

Summary of major non-clinical research on testicular contraception from 2017 to 2023:

2023 Guidarelli

Cross-sectional study on contraceptive testicular lifting devices: safety, acceptability, effectiveness.

Objectives:

Principal: assess the medical safety of at least six months' use of testicular lifting devices (TLD).

Secondary: Definition of socio-demographic and medical profiles; the different TLD in use; the real-life acceptability of TLD; the effectiveness of the TLD in current use; proposal of new avenues and protocols for research and recommendations on usage based on results.

Tools and methodology

A descriptive cross-sectional international study, carried out from 14 December 2021 to 4 March 2022, through the distribution of an anonymous online questionnaire, to participants who had been practising contraception by testicular lifting for at least 6 months.

Results:

There were 1050 respondents, of which 970 were analysed. Several different TLDs were used during an average of 14.1 months [\pm 8.7], the Andro-switch device being the most-used (96.0%). The majority of participants did not use the TLD according to recommendations: 44.8% between 15 and 17 hours per day, 68.6% had an initial sperm analysis and 74.0% an initial medical consultation. Undesirable side-effects were frequent, cutaneous and benign. Unexpected unwanted effects on urinary function were reported. The ASEX scores for sexual dysfunction before TLD and at the time of the study were unchanged.

Satisfaction concerning quality of sexual life according to the MSHQ questionnaire significantly increased for participants and their partners after TLD. Satisfaction was very high (86.5%), and reported feeling of constraint low (inferior to 10%, except in the case of sporting activities (20%)). The main constraints identified were the necessity to regularly reposition the testicles, and the accessibility of medical accompaniment and semen analyses. The contraceptive threshold was achieved by 92.6% of those who had had a semen analysis to verify effectiveness. Six unwanted pregnancies occurred during the period of inhibition (before achieving the contraceptive threshold, or the first three months of use). The Pearl index, assessed after one year of contraceptive phase (contraceptive threshold achieved), and the end of supplemental contraception, during 3727 cycles of exposure, was 0.0%

Conclusion :

TLD devices seem to be acceptable from a healthcare point of view in terms of unwanted side-effects and effects on sexuality. They are not, however, used according to recommendations. Additional studies are necessary, as well as training for healthcare professionals in the accompaniment of this form of contraception, and improved access to semen analysis.

2023 Caddy

Who does what? Reproductive responsibilities between heterosexual partners

Managing fertility and sexual and reproductive health across the life course is associated with numerous responsibilities disproportionately experienced by women. This extends beyond dealing with the physical side effects of contraception and can include the emotional burden of planning conception and the financial cost of accessing health services. This scoping review aimed to map how reproductive responsibilities were defined and negotiated (if at all) between heterosexual casual and long-term partners during any reproductive life event. Original research in high-income countries published from 2015 onwards was sourced from Medline (Ovid), CINAHL and Scopus. In studies that focused on pregnancy prevention and abortion decision making, men felt conflict in their desire to be actively engaged while not wanting to impede their partner's agency and bodily autonomy. Studies identified multiple barriers to engaging in reproductive work including the lack of acceptable male-controlled contraception, poor sexual health knowledge, financial constraints, and the feminisation of family planning services. Traditional gender roles further shaped men's involvement in both pregnancy prevention and conception work. Despite this, studies reveal nuanced ways of sharing responsibilities - such as companionship during birth and abortion, ensuring contraception is used correctly during intercourse, and sharing the costs of reproductive health care.

2022 Gumowski

Les freins et les facilitateurs au développement des contraceptions masculines*1

The barriers and enabling factors to the development of male contraception*1

*By this we mean any person with male genitalia

** We will use the term « women » to refer to any person who identifies as such

Introduction

Today, it is essentially women who assume the contraceptive burden. Numerous female contraceptive methods are proposed and used, such as the pill, IUDs as well as patches. As to male contraception, only vasectomy and the male condom are available on the market. Indeed, since the creation of the condom more than 200 years ago, no new method of reversible male contraception has been put on the market (1). And yet, numerous methods for men have been developed, including hormonal, thermal and enzymatic methods. These have however, never reached the stage of commercialisation.

The medicalisation of contraception for women, notably with the commercialisation of the pill, has progressively led to the abandonment of contraceptive methods implicating both partners, such as withdrawal or periodical abstinence (2). First considered as a tool in the reappropriation of bodily control and as a means of emancipation, the « restrictive character » of female contraception has been, since the 1990s-2000s, more and more underlined : mental burden, naturalised and invisibilised female responsibility, financial burden, obligation of medical oversight and often minimised or ignored side-effects (2).

For what reasons have male contraceptive methods not experienced the same growth as female ones ? Being able to determine the barriers and enabling factors to the development of male contraception would allow us to better understand the influence of relationships of power between the genders which rule over the job of contraception in Western society. Fertility control, traditionally proposed by family planning, is based, aside from the condom, on an exclusively female contraception. However, female contraceptives are not suitable for all women, sometimes for medical reasons. Furthermore, 40-45 % of pregnancies in the world remain unwanted, a fact which shows that the current methods of contraception are manifestly insufficient (3). Some studies postulate that the emergence of new male contraceptives would allow for a reduction of this figure (4). It is therefore a public health interest to improve the range of contraception, by also proposing new methods for men (1,4).

Method

The object of this study was to determine the barriers and enabling factors to the development of male contraception. In order to do this, we carried out research of the scientific literature dealing with the development of methods of contraception, as well as research of the grey literature (social media, podcasts) to inform ourselves on the societal aspect of the question. Following this review, three main research axes were chosen : pharmacology, available information and that of society. We then questioned, through semi-directed interviews, 14 experts from domains relevant to our research axes. We therefore questioned several doctors (a general practitioner, a urologist-andrologist, and 2 gynaecologists), a pharmacologist, a pharmacist, a representative from the pharmaceutical industry and from a diagnostic laboratory, a developer of the Andro-switch, a representative from PROFA, a community health specialist as well as two sociologists.

Results

For the majority of the participants, the development of contraception throughout history has been centred around women for various reasons, the principal being the historical and societal assumption of responsibility by women for sexual and reproductive health. The revendication by women for the reappropriation of control of their bodies in the 1960s, with the invention of the pill, as well as the lack of interest on the part of men, were also mentioned several times. Concerning the perception of the repartition of the contraceptive burden, the participants are unanimous as to the existence of gender inequality. Finally, hegemonic masculinity and its evolution in society influence, according to them, the interest in male contraception.

According to the great majority of the participants, the information is accessible, of good

quality and available to the general public, notably via the internet. One must, however, look for it in order to find it. The participants from the medical field note an increase in demand and interest on the part of patients and the media. All of the participants agreed that the pharmaceutical industry would be more likely to invest in the development of male contraception on the condition that they saw a potential market for it. Furthermore, only a few pharmaceutical companies have the means to finance the final stages of development (clinical trials, certification).

The interviews have demonstrated several barriers to the development of male contraception. First of all, six participants mentioned that the female reproductive system is easier to contracept than the male. The second element underlined is that of the acceptability of side-effects to and by men. Thirdly, several participants raised a lack of knowledge and training of doctors and specialists as well as a lack of information on the question of contraceptive burden in sexual education programs.

Added to the absence of official information, this is a barrier to the general knowledge and interest of the public. All of the participants were in agreement in saying that in the eyes of the decision-makers in the pharmaceutical industry, demand is not sufficient to show an economic interest. This point is incidentally considered the principal barrier. Several participants also asked themselves whether women would be ready to delegate contraceptive responsibility to their partner, them being the ones who assume the principal consequences of an unwanted pregnancy.

The final barrier to the development of male contraception, raised by all of the participants, is the influence of hegemonic masculinity. Indeed, the dominant contemporary definition of masculinity could make men afraid of losing their virility. An evolution of the definition of masculinity and the societal attitude towards the contraceptive burden is nonetheless noted. This could increase the number of men inclined towards male contraception. The engagement of public health policy is the second enabling factor mentioned. This would allow the population access to official information, which is trustworthy and widely available.

Discussion

Unanimously, the participants consider that the lack of demand concerning male contraception is the main barrier to its development, dissuading the pharmaceutical industries from investing (5). A societal change and an investment on the part of men in the sharing of the contraceptive burden would be necessary to increase this demand.

The emergence of new male contraceptives would allow further reflection on the question of the repartition of the task of contraception. Indeed, this could be individual, where each person is the master of their own contraception, or, in the context of a stable relationship, shared alternatively by both partners. In the case of an unwanted pregnancy, it is the woman who assumes the principal consequences. Delegating contraceptive responsibility to a third person could therefore carry a great risk for her. A solution to mitigate this problem could therefore be to use a long-acting contraceptive, such as an implant, which would avoid, among other things, forgetting to take the contraceptive. The acceptability of side-

effects among men is also an important point which influences the development and use of male contraceptives. Indeed, for men, the benefit is considered as inferior to the potential side-effects, which has led to the end of numerous clinical trials. On the contrary, the iatrogenic risk to women is seen as acceptable, as the benefit (not falling pregnant) outweighs this risk. The reasons for which these side-effects are less accepted among men than among women, both of whom share responsibility for procreation, can give pause for reflection.

Concerning the acceptability for men to benefit from male contraception, some studies consider that more than 25 % of men would be ready to try it (6). According to the opinions gathered during the interviews, the male contraceptive most capable of awakening the interest of today's society would be effective, cheap, easy to use, with acceptable and reversible side-effects. While we wait, the Andro-switch contraceptive ring, a new thermal method, already boasts the majority of these characteristics and is currently in the certification phase. Despite some worries as to long-term side-effects, it is today used by several thousand men in France (7). The market arrival of a new, certified male contraceptive would allow a greater number of men access to contraception. This could increase demand by opening a gap in the market, thus inciting pharmaceutical companies to invest in the domain.

2022 Travers – Vallet

Thermal testicular contraception: A still too little known contraceptive method: a descriptive study of general practitioners in Auvergne-Rhône Alpes by self-administered questionnaire

Introduction

Despite the existence of a wide range of contraceptive options, the increase in number of abortions reflects the need to provide new contraceptive solutions and to place the couple at the heart of the debate. In contrast to the large number of contraceptive options for women, the arsenal of devices for men is still limited. Thermal male contraception, developed 30 years ago, still suffers a lack of medical democratisation which counterbalances with men's growing interest in it. Yet, General Practitioners, who are the main prescribers of contraception, do not seem sufficiently informed to offer this alternative to their patients.

Objectives

To carry out an inventory of the knowledge of General Practitioners about thermal testicular contraception in the AURA region. Analysis of their representations of thermal testicular contraception (TTC) and their motivation to benefit from additional information.

Material and method

Realisation of a quantitative cross-sectional study of descriptive type via a questionnaire sent by mail to the physicians or distributed by the CDOM in Auvergne-Rhône-Alpes

between July 2021 and September 2021. The results were analysed using the Jamovi software with the Chi2 test.

Results

We included 153 responses in the analysis. Among these, 30.1% of doctors appeared to be aware of the TTC, most notably in the form of the undergarment (29.1% versus 17.9% for the ring).

The location of practice, additional training courses about contraception and the mode of practice (planning or orthogenetic centre) all have a statistically significant link with the knowledge of the TTC among the doctors questioned. After presenting them a brief and synthetic piece of information, 94.6% showed an interest in additional information and 53.5% felt ready to suggest it to their patients. We can underline that 51.3% are in favour of popularising TTC, so that it could be suggested to patients the same way female contraceptives are.

Conclusion

Male contraception is a topic that motivates a number of national and international clinical trials. Although still in the experimental stage, the results are promising. In response to the increasing demand of patients, General Practitioners would be willing to support TTC projects, provided that additional information and solid scientific evidence are available.

2022 Richer

Contraception in Martinique: An examination of male contraception and its impact on sexuality

This study is inspired by our professional practice, from the story of a married couple experiencing difficulties in their sex life, related to a failure of their chosen contraception, that of male contraception. We therefore decided to orient our study in this area on the basis of a wider investigation on the territory of Martinique.

Object of this study

- Study the impact of male contraception on sexuality
- Identify the interest in and knowledge of male contraception on the level of the population of Martinique

Methodology

3 investigations were carried out:

- Among 28 users of male contraception (2 vasectomies, 7 users of the Andro-switch, 19 users of condoms)
- Among the general population, using an online questionnaire on social media. 210 responses underlined the lack of knowledge of male contraception other than the condom

- Among healthcare professionals, through an online questionnaire via social media

61 responses principally from midwives and student midwives attest to the lack of knowledge of male contraception.

❖ Results

Concerning the use of the male condom; the penal ring or vasectomy, the responses focussed on a lack of sexual repercussions, equally on the apparition of dysfunction either in terms of the frequency of sexual relations, or on the quality of sex life. Two telephone interviews were also included in this study. The contribution of this study, to the practice of a sexologist, shows the interest of the population concerning the sharing of the contraceptive burden on the one hand, and on the other, the absence of repercussions on sexuality leading from male contraception, despite the small sample size studied. For the majority, contraception should not uniquely be a woman's issue.

20% of the respondents would be interested adopting male contraception, 80% asked for access for men to family planning in order to talk about male contraception, to exchange on sexuality no matter what their sexual orientation, and to benefit from someone there to listen. The returns do not express any negative repercussions from male contraception on sexual relations; they are completely in agreement. The majority of healthcare professionals (80%) would hope for access for men to family planning centres, as well as training on male contraception in Martinique.

❖ In conclusion, the choice of contraception is a free and informed process. Prescribers must guide users taking into account the impacts that contraception can have on their sexuality. Users must be able to talk about their sexuality with professionals, whether they are experiencing difficulties or not.

2022 Pidoux

Perceptions and use of male contraceptive devices in Swiss Romandy

Problematic

Even though its use remains marginal, male contraception seems to occupy a certain space in the news media. And yet, since the Second World War, numerous methods of contraception have been invented, though none for men. So, where are we with male contraception in 2022? And, more specifically, where are we with this question in Swiss Romandy?

Method

This study proposed to respond to this question by using a social sciences methodology, joining qualitative tools (analysis of semi-directed interviews) with quantitative ones (analysis of a survey). First of all, a review of the literature has allowed us to identify the available male contraceptive methods, as well as those still in the research stage. I then

conducted 11 semi-structured interviews by constituting a representative sample of participants from the medical field who could be led to discussing the question of contraception with their patients. I also created a questionnaire on male contraception: distributed in autumn 2021 to the broadest possible range of the population. This allowed me to collect 889 responses. The collection of these data allowed me to examine the perceptions and uses of male contraceptive devices in Swiss Romandy. To conclude, I compared my results with other social science studies dealing with the same subject.

Results

Through my analysis, I identified different actors influencing the development and use of male contraceptive devices. The development of male contraception has been encouraged by the Indian and Chinese governments, by WHO and by Western feminist movements. However, pharmaceutical companies see little economic interest in it, and research on this subject lacks resources.

Regarding users, the results obtained demonstrated that male contraception is of interest to a particular group of men, generally benefitting from a high level of education and coming from the younger generations (25-35 years old). They are, in addition, often in a personal situation which pushes them to look for a new method of contraception.

The fears most frequently reported by users and healthcare professionals relate to the safety, reversibility and comfort of the devices. Finally, contraception for men brings into question established gender norms, which could also present a barrier to its development and use. Despite this, and according to the survey carried out, the men and women of Swiss Romandy seem to be, on the whole, favourable to the use of a new reversible male contraceptive device, if this were to become available.

Conclusion

There is a discord between supply and demand in terms of male contraception. During the past 5 years, the theme of male contraception has gathered importance in the media, and demand for contraceptive methods for men is increasing. On the other hand, the realisation of large scale studies facilitating the development of new methods of contraception is lagging behind. Healthcare professionals represent an intermediary between these two worlds, the users and the researchers, and, faced with ever increasing demand, should be pushing research to engage with the subject.

2022 Limbour

Male thermal contraception : A shift in the contraceptive burden

This Master's thesis in sociology deals with the disruption of the contraceptive burden among so-called heterosexual cisgender couples; here I will focus mainly on the use of the Andro-switch, since this was the choice of my interviewees. The male contraception expected by society took the form of a non-medicalised contraception called thermal contraception.

Using so-called non-medicalised male contraception is part of a departure from the dominant norm in which the mental and actual burden of contraception falls on the woman. The use of the Andro-switch upsets existing gender relations. The aim is to visualise and understand the way in which so-called heterosexual cisgender couples have deconstructed the contraceptive burden and the way in which this influences the gender relations in the couples. The interviewees have a 'typical' profile whose deconstruction is already pre-established, making it easier to pursue.

Finally, we shall see, through the resumption of the forms of work linked to so-called female contraception put forward by Cécile Thomé and Mylène Rouzaud-Cornabas in their article "Comment ne faire pas d'enfant, un travail féminin invisibilisé" (How not to have children, an invisibilised female task), the way in which the work of providing information, the day-to-day work, the fact of making sure of being contracepted, and the work on the self carried out by the individuals is managed.

As a result, we will be able to establish where the contraceptive mental burden lies among couples using thermal contraception, in this case the Andro-switch.

This work is based on a study of four couples who have been contracepting for about a year with the Andro-switch. This manuscript consists of a methodological reflection on the construction of my investigation. The first part is dedicated to the way in which the individuals deconstructed the contraceptive burden, then the second part is based on the forms of work defined by Cécile Thomé and Mylène Rouzaud-Cornabas in order to consider the distribution or not of the mental burden associated with the use of the Andro-switch.

2022 Tcherdukian

Knowledge, professional attitudes, and training among health professionals regarding male contraceptive methods

Objectives

Health professionals are at the forefront of information and acceptability regarding contraceptive methods, however only one study evaluated their knowledge of male contraception (MC) including hormonal MC (HMC) and thermal MC (TMC). Our objective was to evaluate the knowledge, professional attitudes, and training of French practitioners regarding the management of couples' contraception by male contraception (MC).

Study design

We designed a descriptive, cross-sectional, multicentre study of 2,396 French practitioners belonging to national or regional institutions involved in contraception. We solicited practitioners by e-mail to complete an anonymous questionnaire; we analysed their knowledge, professional attitudes, and training regarding the management of couples' contraception by MC.

Results

The overall participation rate was 18% (427/2,396). Condoms, withdrawal, and vasectomy were known by 98%, 89%, and 76% of the population, respectively. Hormonal MC and Thermal (TMC) were known by 10% and 24% of the population, respectively. Fifty-five percent of the population never or infrequently offered MC during a couples' contraception consultation. Only 14% of the population had ever participated in training on MC; 96% wanted to be better trained on MC, and 87% expressed a willingness to participate in training on the subject.

Conclusions

Health professionals involved in contraception have unsatisfactory knowledge about MC methods based on spermatogenesis inhibition and are eager to have more information about them. To advance the acceptability and dissemination of MC methods, it seems imperative to enhance research in the field and to provide healthcare professionals with an adapted training programme.

2022 Tribout

The contraceptive duty for men: Hypervisibilisation and recomposition of masculinity

During the past few years, the news has underlined the fragility of reproductive and sexual rights in the world, and the necessity to view contraception as a major political issue. The objective of this study was to examine the effects of male contraception. Based on interviews carried out with 8 men using the Andro-switch in the majority (7) and the jockstrap (1), as well as observation of the Discord group dedicated to users of the Andro-switch, I examined the lived experiences of men using a thermal contraceptive method. I attempted to understand which factors had been determining in their awakening to contraceptive issues, and their will to transform their contraceptive practice. I examined the role of doctors and on the forms of the contraceptive duty when it comes to men. I attempted to see if - and how - the practice of a thermal male contraception had induced a reconfiguration of their model of masculinity. I distinguished three groups among the men questioned.

For the men from the first group (4), it was the difficulties with contraception for their partner which made them aware of the issues. The visibilisation of the suffering of their partner brought about a dialogue which allowed for a shift in the question of contraception; faced with the difficulties related to fertility control for women, it is the fertility of the couple which was considered. Considering that the female methods are not “worth hearing,” and conscious of the contraceptive burden and the role of the man in procreation, it is their engagement in feminism which led the men of the second group (3) to think about their fertility. Finally, for the man in the third group (1), it is the search for a “personal” contraception which led him to use thermal contraception.

For all of those questioned, becoming conscious of their fertility and identifying a need for contraception allowed them to escape from the “irresponsibility of the privileged”. Their experience of male contraception is also an experience of caregiving; they have concerned themselves with their fertility and have taken control of their contraception by transforming their methods. Faced with the scepticism of the medical profession, those men who hope to engage in this contraception help each other, notably in the Discord group Ring Com’Unity, by sharing information, experiences or the contact information of doctors who are willing to provide support for male contraception. On the other hand, other men who have been supported and encouraged by their doctor, and healthcare professionals are more and more numerous in wanting to be trained on the subject of male contraception.

The men who use male contraception in the context of a heterosexual couple take charge of the contraceptive duty which comes from it. Responsible for the fertility control of the couple, they experience the contraceptive burden. The main difference resides in the visibilisation of this burden: if the burden of contraception is invisibilised because it is considered as natural when it comes to women, it is inversely hypervisibilised when it comes to men.

As contraception has been strongly associated with women since its medicalisation, the men

who use male contraception must redefine their model of masculinity in order to integrate it into this practice. For the men from the first group it appears easier to distance themselves from the traditional norms of masculinity in the private sphere than in the public sphere. This notably shows itself in the preference for the Andro-switch, a discrete device which allows them to maintain an “intimate” relationship with their contraception. Thermal contraception requires the positioning of the testicles in the upper position, the testicles being a symbol of the virile model of masculinity, the use of thermal contraception has often been ridiculed by the press (Desjeux, 2012b). The experience of male contraception has led the participants to question their bodies and how they work. This can therefore be valuable as a source of knowledge and men can feel a certain fascination in reading the concrete results of their contraceptive practice in their semen analysis.

In the collectives dedicated to male contraception and on the Ring Com’Unity Discord, many men are experiencing a new type of relationship, that of intimacy. This type of exchange is valued while traditional masculine norms are not appreciated; creating a distinction between men who are “contracepted” - responsible, “deconstructed” men - and the others. Conscious of the possibility of creating new forms of hegemony and the dangers associated with the “heroisation” of users, the men from the second group highlight the importance of not using contraception to validate the ego.

50 For the men from the first group, the use of male contraception seems to not only have created or developed a consciousness of the inequalities between the sexes, and also awoken an involvement in activism. Indeed, two of the men who had never been activists have since become involved in the promotion of male contraception while a third user considers the act of continuing to wear the Andro-switch despite its prohibition by the ANSM as a “small activist gesture”. For Arthur, the man from the third group, the experience of male contraception has been an “activist revelation”. He who had not been an activist before, joined a collective and has since been working for a cooperative which accompanies new methods of contraception in the procurement of CE certification.

Finally, for the men of the second group the experience of contraception seems to have reinforced their involvement in activism. All of them were involved in collective and/ or activism before becoming “contracepted” and today all of them are involved in collectives and associations promoting male contraception. The opinions of each of the participants underlines a willingness to legitimise and democratise thermal contraception. Their involvement in collectives and associations promoting male contraception shows their will for collective organisation in order to transform contraceptive norms.

It is at this point important to remember the limits of this study. First of all, it is geographically and culturally limited, the area concerned being principally France where, as we have seen, contraception is socially and culturally specific. It is probable that the experience of thermal male contraception would be lived differently elsewhere in the world. The method of thermal contraception remains little known to the general public, so one can therefore suppose that the men who were willing to exchange with me hoped to promote this method, it is therefore possible that the results would have been different if I had asked other users. Finally, it would be interesting to prolong this research by analysing the perspective of men using another method of male contraception, such as hormones or vasectomy: what similarities, and what differences in their journeys? It would be equally

interesting to analyse the recomposition of masculinity among the men who had used, and then discontinued the use of male contraception.

2022 Serna

Male contraception : a feminist issue

Dispossession or reappropriation?

Cis or trans, women are getting involved in favour of the development of male contraception (MC), should it be as part of associations (such as Family Planning, as counsellors, midwives or doctors), auto-fabrication workshops making contraceptive underwear or research projects (as biologists, as part of the International Consortiu, for Male Contraception, for example, or even as designers, such as the German Rebecca Weiss who has recently become known thanks to her invention of an ultrasound testicular bath).

Their involvement is not enough to guarantee the direction which MC will take in the future, but it does demonstrate the interest which women bring to the acceleration of its development and spread. And from the moment when MC responds to the needs of a portion of women, we can only hope that it will develop in the most favourable conditions for those women. It is therefore crucial that access to vasectomy and to temporary methods of male contraception should be facilitated. If, in the current state of affairs, this requires more training of medical professionals in the practice of vasectomy and hormonal contraception, the communication of these methods relies above all on a fragile network of associations and activists, which has no equivalent outside of France.

Faced with the new-found attractiveness of male contraception, the role of these activists only seems the more important in promoting loud and clear an unambiguous feminist discourse, denouncing the over-valorisation of a “new masculinity” and instead replacing it with a demand for equality, and not to reduce the question to a deconstruction of masculinity based solely on identity. And thus to integrate this subject into all feminist combats, in order to think of male contraception in the context of the attribution of reproductive responsibility to women, and with all of the economic and social questions which remain the principal barriers to their emancipation.

2022 Morlet

The fellowship of the ring

Study of an innovation in contraception by testicular ascent - the Andro-switch - and of its effects

The Andro-switch, as an object and concept, has come to destabilise an environment in place since the 1980's. Thermal contraception was invented in the medical context, at the University Hospital of Toulouse, before being exported to activist movements who took up its de-medicalisation and used it as an object of deconstruction of masculinity. The de-medicalisation continued with the arrival of the Andro-switch, though in an ambivalent manner. Indeed, the number of users of the thermal method exploded in the space of two years because of the sale and use of the device, offering even easier and more de-medicalised access to this method. In the absence of support measuring the experimental aspect of the method, and the utility of minimal medical follow-up through regular semen analysis, the Andro-switch has come to test the limits of autonomous responsibility of those who use this method and the significance that it can have.

A media explosion regarding the ring followed on from this, as well as alarm on a medical level of the dangers which an uncontrolled expansion of this method could represent. By de-medicalising and making accessible this method to a larger number of people through the Andro-switch, Maxime Labrit puts his mark on its journey to institutionalisation, and therefore a form of medicalisation. The suspension of the dissemination, provision and propagation of the Andro-switch by the ANSM, comes to reinforce the need for medical control over bodies and contraception, preventing individuals from being actors in their own practices and is evidence of a form of medical paternalism. Thermal contraception examines the capacity for medicine to accompany people in ways other than by medication and to act on causes more than consequences.

In only a few years, the Andro-switch has come to shake up a method which was spread among a "happy few" deconstructed men, in order to make it more accessible to a larger audience, creating an institutionalisation and regulation of a method which saw itself as distant from the institutional and medical process. This method and the more "homemade" devices will surely continue, if only in some contexts, to be made in this way.

The associative sector will therefore orient its work more on the deconstruction of masculinities faced with a method which, in any case, will spread without their control. The thermal method has effectively, as of now, changed its means of outreach, turning away from a model anchored on French territory to an exportable one. Users of the ring are found in 30 different countries and, even if it's French people abroad, they are beginning to export

it throughout Europe and internationally. The only barrier to its more generalised use is access to semen analyses, which will perhaps evolve in the coming years. New forms of territorialisation of testicular contraception are happening through the growing associative network in France, and is even beginning to export itself to neighbouring countries such as Belgium, Luxembourg and Switzerland. The space for this radical thinking in society constitutes a subject for study in itself, and could be treated not as a marginal phenomenon, but as the early stages of a social, technical or even political innovation through a recasting of the prescription towards free choice, from confrontation to complementarity among the different actors in society.

This study presents a non-exhaustive picture of what the ring says about contemporary French society and numerous questions remain unanswered. It sheds light on social rules which have never been examined up until now, which would be interesting to look at from different angles. We can affirm, however, that the community around the ring gives rise to new profiles of people engaged in contraception and opens the method up from its small deconstructed activist environment. Access to thermal contraception, previously reserved to those in the know, is spreading and reaching different, diverse profiles.

The reconsiderations around sexuality, masculinities et de-medicalisation will perhaps disappear from the profile of users of thermal contraception. Some users of the Andro-switch do have a profile similar to the early users, but an awareness of the crucial importance of contraception as a symbol of liberation for those who menstruate doesn't seem to apply to all users. Furthermore, the acceptance of the opportunity cost of an experimental contraception by the users of the Andro-switch seems to rely upon a co-acceptation with their partners who menstruate, who are often the ones who introduce this reflection. In addition to this, those partners sometimes continue to carry a portion of the contraceptive burden, being the ones who suffer the consequences of improper use. Profiles less inclined to engage in the questioning of male domination brought about by testicular contraception are coming to light through the use of the Andro-switch. Studying the users of the Andro-switch and thermal contraception questions their way of viewing gender in our society, the direction of change in relationships with others through sexuality (though not uniquely) and therefore poses questions of a cultural nature.

According to Françoise Héritier, "it is therefore within the logic of male domination that it is so difficult to bring up the problem of male contraception," because "medicalised male contraception is very much primarily seen as an intervention which threatens the physical integrity of the male body, with consequences above all to identity, and also of an organic and psychosocial nature, due to ideas attached to the nature of sperm and of the specific functions of male genital organs." Wouldn't de-medicalised testicular contraception represent a willingness to control and dominate the medical profession on the part of people with testicles? And this new form of dominance through choice - representative of

male privilege - is it not finally just violence, symbolic of a renewed domination by people with testicles over people who menstruate?

2022 Macé de Gastines

Qualitative study: the opinion of men aged between 18 and 33 on the potential use of testicular thermal male contraception

Context

In 2019, the abortion rate reached its highest level in France for 30 years. The need for fertility management is real. In seven cases out of ten, the contraceptive charge is carried by the woman. Though thermal male contraception has proved its effectiveness for more than 20 years, it is not yet available on the market. Nowadays, it is used without medical supervision by some men who devise their own contraceptive device.

Objective

To explore the opinions of men aged between 18 and 33 on the potential use of thermal male contraception (TMC) by testicular ascent.

Method: A qualitative study has been carried out using semi-directed individual interviews and a focus group. Data analysis was performed relying on the "grounded theory method".

Results/Analysis

16 men aged between 18 and 33 years were interviewed. The majority of them expressed a deep interest in the development of male contraception. However, the lack of available solutions and the contraceptive norm which they follow curbs this interest. The consequences on the quality of life and the usage comfort are major obstacles against the adoption of TMC. The impact on male status and feedback from others were also mentioned. According to participants, this contraception method appears more acceptable for men who are involved in a stable relationship. Obtaining the trust of women is essential. Originality, simplicity, independence and absence of constraints on the sexual act are quoted among the sources of motivation. Interviewees underscored the need to be informed and reassured. They would appreciate feedback from preliminary experiments. In addition, they advised on a greater involvement of society regarding sexual education from Middle School to University. To that regard, they suggested the creation of dedicated days similar to "Defence and Citizenship Day".

Conclusion

Thermal male contraception raises surprises and fears. Information and education are essential to break taboos and reassure the population. The pharma industry does not seem interested in addressing this market, but associations, collectives, as well as a cooperative society of collective interests are developing. These are early initiatives to foster male contraception adoption and to push towards the certification of testicular contraceptive devices in the European market.

2022 Lalieux

“Retrospective follow-up of men having chosen Thermal Male Contraception (TMC), consulted at City Planning Evaluation considering its effectiveness and side-effects.”

Introduction

Today, a great number of unwanted pregnancies are still occurring. The majority of today's contraceptive methods are feminine, while for men, officially there only exist three: withdrawal, the condom and vasectomy. And yet, during the 1990's, several studies showed the contraceptive effectiveness of increasing testicular temperature. Men are more and more implicated in the sharing of contraception. Alternatives, still not recognised as medical devices, have been invented in the past number of year, and are freely on sale on the internet. However, the medical profession is not trained to accompany those men who wish to engage in the thermal method of contraception. A consultation at the family planning of Saint-Pierre was therefore put in place.

Objectives

To study the effectiveness and side-effects of Thermal Male Contraception (TMC)

Equipment and Methods

A retrospective observational study was carried out at City Planning, from May 2020 to May 2021, on healthy men between the ages of 20 and 40, having been using a TMC device for at least three months. Semen analysis was requested at the beginning of the process, and was realised once every 3 months thereafter. An online form was sent to the participants to gather the undesirable side-effects.

Results

Out of 29 men, 6 were excluded because of an abnormal semen analysis or a medical contra-indication. In the end, 16 men decided to use the thermal contraceptive method. All participants used a contraceptive ring (Andro-switch®), except for one who used a heating boxer short (Spermapause®). 64% of the men were successfully contracepted from the third

month. 25% of the men studied had not attained the contraceptive threshold of 1 million spermatozoa/ ml during the period studied. No unwanted pregnancies occurred. The most often-reported side-effects of the ring are cutaneous irritations and testicular discomfort. No-one mentioned an effect on the libido.

Discussion

TMC is an effective contraceptive method, which is natural and promising, and which men and couples are ready to use. More studies, of a larger sample-size, and over a longer period of time, are essential in order to be sure of its effectiveness, security and reversibility.

2022 Vanhakendover

Contraception as a health and public policy issue: how a shift towards the public health domain has affected the liberty and legitimacy to use alternative contraception.

We have seen, in the case of contraception, how an object of private interest becomes one of public interest. Because of this, the subjects pass from the individual to the entire population. What is more, we have seen the particularity of the case of contraception by observing the shift from the social domain, which concerns couples, to the domain of gynaecological medicine, which is focussed on women. If medical care can bring with it a certain form of freedom, it can also trap the person in a pre-defined schema according to the limited vision of the gynaecologist. These shifts have clearly allowed for and sustained an unequal and gendered structure through the monopolisation of practice and authority over legitimate knowledge. The overcoming of the freedom and legitimacy of this normative system allows some to find another form of freedom through the deconstruction of gender expectations and de-medicalisation.

“We are really interested in the idea of “demedicalising” this question, and being able to take charge of it for oneself by making one’s own contraceptive underwear, while maintaining a deeper questioning of the status and role of men” (Boulocho).

On rediscovering the data coming from the interviews carried out in 2019, we have been able to bring to light several elements which are initially set aside. A new approach has however allowed us to examine the medicalisation of contraception and to consider alternative methods, male and non-hormonal, as means of emancipation. This research on a new form of auto-determinist freedom reflects the contemporary tendency to question the dynamics reproduced in the medical domain, such as for example the fact that health is often exclusively thought of as being medical. However, many political and social aspects are also linked to health. The shift of a subject or practice such as contraception into the medical field is not trivial, as it is in this way that it is partly depoliticised and de-socialised.

It's once in the machine of health expertise that the asymmetry in the relationship between a doctor, a patient and the system of the production of legitimate knowledge works against the attempt to live in one's body in a different way.

2022 Vanackere

Male contraception: literature review and qualitative study of general practitioners evaluating the barriers and enabling factors to its development.

Introduction

In our society, contraception is primarily managed by women, and the consequences of this unequal distribution are multiple: exposure to side-effects; mental and financial burden for women and a lack of means of fertility control for men. The goal of this study is to identify the barriers to and motivations for the development and use of male contraceptive (MC) methods, by exploring the advances in scientific research on one hand, and by seeking the opinions of general practitioners (GP) on the other.

Methodology

This study consists of a narrative review of the literature in order to retrace the development of MC methods, as well as the historical and socio-cultural context in which it exists. This will be followed by a qualitative study including a focus group and semi-directed interviews with GP's, which will evaluate their knowledge, attitudes and expectations around MC, and will identify the barriers and enabling factors to its development.

Results

In the scientific literature, we find an exponential growth in international research concerning MC. Multiple methods of MC have been and are currently being studied, some of which are already being used on a relatively small scale, but no new methods have been officially put on the market since the vasectomy.

In this qualitative study, the GPs surveyed said that they had generally very little training in MC methods, and reported weak demand among their patients. They are rather in favour of an expansion of MC methods and some think that they are well-placed to take charge of this expansion. According to them, the promotion of MC will require new reversible methods to be put on the market, a change of mentality through raising awareness in the general population, and better training for doctors.

Conclusion

Despite years of research and the investigation of numerous avenues for MC methods in the scientific literature, the road to an equitable partition of the contraceptive burden remains long. Numerous obstacles block the development of MC, which would despite this bring numerous advantages. Different avenues are suggested in order to enable MC, implicating the participation of GPs.

2022 Vannerem

Male contraception: a study on the expectations for and acceptability of new methods

Introduction

The range of contraceptives is essentially focussed on women, and the methods for men are less numerous. The purposes of this study are to evaluate mens' satisfaction with their contraception, the interest that they would have for alternatives in this domain, and finally to identify the factors which decide whether a method is acceptable or not.

Tools and methods

This was a qualitative, cross-sectional, non-interventionist study, consisting of semi-directed interviews, spread out over four weeks, from 09/03/2021 to 09/04/2021. It was carried out through telephone or videoconference interviews.

Results

Twelve semi-directed interviews were carried out. Six of the participants said that they were satisfied with their contraception, four said that they were unsatisfied and two expressed an ambivalence to the fact that they did not manage their own contraception. Ten of the participants said that they were interested in new methods, two said that they were not interested.

Discussion

In this study, one man in two is dissatisfied with his method of contraception. The perceived advantages are the ease of use and the absence of side-effects. Those who expressed dissatisfaction want to take control of their fertility for themselves and to share the contraceptive burden with their partner. If men's interest in contraception is real, few among them would be willing to adopt a new method. This new method would have to present numerous advantages, notably a great usability, before being chosen.

Conclusion

A dissatisfaction exists among men when it comes to contraception. They are interested in alternatives, but many are hesitant when it comes to a concrete change. The factors judged to be the most important are the ease of use and the side-effects. Men in stable couples seem to be more in search of alternatives.

2021 Richard

Male contraception: What do women think?

Introduction. — Women currently bear the most responsibility in contraception, with a wide choice of methods, while only a few existing male contraceptives are available. However, it has been shown that men are willing to get involved in birth control and to control their own fertility. Our research was focused on the female population and a survey was carried out to explore women's perceptions of male contraception.

Methods. — An observational quantitative cross-sectional study using a self-administered questionnaire was carried out between November 2019 and February 2020. All women aged from 16-years-old to menopause completing the questionnaire were included. Descriptive statistical analyses were conducted, qualitative variables were expressed as counts and frequency.

Results. — In total, 379 interpretable completed questionnaires were included. Among the women, 69.7% were in favour of letting men deal with contraception, without referring to a specific method. After having been made aware of the medical information concerning existing male contraceptives and those in development, the proportion of women in favour dropped to 46.7%. The most acceptable method for a majority of women was the male pill, which is still being developed. The majority (78.4%) of the women in our survey felt insufficiently informed about male contraception.

Discussion. — In our study, women seemed to want to share contraceptive responsibility with men, but the lack of information and of acceptable contraception methods available remained an obstacle. Although larger-scale studies are needed to confirm these results, the development of a wider range of male contraception methods seems to be what both men and women have long been expecting.

2021 Le Guen

Men faced with contraception: between gendered contraceptive norm and process of differentiation

In this article, we analyse the contraceptive practices of men based on the data from the Fecond 2013 survey. Our results allow us to show that the use of contraception by men in France is structured by the French contraceptive norms already visible for women. Furthermore, we show that this norm is gendered. By requiring the transition from the condom to the pill when the relationship becomes stable, this contraceptive norm also requires the transition from a responsibility which is a priori shared by both partners to one that is exclusively feminine. Finally, the choice of so-called male contraceptive methods by men in stable relationships could be the result of a process of “differentiation” allowing to express different models of masculinity.

2021 Rouanet

Male contraception, it's (still) coming soon

The Andro-switch contraceptive device: feedback on users' experiences

Our study has allowed us to show that men are motivated to take charge of their contraception. It has also allowed us to demonstrate the advantages and disadvantages of the Andro-switch device and to propose some ways to improve its use. This method is little-known among health-care professionals, which makes the most motivated men use it without medical support.

To this lack of knowledge on the part of medical professionals are added other barriers (social; psychological, economic, political) which persist despite the demand to share contraceptive responsibility which has been emerging in the past number of years.

We are in a new period of the history of contraception when women are questioning the methods of contraception which are proposed to them and are demanding methods which are less burdensome and more "natural", and men who are calling for the right to see methods destined for their use being developed.

It seems important to bring interest to this demand and to lift the barriers which prevent the development of male methods.

In addition, we have seen that the question of the sharing of contraception has also some importance in the goal of moving towards equality between the sexes.

Following on from this work, we can ask ourselves about the future of this method in the range of contraceptive methods and on the manner in which it would be possible to increase access to it.

2021 Moreau

What are the barriers to the development of male contraception? A review of the social and medical science literature.

Introduction: Since the revolution in contraception in the 1960's, the range of feminine contraception has not ceased to expand. The methods of male contraception remain limited to the old ones: withdrawal and condom, to which we add a method of sterilisation: the vasectomy. How to explain such an asymmetry between the range of contraception for women and for men in 2021?

Objectives: The objective of this study is to identify and analyse, through a literature review, the barrier to the development of male contraception (MC).

Method: A review of the literature was carried out on the principal databases in medical and social science. After inclusion and reading of the articles, a list of potential barriers was established, then checked against the data collected in the research.

Results: 21 "review" articles, 214 clinical trials and acceptability studies et 38 sociology articles have been included and analysed. The main potential barriers identified were to do with effectiveness, side-effects, reversibility, acceptability and the traditional gendered social perceptions.

Conclusion : Plus de 50 années de recherche ont permis de prouver qu'une CM efficace, sans effet secondaire grave et réversible était possible. Hommes et femmes se disent prêts à utiliser une CM. Le développement de cette dernière semble freiné par l'absence d'investissement de l'industrie pharmaceutique et les représentations sociales traditionnelles genrées.

Conclusion: More than 50 years of research has proven that effective, reversible MC without side-effects is possible. Men and women declare themselves as ready to use MC. The development of MC appears to be blocked by the absence of investment from the pharmaceutical industry, and traditional, gendered social perception.

2021 Joubert

Thermal male contraception : Study on motivations, choice and satisfaction among users

Purpose: To evaluate the motivations, experience and acceptability of a thermal male contraception (TMC) in an historical cohort of men using TMC as the couple's only method of contraception.

Materials and Methods : We solicited 72 men who started using TMC between 2011 and 2019, using an online anonymous survey (93 questions) exploring population characteristics, contraceptive history, motivation for choosing TMC, patient experience at the various phases of the method, relations with partner and environment, and satisfaction with this method.

Results : Sixty seven men responded (93% response rate), 63 were included and completed the survey (94% participation rate). The main motivations for choosing TMC was "not using hormones" (n=59/63, 94%) and using a method regarded as "natural" (n=49/63, 78%). Most men (68%) adopted the method in less than 2 weeks. During the contraceptive phase (n=59 men), they described a statistically improved sexual satisfaction compared to when using previous contraceptive methods (3,50 +/- 0,64 versus 3,23 +/- 0,76, respectively, p<0.01) and a high confidence (100% rather/totally confident partner) and support (88% rather/totally supporting partner) inside the couple; most men (n=35/59, 59%) improved their self-esteem. The main negative aspect was discomfort in 24% of patients. The overall satisfaction score of using this method was 3,78—0,46/4 and 100% of men would recommend the method to other men.

Conclusions : Men using TMC successfully assumed the mental burden of a daily action for the couple's contraception. This positive evaluation, together with the already published contraceptive efficacy and reversibility of TMC, should encourage the development of this method.

2021 Hajji

Male contraception: update on the literature and practice in Brussels

Introduction: 10 years passed between the initial idea to use hormones for contraceptive purposes for women and their arrival on the market. For men, the “Task Force on methods for the regulation of male fertility” was created in 1973. This group of experts from WHO had the mission of developing new methods of contraception. In 2021, 48 years and numerous publications later, there still does not exist a single molecule aimed at reversibly contracepting men on the market. And yet, certain actors on the ground have decided to take their fertility in hand and to propose male contraceptive protocols. What is the quality of these protocols?

Method: Update relating to the literature supporting the practice of male contraception and a comparison with the protocols proposed in the field.

Conclusion: 2 available methods emerge: hormonal contraception and thermal contraception. Even though their effectiveness is established, the current state of the literature does not allow for the recommendation of a generalised practice of hormonal or thermal male contraception. The reversibility and harmlessness of hormonal contraception, even though suggested by a phase 3 trial and a double-blind trial, must be more solidly established by studies using a larger sample size. Their long-term effects remain unknown. As regards thermal contraception, while literature studying the effect of heat on the testicles does exist, its use in a contraceptive setting is very little documented. At the current time, both hormonal and thermal male contraception can be proposed, on an experimental basis, to young, informed subjects in good health, motivated by the sharing of contraceptive responsibility and of the health of their partner.

2020 Dupont

Thermal male contraception (TMC) : a systematic review of the literature

The increasing demand to share the contraceptive burden in couples and the absence of effective male contraception available on the market led us to research the scientific data on TMC.

We carried out a systematic review of the literature, which allowed us to identify 14 articles from interventional studies published between 1965 and 2019. Their goal was to study the inhibition of spermatogenesis in men by a low intensity increase in testicular temperature. Some studies have also examined its reversibility, contraceptive effectiveness and its safety.

The method of increasing testicular temperature principally studied was that of the use of a device lifting the testicles into the suprapubic position for 15-24 hours per day. A partial to total inhibition of spermatogenesis, with alteration of the quantity and quality of the sperm was observed in all studies except one. The reversibility of this inhibition was satisfactory at the end of the temperature exposure. The contraceptive effectiveness was studied by 3 papers, for a combined period of 512 months, with no pregnancies for any of the couples having been using TMC without interruption. The maximum length of time that this contraception was used was 47 months. No serious side-effects were reported by any of the men studied. The anomalies observed in the nuclei of the sperm during the treatment were reversible by the end.

The published data confirm the contraceptive effectiveness of TMC by the use of a device which lifts the testicles into the suprapubic position. Larger scale studies are necessary to test these results in the general public. The commercialisation as a medical device and wider-reaching marketing are necessary to increase accessibility of use. Training of frontline healthcare professionals (GP's, midwives) as well as their inclusion in larger scale studies would help greatly with the spread of TMC.

2020 Amory

1. The need for a new ethical framework for assessing risks and benefits in novel male contraception

Novel male contraception has the potential to enhance reproductive autonomy for men [1,2-4] and offer greater equity in contraceptive responsibility for monogamous or non-monogamous heterosexual relationships [1]. However, novel male contraceptives have been in development for decades, with no method able to reach the market to-date. Technical challenges inherent in the development of novel reversible male contraceptives have been detailed in other publications [5,6]. The negative impact of gender bias in this setting has also been explored [1]. Moreover, medicolegal issues have presented enormous challenges in female contraception development, leading to the discontinuation of some approved products. Similar concerns are likely to affect the development of novel male contraception, which is thus far unexplored and will require further analysis. For our purposes here, we will focus on one of the key ethical challenges in this domain. How ought medical professionals and researchers assess the balance of nonmaleficence (do no harm or avoid risks) and beneficence (seek the greatest good or benefit) [7], when male contraception has impacts that extend beyond the user of the contraceptive?

The FDA currently offers no ethical guidance about how to assess risks and benefits in the context of male contraceptives [8]. This should not be surprising, given that standard ethical frameworks for weighing these obligations are historically focused on individual patients. Female contraceptives are easily justified according to the standard individual framework: the contraceptive poses small risks to the user in comparison with the substantial benefits of avoiding unplanned pregnancy. While male contraceptives, have not been justified in similar terms, a novel male contraceptive would mitigate a myriad of biopsychosocial risks to the male user and their partner(s), with the substantial and direct benefits of pregnancy prevention in a partner, and avoidance of parenthood and its obligations on the male user and partner. In the United States, every state is required to enact laws that ensure child support payments from a non-custodial parent until the child achieves majority [9]. Willful failure to pay court ordered child support by a non-custodial, out-of-state parent, can result in federal misdemeanor or felony charges [10]. With female and male contraception options, each partner would have an actual opportunity to control being a parent, and a reason to assume some risk to avoid an unplanned pregnancy.

How risks and benefits should be assessed for individual contraceptive users in the context of interdependent relationships is ethically complex, but also a known process in other areas of healthcare. Public health ethics considers interdependent societal relationships and justifies small harms to one individual for the purpose of securing substantial benefits to the individual and broader public, such as vaccinations [11]. However, this framework does not justify the risk of a male contraceptive, which may pose uncertain and possibly substantial risks to men [12], while offering significant benefit to women and men alike. Similarly, living organ donation utilizes a risk-benefit model that justifies substantial health risks to an individual in order to benefit the health of another, but key differences prevent application in this context. Living organ donation is considered an extreme form of altruism because donors typically do not hold responsibility for the underlying medical condition of the recipient [13], which cannot account for dyadic responsibility in contraception. Additionally, the possibility of living organ donation arises in a setting in which few if any medical

alternatives exist [13]. In contrast, there are effective medical alternatives to novel male contraception: female contraceptives and traditional male contraceptives. Nevertheless, relying on those alternatives fails to acknowledge men's desire for greater reproductive autonomy [1,2-4], the adverse effects experienced by women using novel female contraceptives [1], and the need for a more equitable distribution of risks and benefits in contraception.

2. "Shared risk: A novel ethical framework for male contraception

The ethical obligations in the context of male contraceptives are fundamentally relational. Though women take on some of the greatest risks of unintended pregnancy, men face a corresponding set of risks [14] and need for support in family planning [15]. Given these complexities, we suggest a new framework for understanding the risks of male contraception that accounts for the interdependent nature of family planning.

Ethically, this shift can be grounded in care ethics, which conceptualizes humans as unassailably interdependent and interconnected [16]. Conceptualizing risk to one sexual partner is inextricably linked to the risks of another. We call this "shared risk." Shared risk is defined as the sum of the risks to both members of a sexual dyad associated with contraceptive use by either or both members, and is compared to the risk of unintended pregnancy to the dyad as a whole. This is justifiable because although modes of family planning differ within any type of sexual pairing, in the context of contraception, the shared responsibility remains the same for each partner, and risk calculations should take this into account. This lowering of the overall risk to a couple is especially important when the risk of health complications from unintended pregnancy are considered, most of which accrue to the female member of the couple.

For example, consider a sexual partnership that primarily relies on a combined hormonal contraceptive. If the risk of death from thromboembolism associated with the use of a combined hormonal contraceptive is 7.5 deaths in one million users-years [17,18], then the risk of death from thromboembolism to either individual would be 7.5 deaths in one million sexual dyads (effectively two million person years). Using this paradigm of "shared risk," if the risk of death from use of a novel male contraceptive were less than 7.5 deaths per one million user-years, the "shared risk" would actually be lower than the shared risk where the female partner used a combined hormonal contraceptive. If the risk of death from a long-acting male contraceptive were as low as one in ten million, the risk of death from contraception or pregnancy that accrued to the dyad from contraception would be reduced by 99%. Such a male contraceptive, even one associated with a low but non-zero risk of death, would seem to be strongly favored from a "shared risk" perspective over the use of a combined hormonal contraceptive in a couple desiring to prevent an unintended pregnancy (see Fig. 1).

Though these examples are simplistic, they offer a basic framework for drawing together different risks accrued to monogamous and non-monogamous relationships in the context of contraception. Applying this framework will require more knowledge about particular relationships to better assess the diversity of risks that should be considered. For instance, do both partners plan to continue using individual contraceptives? Some risks may be difficult to quantify (e.g. social costs) and others may be easy to quantify (e.g. risk of death from unintended pregnancy or failure rates of different contraceptive methods), but all should be incorporated in the risk-benefit analysis. Another limitation of this model is that it

is based largely on the risks of current contraceptive use, consisting mostly of risk of death from unintended pregnancy and thromboembolism in women, and doesn't include detailed consideration of potential long-term risks and benefits of a male contraceptive, which may take years to fully appreciate. In addition, as the use of long-acting reversible contraceptives with much lower risk of serious adverse effects becomes more common [19, 20], the acceptable risk level for male contraceptive may decrease as well. Nevertheless, a case can be made that use of a male contraceptive, even one associated with a very small risk of serious side effects and even death, is justifiable in a risk-benefit analysis as long as the overall risk to a given couple, the "shared risk," is at or below the risk of currently available combined hormonal contraceptives or unintended pregnancy.

Much work remains in order to develop a more robust understanding of this ethical framework for risk, how it should apply in particular cases, and how it should be balanced against other ethical considerations, such as respect for autonomy. For instance, could this framework affect the authority of women in reproductive decision making? Or, how would it apply differently to monogamous and non-monogamous relationships? And, how ought other risks and benefits be integrated that may be more difficult to quantify, such as mental health risks? Ultimately, we hope this skeletal framework of "shared risk" provides a starting point for more robustly addressing the inequities in risk and shared responsibility and autonomy in contraception.

2020 Constans

Opinion survey on male contraception: the acceptability of new types of contraception

Background: Contraception is a global health issue. Very few studies have focussed on male contraception or investigated the opinions on and acceptability of new methods, while clinical trials have been conducted for several decades.

Methods: The two objectives of the study were to gather the opinions of men and women concerning not only the development of new methods of male contraception, but also concerning the current methods. A qualitative study was conducted in a medical school and an independent midwife's surgery in Auvergne-Rhône-Alpes. Semi-structured interviews were conducted with five women and five men.

Results: Respondents show mixed opinions and a lack of knowledge about current male contraceptive methods. They are in favour of the development of new male contraceptives, but feel that there is insufficient communication on this subject and fear the potential adverse effects.

Discussion: Specific psychosocial factors surround male contraception and provoke fears of a breach of masculinity in all its dimensions. The subject of male contraception is also linked to the issue of female sexual and contraceptive burden.

Conclusion: Major obstacles hamper the rise of male contraception, both because of the actors involved in its development and the population. Improved communication and further acceptability studies are needed.

2019 Vanhakendover

Socio-Technical Transitions and Intermediaries: Lessons From the Gender Gap in Contraception for Future Inclusive Treatments

How can networks of intermediaries reinforce their potential in scaling up inclusive solutions and stimulating socio-technical transitions?

Why are cars fuelled and not electricized? Why did fuel cars win over electric cars? Why do we use plastic bottles for water rather than in cans that are 100% recyclable? Why are governments still dependent on nuclear energy and not wind power? Why do women bear the heavy burden of contraception when other ways exist? How can sustainable and/or inclusive solutions replace their unsustainable and/or unbalanced alternatives and replace the dominant system? Sometimes it can look like this is a world of possibilities in the form of low-hanging fruit, but that they often remain just that: possibilities.

Niche projects and innovations are sprouting up all around Europe. Yet, these projects do not always get to a stage where they can be expanded to a greater scale. There is an identifiable systemic policy failure where inclusive and/or sustainable innovations already do exist all around Europe, and are supported in different localities but are not scaled up. The end result paints a discouraging picture where Europe is composed of a plethora of pilot projects but they never acquire enough strength and the overwhelming support they need to scale up and disrupt the socio-technical system in place, or in political terms the status quo. How does an isolated idea in an isolated niche become mainstream?

The objective is clear: transitioning from existing unsustainable and unequal socio-technical regimes implementing sub-optimal solutions to sustainable and inclusive ones. This research will focus on inclusive socio-technical transitions, where the literature is lacking, rather than sustainable socio-technical transitions, which already has a considerable amount of research behind it. It will not concentrate on the validity of the projects but rather on the innovative processes, the networks and actors involved in it, their challenges, their opportunities, as well as a solution to answer the following question: How can networks of intermediaries optimise their role in scaling up inclusive solutions to implement socio-technical transitions?

2019 Stevelinck

«Contraception : where are the men ? An essay on a shared responsibility – the example of Thomas Bouloù »

Today, women are principally in charge of contraception, should it be technically, financially or mentally, while men don't share, or share very little of this responsibility. While respecting the right of women to do as they wish with their bodies, this study aims to question the obstacles to the development and use of male contraception and also to demonstrate, through the example of the Thomas Bouloù group, that these can be overcome.

2019 Granger

Male hormonal contraception : validated methods and new therapeutic approaches

Introduction

Despite men's proven interest in contraception, women still predominantly shoulder that burden.

Objectives

Assess the panel of validated methods of contraception and list the new therapeutic approaches.

Research method

In this systematic review, we searched the computerised databases PubMed, Cochrane Library and Web Of Science from 04/07/2001 to 01/04/2019. We included systematic reviews, randomised and non-randomised clinical trials, and guidelines.

Results : 25 references met our inclusion criteria, and have been analysed. There are three validated methods, which are male condoms, withdrawal and vasectomy, recognized in France as a permanent method of contraception since July 4th 2001. New possibilities gather intra vas devices and hormonal contraception, mostly androgen and progestin associations.

Conclusion

No new validated techniques have been identified. Medical research complexity makes the realisation of new techniques difficult to attain, despite the many options under study.

2018 Brot

Men's awareness of male contraception : a descriptive cross-sectional study of 145 men

Introduction : Contraception is a major public health concern. Contraception must be adapted to the way of life of couples in order to be used in an optimal fashion. We examined the role of men in contraception.

Tools and method : This is a descriptive, cross-sectional multicentric study by questionnaire of a male population aged between 18 and 65, carried out in a doctor's office and through social media.

Results/ discussion : The men said that they felt concerned by contraception but that they discussed it very little with their partners and participated very little in the choice of method. They have good awareness of the male condom but the other methods remain little known. They do not have knowledge about vasectomy, unlike the Anglo-Saxons who practise it widely. Regarding a potential male hormonal pill, the men were ambivalent. They said that they were interested but that they were not ready to take it.

Conclusion : The men are perhaps ready to invest themselves in their contraception, and to assume more responsibility for their fertility with a male contraceptive method. However, are women ready to cede this responsibility to men ?

2018 Amouroux

Are men ready to use thermal male contraception? Acceptability in two French populations: New fathers and new providers

Background

Since the 1970s, international research has actively pursued hormonal male contraception (HMC) and, to a lesser extent, thermal male contraception (TMC). Although the efficacy of TMC has been confirmed in limited populations, its acceptability has not been studied in either potential users or potential prescribers.

Methods

A cross-sectional descriptive multicentre study of potential male users of TMC (new fathers) and potential prescribers of TMC (new providers) was conducted between November 2016 and February 2017. The participants completed a 3-part survey, and their responses were evaluated to i) determine their socio-demographic profiles; ii) identify personal experiences with contraception; and iii) gauge the participants' knowledge, interest and preference for male contraception, particularly TMC. For new providers only, the survey included a fourth part to evaluate professional experience with male contraception.

Results

The participation rate was 51% for new fathers (305 NFs) and 34% for new providers (300 NPs, including 97 men (male new providers, MNPs) and 203 women (female new providers, FNPs)). Only 3% of Nfs and 15% of NPs knew about TMC (including 26% of the MNPs and 10% of the FNPs, $p < 0.01$). After reading information on TMC, new fathers were significantly less willing to try TMC (29%) than were new providers (40%) ($p < 0.01$). The 3 main advantages of TMC for the new fathers included the following factors: "natural" (52%), "without side effects" (38%) and "non-hormonal" (36%). The main disadvantages were "lengthy wear time" (56%), "daily undergarment wear" (43%) and "concern about possible discomfort" (39%).

Conclusions

Young male and female providers have limited knowledge of male contraception, are interested in further information and would generally prescribe TMC to their patients. Successful expansion of the use of male contraception, including TMC, would require distribution of better information to potential users and providers.

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Hormonal, chemical and thermal inhibition of spermatogenesis: the contribution of French teams to international data with the aim of developing male contraception in France

Since the 1970s, international research on male contraception has been actively pursued. Hormonal and nonhormonal methods (thermal, chemical) have been tested, leading to clinical trials of interest to thousands of men and couples.

The results showed that it was possible to develop methods of male contraception that inhibited spermatogenesis with good contraceptive efficacy. However, their side effects (mainly loss of libido), poorly accepted modes of administration, and the high frequency of poor responders prevented their widespread use. Based on earlier initiatives, new avenues were explored and significant progress was achieved, allowing the reasoned use of male contraception. For 40 years, several French teams have played an important role in this research. The aim of this paper is to outline the history and the progress of the experimental and clinical work of these teams, which addressed hormonal, chemical and thermal approaches to male contraception. These approaches have led to a better comprehension of spermatogenesis that could be useful in fields other than male contraception, such as the effects of toxic compounds and fertility preservation.