.

Neste estudo, a elevada taxa de satisfação com o método e a baixa percentagem de mulheres que se arrependeram de ter optado por ele podem refletir o fato que, em geral, as mulheres confiam em um método que é bem conhecido e foi recomendado por amigos, parentes ou vizinhos (33). A satisfação das usuárias influi na aceitação do método como já foi claramente demonstrado (34).

Sangramento irregular é um dos efeitos colaterais mais comuns em usuárias de métodos contraceptivos contendo apenas progestágenos, incluindo os implantes, e representam a maior causa de descontinuação precoce do método (11, 22, 26, 28, 32, 35). Entretanto, este efeito colateral não afeta de forma substancial a aceitabilidade pós-inserção e está fortemente relacionada ao aconselhamento prévio à inserção e durante o uso do método, o que deixa claro porque é tão alta a porcentagem de usuárias que toleram estes efeitos colaterais. O aconselhamento é o fator mais importanre na aceitabilidade do sangramento irregular pelas usuárias durante o uso do método e achados prévios de outro estudo realizado com o Norplant® no Reino Unido (28) confirmaram estes resultados.

Neste estudo, a satisfação não foi afetada pelas novas características do padrão menstrual. Considerando todas as respostas obtidas ao longo do estudo, aproximadamente 50% das usuárias de ambos os métodos declararam estar satisfeitas ou muito satisfeitas.

As alterações menstruais tão comuns entre usuárias de implantes contraceptivos não resultaram em uma alteração na quantidade de sangue perdido

quando comparado ao do fluxo menstrual normal (36). A maioria dos estudos mostrou que não ocorre alteração significativa nos níveis de hemoglobina, mesmo naquelas que tiveram seus implantes removidos devido ao sangramento menstrual imprevisível (37).

Sabe-se que o uso de calendário menstrual e a dosagem de hemoglobina poderiam proporcionar um perfil mais acurado das alterações menstruais (37), o que constitui um fator limitante neste estudo. Entretanto, o objetivo deste foi avaliar a opinião da usuária com relação às alterações do padrão menstrual. O aconselhamento realizado anteriormente à inserção do método, e durante todo o seguimento, pode ter afetado de forma positiva as taxas de satisfação, uma vez que os efeitos esperados podem ter sido mais bem tolerados.

Na coorte atual, a satisfação das mulheres com o novo padrão menstrual parece estar relacionada a uma combinação de diferentes fatores, tais como a eficácia, a facilidade de uso e proteção em longo prazo, o que poderia justificar a taxa de satisfação elevada com os diferentes sistemas desde o início deste estudo.

Além disso, a maioria das mulheres nos dois grupos estudados não referiu alteração na atividade sexual após a inserção do implante. Na literatura são poucos os estudos sobre sexualidade durante o uso de implantes. Dados referentes a alterações na atividade sexual devem ser melhor investigados.

As usuárias devem saber da possibilidade de ocorrência dessas alterações durante o aconselhamento prévio à inserção, pois a tolerabilidade seria maior na eventualidade da ocorrência desta queixa. No entanto, não se pode excluir o

viés de cortesia, uma vez que as pacientes poderiam se sentir constrangidas ao serem questionadas sobre sua atividade sexual. Estes dados podem estar relacionados ao fato de que 62,8% e 57,5% das usuárias de Implanon® e Jadelle®, respectivamente, declararam que seu parceiro aprovou a utilização deste método anticoncepcional.

Introduzir estes métodos em um programa de PF deve levar em conta a atitude das mulheres com relação à percepção e satisfação com o método e com seus efeitos colaterais. Esta informação é importante para melhorar as taxas de adesão ao método e reduzir a retirada precoce, visto que seu custo é razoavelmente elevado quando comparado a outros métodos, e isto poderia interferir de forma negativa na adesão desta nova geração de implantes por provedores de saúde.

Os implantes anticoncepcionais são aprovados em mais de 60 países e foram utilizados por milhões de mulheres em todo o mundo (38). A utilização desta nova geração de implantes está crescendo rapidamente em função da sua duração prolongada, alta eficácia, segurança, reversibilidade, facilidade de inserção e remoção e baixa taxa de efeitos colaterais.

5. Conclusões

- Os sinais e sintomas observados no local de inserção do implante durante o período de 3 anos foram, respectivamente, para Implanon® e Jadelle®: dor 16,0% e 22,0%; adormecimento 5,3% e 6,0%; hiperpigmentação 23,0% e 85; prurido 16,5% e 18,3%. Retração foi observada em oito usuárias de Implanon® e 13 usuárias de Jadelle®.

- Não houve diferenças significativas entre os implantes nos sinais e sintomas observados no local da inserção quando comparados aos 12, 24 e 36 meses.

- Houve menor tendência à hiperpigmentação entre as usuárias de Jadelle® após 12 meses de uso. A hiperpigmentação foi menor entre as usuárias de Implanon® do que em usuárias de Jadelle®.

- As taxas de satisfação foram altas com os dois métodos (Implanon® 80% e Jadelle® 81,1%) e não houve diferença significativa entre a satisfação quando os dois implantes foram comparados.

- A satisfação não foi afetada pela mudança do padrão de sangramento.

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7. Anexos

7.1. Anexo 1 – Parecer do CEP

UNICAMP

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cep@head.fcm.unicamp.br

CEP, 17/09/02
(Grupo I)

PARECER PROJETO: N° 385/2002

I-IDENTIFICAÇÃO:

PROJETO: **"PROJETO MULTICÊNTRICO, ALEATÓRIO DE DOIS MODELOS DE IMPLANTES CONTRACEPTIVOS PARA MULHERES, JADELLE E IMPLANON".**
PESQUISADOR RESPONSÁVEL: Carlos Alberto Petta
INSTITUIÇÃO: Departamento de Tocoginecologia
APRESENTAÇÃO AO CEP: 05/09/2002

II - OBJETIVOS

Os principais objetivos deste estudo aleatório são: 1) Comparar as taxas cumulativas anuais e até 3 anos de continuação do método Jadelle e Implanon; 2) Comparar a eficácia contraceptiva de Jadelle e Implanon; 3) Comparar a incidência de efeitos adversos entre mulheres usando implantes contraceptivos e mulheres usando um método contraceptivo não-hormonal (DIU com cobre); e 4) Comparar os níveis de hemoglobina nos três grupos em estudo.

III - SUMÁRIO

Estudo multicêntrico internacional, a ser simultaneamente desenvolvido em 4 países desenvolvidos e 8 países em desenvolvimento, tendo como patrocinador a OMS, com duração de 3 anos, aleatório, comparando a eficácia contraceptiva e a aceitabilidade entre os implantes contraceptivos Jadelle e Implanon em 2400 mulheres.

IV - COMENTÁRIOS DOS RELATORES

Estudo multicêntrico internacional com relação risco/benefício favorável. O desenho do estudo é adequado, sendo os critérios de inclusão e exclusão claros. Os procedimentos para inserção dos implantes e DIU estão discritos em pormenores, bem como o seguimento das voluntárias durante o período de estudo. As mulheres que tiverem implante de DIU serão informadas sobre os riscos de aborto no primeiro e segundo trimentre e, também, o risco de parto prematuro caso o DIU não possa ser removido no primeiro trimestre da gestação. Os principais problemas antecipados estão claros bem como

as suas soluções. Os possíveis questionamentos éticos estão colocados de forma adequada no projeto. Haverá controle, auditoriais ou inspecções dos membros da OMS. A descrição do orçamento é satisfatória. As orientações a serem fornecidas às voluntárias estão dispostas nos anexos do projeto, bem como riscos benfícios e desconfortos. Os Termos de Consentimento estão em acordo com as Resoluções 196/96 e 251/97.

V - PARECER DO CEP

O Comitê de Ética em Pesquisa da Faculdade de Ciências Médicas da UNICAMP, após acatar os pareceres dos membros-relatores previamente designados para o presente caso e atendendo todos os dispositivos das Resoluções 196/96 e 251/97, bem como ter aprovado o Termo do Consentimento Livre e Esclarecido, assim como todos os anexos incluídos na Pesquisa, resolve aprovar sem restrições o Protocolo de Pesquisa supracitado.

VI - INFORMAÇÕES COMPLEMENTARES

O sujeito da pesquisa tem a liberdade de recusar-se a participar ou de retirar seu consentimento em qualquer fase da pesquisa, sem penalização alguma e sem prejuízo ao seu cuidado (Res. CNS 196/96 – Item IV.1.f) e deve receber uma cópia do Termo de Consentimento Livre e Esclarecido, na íntegra, por ele assinado (Item IV.2.d).

Pesquisador deve desenvolver a pesquisa conforme delineada no protocolo aprovado e descontinuar o estudo somente após análise das razões da descontinuidade pelo CEP que o aprovou (Res. CNS Item III.1.z), exceto quando perceber risco ou dano não previsto ao sujeito participante ou quando constatar a superioridade do regime oferecido a um dos grupos de pesquisa (Item V.3.).

O CEP deve ser informado de todos os efeitos adversos ou fatos relevantes que alterem o curso normal do estudo (Res. CNS Item V.4.). É papel do pesquisador assegurar medidas imediatas adequadas frente a evento adverso grave ocorrido (mesmo que tenha sido em outro centro) e enviar notificação ao CEP e à Agência Nacional de Vigilância Sanitária – ANVISA – junto com seu posicionamento.

Eventuais modificações ou emendas ao protocolo devem ser apresentadas ao CEP de forma clara e sucinta, identificando a parte do protocolo a ser modificada e suas justificativas. Em caso de projeto do Grupo I ou II apresentados anteriormente à ANVISA, o pesquisador ou patrocinador deve enviá-las também à mesma junto com o parecer aprovatório do CEP, para serem juntadas ao protocolo inicial (Res. 251/97, Item III.2.e)

Relatórios parciais e final devem ser apresentados ao CEP, de acordo com os prazos estabelecidos na Resolução CNS-MS 196/96.

Atenção: Projetos de Grupo I serão encaminhados à CONEP e só poderão ser iniciados após Parecer aprovatório desta.

VII - DATA DA REUNIÃO

Homologado na IX Reunião Ordinária do CEP/FCM, em 17 de setembro de 2002.

Prof. Dr. Sebastião Araújo
PRESIDENTE do COMITÊ DE ÉTICA EM PESQUISA
FCM / UNICAMP

7.2. Anexo 2 – Formulário do Artigo 1

FORMULÁRIO SOBRE EFEITOS ADVERSOS NA ÁREA DO IMPLANTE

INICIAIS: Nº DO PF.: Nº NO ESTUDO:

COR DA PELE: BRANCA ( ) NEGRA ( ) PARDA ( ) AMARELA ( )

TIPO DE IMPLANTE: DATA INSERÇÃO: ____/____/_____ TEMPO DE USO:

(em meses):

PESO: ALTURA: IMC: IDADE:

COD.	Possíveis Eventos	NÃO	SIM
1.0	TEM TIDO MOLESTIA NO BRAÇO?		
1.1	DOR?		
1.2	ADORMECIMENTO?		
1.3	DOR EM AGULHADAS?		
1.4	FORMIGAMENTO?		
2.1	HIPERPIGMENTAÇÃO SOBRE O IMPLANTE		
2.2	HIPERPIGMENTAÇÃO NA ÁREA		
2.3	HIPOPIGMENTAÇÃO		
3.0	AFUNDAMENTO NA ÁREA		
4.0	OUTRO		

Nome da Entrevistadora: _____ Data_____/_____/_____

7.3. Anexo 3 – Formulário do Artigo 2

Questionário Visita de Seguimento

Título: Avaliação do padrão de sangramento e satisfação das usuárias de dois tipos de implantes contraceptivos

Nome:_____

N° do PF: ☐☐☐☐☐

Data da visita: ____/____/____

Meses de uso:☐☐

MAC: ( )Implanon ( )Jadelle ( )DIU

Número ☐☐☐-☐

A seguir serão realizadas algumas perguntas sobre a sua experiência com o método que está usando

1-Qual destas figuras mostra melhor a sua satisfação, como você se sente com o uso do implante?

(a)	(b)	(c)	(d)	(e)
muito insatisfeita	insatisfeita	pouco satisfeita	satisfeita	muito satisfeita

2-A senhora se arrependeu alguma vez de ter escolhido este método?

□ sim □ não

3-A senhora acha que este método tem trazido benefícios ou prejuízos para a sua vida?

□ benefícios □ prejuízos □ um pouco de cada □ não sabe

4-Desde que a senhora inseriu o implante tem apresentado alguma coisa que a incomode?

□ Sim □ não

5-O que?

□ problemas com a menstruação □ outros

6-Qual destas figuras mostra melhor como a senhora se sente em relação as novas características da sua menstruação?

(a) (b) (c) (d) (e)

muito insatisfeita insatisfeita pouco satisfeita satisfeita muito satisfeita

7-A senhora acha que as alterações da sua menstruação melhorou,piorou ou não alterou a sua vida sexual?

□ melhorou

□ piorou

□ não houve alteração

8- Desde que a senhora inseriu o implante, o número de relações sexuais que a senhora tem por semana :

□ aumentou

□ diminuiu

□ ficou igual

9-O que seu marido acha do método?

□ aprova

□ não sabe

□ reprova

□ não tem opinião

10-Você indicaria este método para outra mulher?

□ sim □ não

11-A senhora deseja continuar utilizando o implante?

□ sim □ não

12- Por que motivo a senhora deseja retirar o implante?