



## PREVENTIVE NEWBORN MALE CIRCUMCISION: WHAT IS THE CHILD'S BEST INTEREST?

### CIRCUNCISIÓN MASCULINA PREVENTIVA DEL RECIÉN NACIDO: ¿CUÁL ES EL MEJOR INTERÉS DEL NIÑO?

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#### ABSTRACT:

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Preventive newborn male circumcision has been at the center of scientific debate for many years. The reason for promoting preventive newborn male circumcision, is the reduction of the incidence of UTIs (in the first six months of life), penile cancer, transmission of STDs/HIV infection/AIDS. However preventive interventions in the newborn involving violations of bodily integrity elicit several ethical questions. In this article, we reviewed the literature regarding circumcision, the prevention of UTIs, penile cancer, transmission of STDs/HIV infection/AIDS and complications of this practice in the neonatal period. The very limited reduction of incidence of UTIs and the uncertain preventive role of newborn male circumcision towards penile cancer, STDs/HIV infection and AIDS, makes it difficult to justify male circumcision in newborns. Moreover, the challenge in obtaining a unanimous opinion on newborn male circumcision derives from the fact that, as a preventive intervention, it requires evaluation criteria that are not comparable to those of therapeutic treatments. Since preventive male circumcision determines permanent alteration of the body, some authors believe that it can be used only in subjects that are capable of giving their valid consent. In the case of a newborn, the "child's best interest" should be used as a standard, but preventive newborn male circumcision does not satisfy it.

#### RESUMEN:

##### Palabras clave:

Circuncisión  
masculina, recién  
nacido, prevención,  
estándar del mejor  
interés

La circuncisión masculina como tratamiento preventivo en recién nacidos ha estado en el centro del debate científico durante muchos años. Las razones para promover la circuncisión masculina preventiva en niños han sido la reducción de la incidencia de infecciones del tracto urinario (en los primeros seis meses de vida, UTIs), el cáncer de pene, la transmisión de VIH/SIDA y de otras enfermedades de transmisión sexual. Sin embargo, las intervenciones preventivas neonatales, que implican una violación de la integridad corporal del niño, presentan varias cuestiones éticas. En este artículo, revisamos la literatura con respecto a la circuncisión, la prevención de las UTIs, el cáncer de pene, la transmisión de VIH/SIDA y otras enfermedades de transmisión sexual y las complicaciones de esta práctica en el período neonatal. La

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muy limitada reducción de la incidencia de las UTIs y la incertidumbre en cuanto a la función preventiva de la circuncisión masculina en recién nacidos en relación con el cáncer de pene, la infección de VIH/SIDA y otras enfermedades de transmisión sexual, hace que sea difícil justificar la circuncisión masculina de tipo preventivo en neonatos. Por otra parte, los desafíos que aparecen en la obtención de una opinión unánime sobre la circuncisión masculina del recién nacido derivan del hecho que, como una intervención preventiva, se requieren criterios de evaluación que no son comparables a criterios de los tratamientos terapéuticos. Puesto que la circuncisión masculina preventiva determina una alteración permanente del cuerpo, algunos autores creen que puede ser utilizada sólo en los sujetos que son capaces de dar su consentimiento válido. En el caso de un recién nacido, “el mejor interés del niño” debe ser el estándar de referencia, pero la circuncisión masculina con carácter preventivo en niños recién nacidos no satisface este estándar.

## 1. Introduction

Male circumcision consists of the surgical removal of some, or all, of the foreskin (or prepuce) from the penis<sup>1</sup>. The history of male circumcision, is as old as mankind itself. Some authors placed it in the Bronze Age<sup>2</sup>. The earliest records of male circumcision are found in the Egyptians, and more specifically, in a bas-relief of the sarcophagus of Ankh-ma-Hor at Saqqara, from the sixth dynasty, where it shows the practice of male circumcision as a step prior to entry into the priestly caste (2.200 – 2300 BC). In some cultures, male circumcision is carried inside rituals of passage into adulthood, i.e. in many African societies<sup>3</sup>. In other contexts, male circumcision has a religious connotation, being widely practiced among Jews and Muslims. The Old Testament describes Abraham as entering into a Covenant with God. One of the prerequisites was that Abraham should “circumcise the flesh of the foreskin” (Genesis 17,10-13), and become a signal of identity and belonging to the elected people<sup>4</sup>. Prophet Muhammad instructed his followers to circumcise their male

infants on the seventh day of life. As with the Jewish community, the child is usually named on the same day<sup>5</sup>.

Since the end of the nineteenth century, circumcision entered the field of public health and, more specifically, into neonatal preventive medicine. Circumcision of boys was introduced in United Kingdom and United States as a means of controlling manifestations of juvenile sexuality (principally “masturbation”) and as a treatment for what became known as “congenital phimosis”<sup>6</sup>. In 1894, B. Merrill Ricketts identified an astounding array of maladies that could be cured through male circumcision. They included eczema, oedema, elephantiasis, gangrene, tuberculosis, hip-joint disease, enuresis, general nervousness, impotence, convulsions and hystero-epilepsy<sup>7</sup>.

Actually, one third of the global male population is circumcised under two main categories: a) therapeutic male circumcision, and b) non-therapeutic male circumcision.

### 1.1. Ethical problems surrounding male circumcision

#### 1.1.1. Therapeutic male circumcision

From an ethical point of view it is clear that unnecessarily invasive procedures should not be used where alternative, less invasive techniques, are equally efficient and available.

1 American Academy of Pediatrics Task Force on Circumcision. Circumcision policy statement. *Pediatrics* 2012; 130: 585-586.

2 Hendel RS. That old time religion: the Bible preserves hints of Stone Age rites that retained their holiness for millennia. *Biblical Archeology Review* 2002; 18: 1-5.

3 Marck J. Aspects of male circumcision in sub-equatorial African culture history. *Health Transit Review* 1997; 7 Suppl: 337-359.

4 “Jesus Christ was circumcised on the eighth day, in keeping with Jewish tradition. As the first male followers of Christ were Jews, the Church argued that circumcision was compulsory for converts. Paul, his disciple, however was of the opinion that Jesus had fulfilled the “Old Covenant” and as circumcision would inhibit the appeal of his gospel, he proclaimed that “in Jesus neither circumcision nor uncircumcision counts for anything” (Galatians 5,6) and this practice was therefore unnecessary”, in Gatrad Ar, Sheikh A, Jacks H, *Religious circumcision and the Human Rights Act*. *Arch Dis Child*, 2002; 86: 76-78.

5 Cfr. Gallager DL. *Circumcision: a history of the world’s most controversial surgery*. Basic Books, New York, 2001, 46.

6 Cfr. Darbi R. *A surgical temptation: The demonization of the foreskin and the rise of circumcision in Britain*. University of Chicago Press, Chicago, IL 2005; Glick L. *Marked in your flesh: Circumcision from ancient Judaea to Modern America*. Oxford University Press, New York 2006. Hodges F. *The antimasturbation crusade in antebellum American medicine*. *J Sex Med*, 2005; 2: 722-731.

7 Aggleton P. *Just a Snip? A Social History of Male Circumcision*. *Reproductive Health Matters* 2007; 15: 15-21.

It is important that doctors keep up to date and ensure that any decisions to undertake an invasive procedure is based on the best available evidence. Therefore, “to circumcise for therapeutic reasons where medical research has shown other techniques to be at least as effective and less invasive would be unethical and inappropriate”<sup>8</sup>.

Male circumcision in cases where there is a clear clinical need is not normally controversial. Nevertheless, normal anatomical and physiological characteristics of the infant foreskin have in the past been misinterpreted as being abnormal. The British Association of Paediatric Surgeons advises that there is rarely a clinical indication for circumcision.<sup>9</sup> Doctors should be aware of this and reassure parents accordingly.

If there is doubt about whether treatment is needed, or what is the most appropriate course of management, specialist advice should be sought. It is recommended that infant circumcision for medical purposes must only be performed by or under the supervision of doctors trained in children’s surgery in premises suitable for surgical procedures<sup>10</sup>.

### 1.1.2. Non-therapeutic male circumcision

We talk about non-therapeutic male circumcision when male circumcision is performed for any reason other than physical clinical need. Some people ask for non-therapeutic circumcision for religious reasons, some to incorporate a child into a community, some want their sons to be like their fathers and some circumcise their sons as a prophylactic or preventive medical act. The ethical debates are now centered in two types of non-therapeutic circumcision: newborn non-therapeutic circumcision for religious reasons, and newborn non-therapeutic circumcision as a measure of preventive medicine. Even in these two types of circumcision, the

<sup>8</sup> British Medical Association. The law & ethics of male circumcision—guidance for doctors. British Medical Association, London 2006. [<http://bma.org.uk/-/media/Files/PDFs/.../Ethics/Circumcision.pdf>] (accessed 13 Jul 2017).

<sup>9</sup> British Association of Paediatric Surgeons, Royal College of Nursing, Royal College of Pediatrics and Child Health, Royal College of Surgeons of England and Royal College of Anaesthetists. Statement on male circumcision. Royal College of Surgeons of England, London 2001. [<http://www.cirp.org/library/statements/RCS2001/>] (accessed 13 Jul 2017)

<sup>10</sup> Ibid.

ethical approach varies when talking about adults or when we talk about infants or newborns.

#### a) *Adult non-therapeutic male circumcision*

In the case of adults, the principle to be applied for non-therapeutic male circumcision is the respect for the autonomy of the patient based on an informed consent before submitting to this intervention either for religious or preventive reasons. In this sense, it would be a question of safeguarding the conditions for a free and voluntary decision. That is to say, exercising his autonomy, being aware of the risks of the intervention and submitting voluntarily.

#### b) *Minors or newborn non-therapeutic male circumcision*

The debate is complicated when we talk about non-therapeutic circumcision in children or newborns. In the case of minors or newborns, we must bear in mind that there are two distinct debates. One is the debate of newborn male circumcision by religious claims and another is the debate on preventive newborn male circumcision.

### 1.2. *The ethical debates around newborn non-therapeutic male circumcision*

#### 1.2.1. Religious newborn male circumcision debate

Religious newborn male circumcision has been situated at the center of ethical debate when on May 2012, a German regional court in Cologne ruled that circumcising young boys was a form of bodily harm. Although both Muslim and Jewish families circumcise infant boys as a religious practice, the Cologne court found that a child’s “fundamental right to bodily integrity” superseded the religious rights of parents. This potentially rendered Muslim and Jewish people under suspect of causing bodily harm to their children. After heated public discussions, international political pressure, and a speedy legal process, the regional court ruling was replaced by a new national German law permitted the ritual circumcision of male children.

Critics of the practice have increasingly used human rights arguments<sup>11</sup>. These critics claim that circumcision of minors violate prerogatives of those circumcised, and that the resulting affront to their human dignity demands state protection against the procedure<sup>12</sup>. The concept of human rights is sufficiently embedded in Western thought and in European law that a successful human rights argument might legitimize state limitation of circumcision. There are at least five ways in which circumcision is said to act against a child's rights. First, it may impair sexual, urinary, or reproductive function<sup>13</sup>. Second, it causes pain<sup>14</sup>. Third, it may violate the autonomy of the circumcised child<sup>15</sup>. Fourth, it may limit the child's future options<sup>16</sup>. Finally, it may transgress a right to bodily integrity<sup>17</sup>.

Defenders of religious newborn male circumcision consider that it is in the best interest of the child to respect the right of parents to educate their children according to their convictions and beliefs<sup>18</sup>. Another argument for the justification of circumcision is the parent's right to freedom of religion<sup>19</sup>, and the right of parents to reaching their children as a fundamental constitutional right of parents in liberal constitutional traditions<sup>20</sup>.

We defend that neonatal circumcision for religious reasons is not against the human rights, and contrary to female genital mutilation, neonatal circumcision for

religious reasons has never been penalized, neither persecuted nor discouraged, especially when practiced by the Jewish minority in Europe. Neonatal male circumcision has not been convicted in any human rights document and is not yet to be considered a violation of human rights, unlike female genital mutilation. For these reasons, we centered our research on the preventive newborn male circumcision debate.

### 1.2.2. Preventive newborn male circumcision debate

Preventive newborn male circumcision, that is the surgical removal of part or all of the prepuce for prophylactic or preventive reasons<sup>21</sup>, has been at the center of scientific debate for many years, even though it has still not been possible to reach a unanimous opinion on the usefulness of this procedure at such a young age. In fact, even the American Academy of Pediatrics (AAP) has in time felt the necessity to revise its guidelines.

In 1971, 1975, and 1983, the AAP stated that there is no medical indication for routine newborn male circumcision<sup>22</sup>. In 1989, because of new research on circumcision status and Urinary Tract Infections (UTIs), the AAP concluded that newborn male circumcision has potential medical benefits and advantages as well as disadvantages and risks, yet did not recommend it for routine use.

In 1999, the AAP wrote in the conclusions of the report on newborn male circumcision: "Existing scientific evidence demonstrates potential medical benefits of newborn male circumcision; however, this data is not sufficient enough to recommend routine newborn circumcision. In the case of circumcision, in which there are potential benefits and risks, yet the procedure is not essential to the child's current well-being, parents should determine what is in the best interest of the child"<sup>23</sup>.

11 Darby R. The child's right to an open future: Is the principle applicable to non-therapeutic circumcision? *J Med Ethics* 2013; 39: 436-468.

12 Gatrad AR, Shikh A, Jacks H. Religious circumcision and the Human Rights Act. *Arch Dis Child* 2002; 86:76-78.

13 Merkel R, Putzke H. After Cologne: male circumcision and the law. Parental right, religious liberty or criminal assault? *J Med Ethics*, 2013; 39: 444-449.

14 Svovoda JS, Van Howe RS. Out of step: fatal flaws in the latest AAP policy report on neonatal circumcision. *J Med Ethics* 2013; 39: 434-441.

15 Earp BD. In defence of genital autonomy for children. *J Med Ethics*, 2016; 42; 158-163.

16 Ungar-Sargon, E. On the impermissibility of infant male circumcision: A response to Mazor. *J Medical Ethics*, 2015; 41:186-90.

17 Svoboda JS. Circumcision of male infants as a human rights violation. *J Med Ethics* 2013; 39; 469-474.

18 Jacobs AJ, Arora KS. Ritual male infant circumcision and Human Rights. *Am J Bioeth* 2015; 15:2, 30-39.

19 Fateh-Moghadam B. Criminalizing male circumcision? *German Law J* 2012; 13: 1131-1145.

20 Provisions such as Universal Declaration of Human Rights articles 12 and 16, and de United Nations Convention on the Rights of the Child articles 5 and 7 support the right of parents to rear a child in their religion.

21 Cold CJ, Taylor JR. The prepuce. *BJU Int* 1999;83 Suppl 1: 34-44.

22 American Academy of Pediatrics, Committee on Fetus and Newborn. Standards and Recommendations for Hospital Care of Newborn Infants. 5th ed. American Academy of Pediatrics Evanston, IL, 1971; American Academy of Pediatrics, Committee on Fetus and Newborn. Report of the Ad Hoc Task Force on Circumcision. *Pediatrics* 1975; 56: 610-611. American Academy of Pediatrics, Committee on Fetus and Newborn. Guidelines for Perinatal Care. 1st ed. American Academy of Pediatrics, Evanston, IL, 1983.

23 American Academy of Pediatrics. Task Force on Circumcision 1999-2000. Circumcision debate. *Pediatrics* 1999; 103: 641-642.

These words, that were not well accepted by the supporters of circumcision, were also sustained by the American College of Obstetricians and Gynecologists (ACOG): "The American College of Obstetricians and Gynecologists supports the current position of the American Academy of Pediatrics that finds the existing evidence insufficient to recommend routine neonatal circumcision"<sup>24</sup>. The ACOG subsequently withdrew this statement. In 2012, the AAP modified its position: "Systematic evaluation of English-language peer-reviewed literature from 1995 through 2010 indicates that preventive health benefits of elective circumcision of male newborns outweigh the risks of the procedure. The procedure is well tolerated when performed by trained professionals under sterile conditions with appropriate pain management", therefore, opening the way for newborn male circumcision<sup>25</sup>.

The APP's new position on preventive male circumcision has raised some methodological, cultural and ethical criticism<sup>26</sup>. However, other medical associations did not change their position on the basis of the new literature and have remained opposed to circumcision<sup>27</sup>. In the period that preceded the new position of the APP, in the United States there was a significant decline in the number of newborn male circumcisions and the majority of physicians thought that the risks of circumcision outweighed the benefits and therefore did not recommended it<sup>28</sup>.

## 2. Preventive male circumcision

Preventive male circumcision is proposed for the prevention of UTIs, penile cancer, some Sexually Transmitted Diseases (STDs), including HIV infection and AIDS. However, these indications are very controversial, especially considering the neonatal age in which the procedure is performed.

UTIs affect approximately 1% of children in their first year of life. The article of Singh-Grewal *et al.* suggested that it takes 111 circumcisions to prevent one case of UTI, therefore, exposing 110 newborns to the risks of an unnecessary operation<sup>29</sup>. A population study in Canada estimated this number in 195<sup>30</sup>.

Penile cancer is a very rare disease (0,9-1/100.000), and presents roughly the same incidence in the United States and in the northern European countries, where only 10% of males are circumcised. Rates in the US are, indeed, around 0.5 per 100,000, while rates vary considerably in Europe, being around 1 per 100,000 in Denmark and Sweden, but only 0.6 per 100,000 in Finland, which is also a non-circumcising country<sup>31</sup>.

The correlation between penile cancer and circumcision is still not clear, also due to the existence of multiple risk factors for penile cancer (phimosis, Human Papillomavirus - HPV- infection, low hygiene levels, cigarette smoke). For these reasons, some Authors recommend avoiding newborn circumcision and postponing preventive strategies, such as circumcision and anti-HPV vaccination, to the age of "sexual debut"<sup>32</sup>.

According to some authors, the application of newborn male circumcision as a form of prevention of STDs and HIV infection should be supported by three Randomized Clinical Trials (RCTs). One of these is a randomized trial,

24 American College of Obstetricians and Gynecologists. Committee on Obstetric Practice. ACOG Committee Opinion. Circumcision. Number 260, October 2000. *Obstet Gynecol* 2001; 98: 707-708.

25 American Academy of Pediatrics Task Force on Circumcision. Circumcision policy statement. *Pediatrics* 2012; 130: 585-586.

26 Frisch M, Aigrain Y, Barauskas V, *et al.* Cultural bias in the AAP's 2012 technical report and policy statement on male circumcision. *Pediatrics* 131 (2013) 796-800. Svoboda JS, Van Howe RS. *Out of step...*, *op. cit.*

27 British Medical Association. The law and ethics of male circumcision. Guidance for doctors. *J Med Ethics* 2004; 30: 259-263; Royal Dutch Medical Association (KNMG) Non-therapeutic circumcision of male minors. Royal Dutch Medical Association (KNMG), Utrecht 2010. [<http://www.circumstitutions.com/Docs/KNMG-policy.pdf>] (accessed 12 Jul 2017); Royal Australasian College of Physicians, Pediatrics & Child Health Division: Circumcision of infant males. 2010. [<https://www.racp.edu.au/docs/default-source/advocacy-library/circumcision-of-infant-males.pdf>] (accessed 12 Jul 2017)

28 Matar L, Zhu J, Chen RT, Gust DA. Medical risks and benefits of newborn male circumcision in the United States: physician perspectives. *J Int Assoc Provid AIDS Care* 2015; 14: 33-39.

29 Singh-Grewal D, Macdessi J, Craig J. Circumcision for the prevention of urinary tract infection in boys: A systematic review of randomized trials and observational studies. *Arch Dis Child* 2005; 90: 853-858

30 To T, Agha M, Dick PT, Feldman W. Cohort study on circumcision of newborn boys and subsequent risk of urinary-tract infection. *Lancet* 1998; 352: 1813-1816.

31 Cancer Incidence in Five Continents, Vol. X (electronic version). Lyon: International Agency for Research on Cancer. [<http://ci5.iarc.fr>], (accessed 17 Jul 2017).

32 Nelson CP, Dunn R, Wan J, Wei JT. The increasing incidence of newborn circumcision: data from the nationwide inpatient sample. *J Urol* 2005; 173: 978-981.

published in 2005, in which the French National Agency for Research on AIDS along with the National Institute for Communicable Disease of Johannesburg, in South Africa, studied 3274 uncircumcised men, aged 18-24<sup>33</sup>; the other two trials took place in Rakai District, Uganda (2007)<sup>34</sup> and in Kisumu, Kenya (2007)<sup>35</sup>. These studies showed that circumcision decreases the acquisition of HIV by 53-60%, herpes simplex virus type 2 by 28-34%, and the prevalence of human papilloma virus by 32-35% in men. Furthermore, among female partners of circumcised men, there was a reduction of 40% of bacterial vaginosis and of 48% of *Trichomonas vaginalis* infection<sup>36</sup>.

A lively debate arose as regards to the presence of a methodological bias in these three trials, to their feasibility in the other geographical areas of the world and to the existence of opposite results deriving from other observational studies<sup>37</sup>. However, some issues still remain unsolved: the protective mechanism of circumcision<sup>38</sup>; the correctness of the translation of these results to other geographical and cultural contexts in absence of specific studies; the protection conferred by circumcision against HIV transmission in men who have sex with men; the protection conferred by circumcision against HIV transmission to women; the effectiveness of the protection conferred by circumcision against STDs

other than HIV. And above all, the correctness of the translation of these results to other age, the newborn age, without evidences.

Although the evidence in sub-Saharan African men of the efficacy of adult non-therapeutic male circumcision in preventing HIV infection and AIDS seems strong, the generalization of these results to other cultural and geographic areas is questionable and not supported by evidence<sup>39</sup>.

Several studies based on mathematical models showed that in Peru preventive male circumcision would not result in substantial reduction in new HIV infection<sup>40</sup>; in Papua New Guinea, a country with a high prevalence of foreskin cutting practices, condom usage seems to have a greater population-level benefit than preventive male circumcision<sup>41</sup>. Kenyon *et al.* demonstrated that the large variation in HIV prevalence in different ethnic groups cannot be explained only by the prevalence of circumcision but also by sexual behavior<sup>42</sup>.

Furthermore, for other STDs, such as syphilis, gonorrhea, and chlamydia, circumcision does not offer any significant protection<sup>43</sup>.

As Bell argued "The tools of EBM (Evidence Based Medicine) such as RCTs and meta-analyses regard the body and do not take into account the social and cultural setting of studies. This premise does not occur in real life. This is the reason for not automatically transposing the results from one context to another"<sup>44</sup>. It is also necessary to take into consideration the fact

33 Auvert B, Taljaard D, Lagarde E, *et al.* Randomized controlled intervention trial of male circumcision for reduction of HIV infection risk: The ANRS 1265 Trial. *PLoS Medicine* 2005; 2: e298.

34 Gray RH, Kigozi G, Serwadda D, *et al.* Male circumcision for HIV prevention in men in Rakai, Uganda: a randomised trial. *Lancet* 2007; 369: 657-666.

35 Bailey RC, Moses S, Parker CB, *et al.* Male circumcision for HIV prevention in young men in Kisumu, Kenya: a randomised controlled trial. *Lancet* 2007; 369: 643-656.

36 Tobian AA, Gray RH, Quinn TC. Male circumcision for the prevention of acquisition and transmission of sexually transmitted infections: the case for neonatal circumcision. *Arch Pediatr Adolesc Med* 2010; 164: 78-84.

37 Green LW, Travis JW, McAllister, RG, *et al.* Male circumcision and HIV prevention insufficient evidence and neglected external validity. *Am J Prev Med* 2010; 39: 479-482; Morris B, Wodak A, Mindel A, *et al.* Infant male circumcision: An evidence-based policy statement. *Open Journal of Preventive Medicine* 2012; 2: 79-92; Ncayiyana DJ. The illusive promise of circumcision to prevent female-to-male HIV infection - not the way to go for South Africa. *S Afr Med J* 2011; 101: 775-776; Boyle GJ, Hill G. African randomized trials into male circumcision and HIV transmission: methodological, ethical and legal concerns. *J Law Med* 2011; 19: 316-334.

38 Jayathunge PH, McBride WJ, Mac Laren D, *et al.* Circumcision and HIV transmission; What do we know? *Open AIDS J* 2014; 8: 31-44; The circumcision conundrum, *Science* 2014;345: 161.

39 Bossio JA, Pukall, CF, Steele S. A review of the current state of the male circumcision literature. *J Sex Med* 2014; 11: 2847-2864.

40 Goodreau SM, Carnegie NB, Vittinghoff E, *et al.* Can male circumcision have an impact on the HIV epidemic in men who have sex with men? *PLoS One* 2014; 9: e102960.

41 Gray RT, Vallely A, Wilson DP, *et al.* Male Circumcision Acceptability and Impact Study (MCAIS) team. Impact of male circumcision on the HIV epidemic in Papua New Guinea: a country with extensive foreskin cutting practices. *PLoS One* 2014; 9: e104531.

42 Kenyon CR, Vu L, Menten J, Maughan-Brown B. Male circumcision and sexual risk behaviors may contribute to considerable ethnic disparities in HIV prevalence in Kenya: an ecological analysis. *PLoS One* 2014; 9: e106230.

43 Van Howe RS. Sexually transmitted infections and male circumcision: a systematic review and meta-analysis. *ISRN Urology* 2013;16: 109846; Mehta SD, Moses S, Parker CB, *et al.* Circumcision status and incident herpes simplex virus type 2 infection, genital ulcer disease, and HIV infection. *AIDS* 2012; 26: 1141-1149.

44 Bell K. HIV prevention: Making male circumcision the 'right' tool for the job. *Glob Public Health* 10 (2014) 552-572.

that the incidence of STDs in the United States is higher than in European Countries, in which the percentage of circumcised men is much lower<sup>45</sup>.

However, we must underline that all RTCs were performed on adults, aged approximately 18-24 years, not infants. There is no RCT support for infant circumcision specifically as a form of partial prophylaxis against HIV transmission, whether in Sub-Saharan Africa or elsewhere<sup>46</sup>.

### 3. Newborn male circumcision: complications

About the incidence and severity of preventive male circumcision complications there is conflicting evidence.

According to some authors, a lower number of complications occur when circumcision is performed on newborns rather than in older age groups<sup>47</sup>. The study of El Bachraoui *et al.*, based on a retrospective analysis of register data, calculated the incidence of adverse events associated with male circumcision in United States. The overall incidence is less than 0.5%. The rate of potential serious adverse events varies from 0.76 (95% CI, 0.10-5.43) persons per million of Male Circumcision (MC) who developed a stricture of the male genital organ to 703.23 (95% CI, 659.22-750.18) persons per million of MC who required a second intervention due to an incomplete circumcision<sup>48</sup>. Weiss *et al.* underline the absence of severe complications in infants that were circumcised in their first month of life compared to infants that were circumcised at the age of 3-8.5 months<sup>49</sup>.

According to other authors, it is not true the neonatal male circumcision is safer than infant or adult circumcision: "Complications may certainly be better documented for adults, who have the knowledge and

wherewithal to complain if something goes wrong; but there is no consistent evidence that properly performed adult circumcision is actually riskier"<sup>50</sup>.

Anyway, some of the most common short-term complications are hemorrhages and infections. The percentage of these complications varies depending on the technique used for the procedure, the presence of skilled personnel and on the population taken into consideration. The incidence of hemorrhage varies from 0.08 to 0.18%, while infections represent 0.06%<sup>51</sup>. The most common long-term complication is the stenosis of the urethral meatus: an observational study reports an incidence of 27 cases (20%), which lead to obstructive kidney disease in 3 cases (11.1%)<sup>52</sup>. Other complications are abnormal removal of skin, adhesions, cysts and phimosis.

In a retrospective descriptive study, brought forth by the Iranian Legal Medicine Organization, that registered circumcision-related mortality data, 38 deaths was described over a 10-year period. The age of the boys who died ranged from 4 days to 5 years. In 74% of the deaths, the circumcision was performed by doctors. 24 deaths were linked to adverse drug reaction due to general or local anesthesia<sup>53</sup>.

In absence of anesthesia, the most common complication is pain, which can be observed by the modification of the heartbeat and by the newborn's cry. This could potentially determine repercussions on the mother-child relationship<sup>54</sup>. An increase in aggressiveness has been observed as a short-term response to the trauma<sup>55</sup>, while a long-term effect could be the persistence

50 Svoboda JS, Van Howe RS. Circumcision: a bioethical challenge. *J Med Ethics* (2014). E-letter.[<http://jme.bmj.com/content/40/7/463.responses#circumcision-a-bioethical-challenge>] (accessed 17 Jul 2017).

51 American Academy of Pediatrics. Task Force on Circumcision. *Male circumcision...*, *op. cit.*

52 Joudi M. Incidence of asymptomatic meatal stenosis in children following neonatal circumcision. *J Pediatr Urol* 2011; 7: 526-528.

53 Hedjazi A, Zarenezhad M, Hosseini SM, *et al.* Epidemiology of Circumcision-related mortality in Iran: A 10-year Survey. *N Am J Med Sci* 2012; 4: 608-610.

54 Macke JK. Analgesia for circumcision: effects on newborn behavior and mother/infant interaction. *J Obstet, Gynecol and Neonatal Nurs* 2001; 30: 507-55.

55 Goodman, J. Jewish Circumcision: An Alternative Perspective. *BJU Int* 1999; 83: 22-27.

45 Cold CJ, Taylor JR. The prepuce *op. cit.*

46 Earp BD. Sex and circumcision. *Am J Bioeth* 2015; 15: 43-45.

47 Cathcart P, Nuttall, M, Van der Meulen J, *et al.* Trends in pediatric circumcision and its complications in England between 1997 and 2003. *Br J Surg* 2006; 93: 885-890.

48 El Bachraoui C, Zha X, Cooper CS, *et al.* Rates of adverse events associated with male circumcision in U.S. medical settings, 2001 to 2010. *J Am Med Assoc Pediatr* 2014;168: 625-634.

49 Weiss HA, Lark N, Halperin D, *et al.* Complications of circumcision in male neonates, infants and children: a systematic review. *BMC Urology* 2010; 10: 1186.

of a “memory” of the pain, determining in circumcised boys a greater reaction to future stimuli (i.e. vaccinations) compared to non-circumcised boys<sup>56</sup>. For these reasons, as early as 1987, the AAP wrote: “the decision whether or not to administer anesthetics should not depend only on the child’s age or on the degree of cortical maturity, but it is necessary to use the same parameters that are used for adults”<sup>57</sup>. According Bellieni *et al.*, “no procedure has been found to definitively eliminate pain; the gold standard procedure to make MC totally pain free has not yet been established”<sup>58</sup>.

#### 4. Newborn male circumcision as preventive medicine

According AAP, preventive male circumcision in newborns is indicated on the basis of the assumption of its effectiveness in reducing the incidence of UTIs (in the first six months of life), penile cancer, transmission of STDs/HIV infection/AIDS, of the presence of a low incidence of complications and of an absence of repercussions on future sexual function<sup>59</sup>.

In a very interesting Letter to the Editor about 2015 Statement from the Canadian Pediatric Society regarding newborn male circumcision, Erp reminds: “it would take >100 circumcisions to prevent one case” and “UTIs can be treated non surgically”; “results from African trials involving adult men may not translate to newborn boys in developed countries” and “circumcision does not reduce male-to-female transmission of HIV”; “penile cancer is rare in developed countries” and “its association with intact male genitalia is primarily explained by the presence of phimosis”.

It is clear that there is no indication for the preventive male newborn circumcision. The only medical indications for circumcision are pathological phimosis and recurrent

balanitis<sup>60</sup>, even if “80% of children with a phimosis respond to the simple application of a steroid cream and only a small percentage need a circumcision”<sup>61</sup>.

However, both the protective role and the rate of complications of preventive male circumcision are still a matter of discussion in literature- as discussed above. The absence of certainties regarding these issues makes it difficult to justify male circumcision in newborns.

Moreover, even if male circumcision were proven to allow a level of protection against HIV infection/AIDS and/or other STDs, can infants be ethically subjected to the procedure?

Removing healthy tissue from an infant is only permissible if there is an immediate medical indication. The AAP Committee on Bioethics states that interventions that can safely wait until the child can provide his own consent should be delayed until that consent can be obtained<sup>62</sup>.

In presence of a pathology, a procedure is allowed in the following conditions: the objective is to safeguard the entirety or the life of the patient; the procedure must be directed towards the ill organ or the cause of the disease; there must not be any less-invasive alternatives; the benefit deriving from the procedure must be proportionate to its risks; it is necessary, in order to respect the patient’s autonomy and to obtain informed consent<sup>63</sup>.

Prevention, on the other hand, acts upon subjects that are “healthy” or in a preclinical stage of disease, and it is sometimes only a “promise” of prevention. A subject could never contract the pathology that was the object of a preventive strategy. Even in this case, it is difficult to demonstrate that the absence of that specific pathology is a consequence of the prevention strategy

60 Cathcart P, Nuttall, M, Van der Meulen J, *et al.* Trends in pediatric circumcision *op. cit.*

61 Pringle K. Circumcision health risks and benefits – experts respond. [<https://www.sciencemediacentre.co.nz/2014/04/04/circumcision-health-risks-and-benefits-experts-respond/>] (accessed 17 Jul 2017)

62 American Academy of Pediatrics Committee on Bioethics. Informed consent, parental permission, and assent in pediatric practice. *Pediatrics* 1995; 95: 314-317; Na AF, Tanny S, Hutson JM. Circumcision: Is it worth it for 21st-century Australian boys? *J Paediatr Child Health* 2015; 51: 580-583.

63 Hodges FM, Svoboda JS, Van Howe RS. Prophylactic interventions on children: balancing human rights with public health. *J Med Ethics* 2001; 28: 10-16.

56 Taddio A, Katz J, Ilersich AL, *et al.* Effect of neonatal circumcision on pain response during subsequent routine vaccination. *Lancet* 1997; 349: 599-603.

57 American Academy of Pediatrics, Committee on the Fetus and Newborn, Committee on Drugs, Section on Surgery. Neonatal Anesthesia. *Pediatrics* 1987; 80: 446.

58 Bellieni CV, Alagna MG, Buonocore G. Analgesia for infants’ circumcision. *Ital J Pediatr* 2013; 39: 1-7.

59 American Academy of Pediatrics. Task Force on Circumcision. Circumcision policy..., *op. cit.*



put in place. On the other hand, a preventive strategy could expose the subject to the risk of side effects and, at times, reduce the quality of life.

In doubt, it is fundamental to evaluate if the preventive intervention is necessary, if it could present a risk for public health, if the pathology determines serious consequences when it is contracted/transmitted, if the procedure is efficacious, if there are any non-invasive or minimally invasive procedures that could obtain the same objective, and if the individual will obtain a benefit that is not dependent on a speculation regarding his/her future behavior<sup>64</sup>. In the case of minors, it is also necessary to demonstrate that it is essential to perform the procedure before the subject reaches an age in which they can give consent.

Therefore, regarding newborn circumcision, it is, first of all, necessary to determine if the potential threats are relatively imminent. In the case of male circumcision, UTIs are the only potential forthcoming risk for newborns. Morris *et al.* state that preventive male circumcision is equivalent to other health interventions present in childhood such as breast-feeding, immunization, administration of nutritional products, the use of safe rear-facing baby capsules in motor vehicles, and the prevention of over-heating or cooling of a child. However, all these measures are directed against threats that can occur in childhood. In addition, none of these interventions require an invasive and permanent procedure<sup>65</sup>.

Second, it must be determined whether the potential threats can be prevented by non-invasive means. Many potential diseases can be prevented by hygienic measures and behaviors. UTIs can be prevented with adequate standards of hygiene, and in the case of UTIs, antibiotics are sufficient as therapy. The risk of penile cancer, of STDs and HIV infection/AIDS are strictly connected to sexual activity. It should, therefore, be the individual's responsibility, once they reach the age of consent, to choose between circumcision and other valid forms of prevention.

64 Svoboda JS, Van Howe RS. Out of step..., *op. cit.*

65 Morris B, Wodak A, Mindel A, *et al.* Infant male circumcision: An evidence-based policy statement. *Open Journal of Preventive Medicine* 2012; 2: 79-92.

## 5. Newborn male circumcision and ethical issues

Newborn male circumcision raises some important ethical issues such as: the child's right to bodily integrity, the child's right to an open future, parental rights, the child's best interest, and proxy consent.

Since male circumcision determines a permanent alteration of the body, some Authors believe that it can be used as a preventive method only in subjects that are capable of giving their valid consent<sup>66</sup>.

Bodily integrity is not usually considered a fundamental right: otherwise, the objection applied to male circumcision should also be extended to other interventions, such as, for example, cosmetic orthodontics. Mazor writes: "Note first that an absolute prohibition against all violations of a child's bodily integrity is obviously untenable. Such a prohibition would rule out vaccinations and other violations of bodily integrity (i.e., various critical surgeries) that are necessary to protect the health of the child"<sup>67</sup>.

First of all, as Pringle writes: "To compare the risks of circumcision with the risks associated with vaccination is just not true. Most of the diseases for which infants are vaccinated are potentially lethal or produce significant handicap. Go back to the last Polio epidemic and compare the risks of getting Polio with the risks of having the vaccination. Compare that with a 5-10% risk of infection or ulceration of the tip of the penis after circumcision and the small, but significant risk of death after neonatal circumcision. Vaccination is a low-risk intervention to prevent a problem with significant adverse outcomes. Circumcision is an intervention with significant risks (ignored or minimised by the authors of this paper) to prevent problems that will not develop in the vast majority of males; most of which can be simply addressed if and when the need arises"<sup>68</sup>.

Moreover, it is possible to object that orthodontic interventions present contemporaneously therapeutic and esthetic intentions and that an incorrect occlusion of the mouth alters not only the esthetics of the individual,

66 Svoboda JS. Circumcision of male infants as a human rights violation. *J Med Ethics* 2013; 39: 469-474.

67 Mazor J. The child's interests and the case for the permissibility of male infant circumcision. *J Med Ethics* 2013; 39: 421-428.

68 Pringle K. Circumcision health risks..., *op. cit.*

but also the capacity to masticate, digest and even alters their posture. Furthermore, in these cases (as well as immunizations), there are no possible alternative procedures, as opposed to the pathologies that newborn male circumcision is supposed to prevent.

In an ethical point of view, a material loss of 'integrity' is justified by the principle of totality: the good of the whole overrides the good of a part if that part is truly (not merely hypothetically or speculatively) a threat to the well-being of the whole<sup>69</sup>.

In the case of newborn male circumcision there is no evidence of a curative and immediate necessity to perform the procedure. On the contrary, preventive newborn male circumcision deprives the infant of a naturally protective tissue. Darby therefore concludes that preventive newborn circumcision is a violation of the child's right to an open future<sup>70</sup> The child's right to an open future is the right "while he is still a child.. to have . . . future options kept open until he is a fully formed self-determining adult capable of deciding among them' (Feinberg 1980)<sup>71</sup>. It implies to preserve children's future options and prevent them from making irreversible decisions they may later regret".

In adults, a surgical intervention requires the recipient's fully informed consent. For newborns, the decision whether or not to perform the procedure, therefore, should be taken by the parents.

The statement of the AAP that the parents should determine whether it is in the best interest of the child to perform a newborn circumcision, was criticized. Van Howe asserts that this statement is based on controversial medical evidence and that its appeal to the "child's best interest" is empty and without force. The ethical justification of the AAP statement on newborn male circumcision is founded on parental rights. Van Howe

argues that the parent-child relationship must shift from the parents' power of obligation to a vision of protection of the basic human rights and future options of the child<sup>72</sup>. Morris fears that shifting the decision regarding circumcision from a dimension of parental responsibility to that of the Law, opens the way to many other prohibitions, such as on vaccinations.

He claims that physicians should be the final decision-makers as to which procedures to offer and "parents should be the ones to decide which is the best option for their child". The parents are expected to make decisions in their child's best interest<sup>73</sup>. But, what is the child's best interest?<sup>74</sup>

In clinical pediatrics, when the minor cannot be involved in the decision-making process, the child's best interest is used as a standard. Deriving from the legal field, to help make decisions on issues regarding the welfare of a child (divorce, separation, adoption, etc.), the child's best interest standard is very difficult to define. Those who support the validity of the child's best interest standard, emphasize the positive value of the analysis of each individual case and the opportunity to remind physicians of their responsibility in decisions concerning the health and life of young patients<sup>75</sup>. Those who criticize its validity, consider the child's best interest standard potentially self-destructive, individualistic, dangerous, vulnerable to forms of abuse<sup>76</sup>, and difficult to use since the child cannot be involved in the decision-making process and, therefore, cannot express any opinion on her/his condition. Indeed, as pointed out by the AAP, the real evaluation of a patient's quality of life can only be made by the patient himself and not by an outside observer<sup>77</sup>.

72 Van Howe, R.S. Sexually transmitted infections..., *op. cit.*

73 Morris BJ, Tobian AA. Legal threat to infant male circumcision. *J Am Med Assoc Pediatr* 2013; 167: 890-891.

74 Cfr. González-Melado FJ, Di Pietro ML. El mejor interés del niño en neonatología: ¿Es lo mejor para el niño? *Cuad Bioet* 2015; 26: 201-222.

75 Kopelman LM. Rejecting the Baby Doe rules and defending a "negative" analysis of the best interests standard. *J Med Philos* 2005; 30: 331-352.

76 Downie RS, Randall F. Parenting and the best interests of minors. *J Med Philos* 1997; 22: 219-231.

77 American Academy of Pediatrics. Committee on Bioethics. Informed consent, parental..., *op. cit.*

69 Lang DP. Circumcision, sexual dysfunction and the child's best interests: why the anatomical details matter. *J Med Ethics* 2013; 39: 429-431.

70 Darby RJ. The child's right to an open future: Is the principle applicable to non-therapeutic circumcision? *J Med Ethics* 2013; 39: 436-468.

71 Feinberg J. The Child's Right to an Open Future, in Aiken W, LaFollette H. (eds.) *Whose Child? Children's rights, parental authority, and state power*. Rowman and Littlefield Publishers, Inc., Totowa, N.J. 1980, 124-153.

A reflection on the child's best interest standard seems necessary not only to determine its correct content and method of application, but also to verify its validity and usefulness. In fact, the limit of the child's best interest standard is, first of all, structural: it is the simple transposition of the principle of autonomy into a context where its exercise is not possible.

To make the evaluation more objective, it would be necessary to isolate the child's interests from those of the other subjects involved (parents, physicians, public health agencies). Since the child's first interest is their physical well-being, any intervention must be necessary and justified by the presence of a pathology, trauma, or malformation. Secondly, the intervention should not expose the child to any unnecessary pain or damage. When determining the risks and disadvantages of a medical act, reference is made to three criteria: 1. probability that the patient may suffer harm; 2. severity of the harm; 3. acceptability of harm<sup>78</sup>. These criteria do not appear sufficient in order to define the "minimum" damage in prevention medicine on children.

Referring to another field in which it is even more difficult to evaluate the risk/benefit ratio, such as RCTs with non-therapeutic objectives, it is proposed to quantify the "minimum" damage on the basis of the risk and/or discomfort that a child might encounter in everyday life and in the minor's specific situation or during routine examinations or psychological tests<sup>79</sup>, but it is difficult to define what risk or inconvenience can be defined "minimum" and therefore acceptable. There is also the risk of subjectivism, since it is difficult to determine the amount of risk that can be considered acceptable.

## 6. Is newborn male circumcision the child's best interest?

Considering that the role in preventing UTIs, penile cancer, STDs and HIV infection/AIDS is not presently supported by RCT in male newborn circumcision and

that short-term and long-term complications cannot be excluded, it does not seem to satisfy the child's best interest standard. Are there less invasive and more effective treatments?

UTIs can be prevented with adequate standards of hygiene, and in case of UTIs, antibiotics are sufficient as therapy. The risk of penile cancer, of infection of STDs and HIV infection/AIDS are strictly connected to sexual activity: it should, therefore, be the individual's responsibility, once they reach the age of consent, to choose if to be circumcised or to adopt other forms of prevention.

A physician cannot prevent parents from circumcising their child, unless he/she foresees an important risk deriving from the procedure. However, it is the physician's responsibility to explain to the parents how to preserve their child's health and to inform them on the importance of educating the child on correct life styles. Furthermore, in the case that parents should have a doubt on whether or not to circumcise their newborn child, they should ask themselves what would the child choose if he were capable of expressing consent.

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