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Review Article

Should a Pediatrician Recommend Circumcision?

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Abstract

Circumcision is a social reality that should be assessed in terms of social, cultural, psychological, medical, and many other aspects. This phenomenon should be on the agenda of the physician, without ignoring other aspects, primarily with its medical aspect; the physician should determine the steps, which would be followed, based on the guidelines of competent institutions, apply them to patients with personal experience and competencies, or guide the patient to have circumcision. If she/he is a pediatrician, that is, if she/he is not a physician who performs circumcision, she/he should know the details of the procedure at least as much as the practitioner and inform the family on the details of the procedure before referring to circumcision [1-4].

Many question marks need to be answered for physicians who perform the circumcision procedure as well. The objective of our review is to shed light on these question marks and to form a common language between the recommender and the practitioner of circumcision [5].

Keywords: *Recommender; Practitioner; Circumcision*

Discussion

Since the subject is a child, many times a neonate and always a urological intervention, research and assessments of institutions such as AAP (American Academy of Pediatrics) and European Association of Urology and Pediatric Urology should be followed, and new developments and recommendations should be taken into consideration [6-8]. Conscientious, legal, and moral responsibility necessitates this. Neonatal circumcision is not recommended routinely in these guidelines, which have changed over the years; yet it cannot be rejected totally due to its contributions to perineal hygiene [9]. It is recommended in numerous studies thanks to its benefit is more than its harms. Interestingly, in countries where circumcision is not practiced routinely, it is observed that it is recommended in cases where the regional colonization burden needs to be lessened rapidly [10].

Circumcision, which has been performed for centuries, is a surgical procedure, yet has some geographical differences [1-3,11]. Some beliefs and myths influence physicians on the issue of circumcision, as it could be in all cases beyond centuries. Of these, the belief that "newborn does not suffer" might lead physicians to make mistakes in practice. This indicates that physicians need to reconsider even the subjects they know best. Put differently, physicians should keep their medical knowledge and experience up to date. Circumcision is also included in this scope [12].

Prevalence of being circumcised

The most common surgical procedure worldwide is circumcision. Its prevalence varies depending on years, religious beliefs, and regional popularity. The rate of circumcised men in the USA, which was 63% until the 2000s, has decreased to 57%. It is over 80% in some states. It has a prevalence of 40% in Canada and Australia, whereas it is less than 15% in the UK. The prevalence of circumcised men, which was 4% in 2004 in South Africa, has escalated to 24%. The targeted prevalence for circumcision has been determined as 80% in the Republic of South Africa. While circumcision is performed at a rate of almost 100% in Jewish societies, this rate is over 90% in Islamic societies. It is performed in the first days of life in Jewish communities, while it is performed at any stage of life in Islamic societies [13,14].

The prevalence of circumcision is impacted by whether it is covered by health insurance in regions where traditional or religious circumcision is not required. As a matter of fact, the fact that the surgical procedure is covered by insurance in some states of the USA can enable the parents to remain on the side of "families who prefer circumcision" [15,16].

Pain management

Nowadays, pain relief is of top priority in the procedure of circumcision. Today, attention has been paid to the management of pain regarding the procedure of circumcision, which has gained popularity with religious and regional effects and stands out with its medical benefits. Circumcision actually signifies pain management. The most important factor in whether the parent decides on circumcision is pain. The potentiality that the child to be circumcised might suffer is a considerable factor in giving up the circumcision [17,18].

Assessments on the parent's anxiety related to circumcision

It has been demonstrated in study groups with many different countries and age groups that pharmacological pain relief is necessary for all ages and groups during circumcision. This is also the case with neonates. The belief that the fight against pain with only sugared water is adequate or the expression "newborn does not suffer from pain" should take its place in history as a common and erroneous belief among physicians [19-21].

There is a wide range of information deficiencies and erroneous practices regarding the prevention of pain that may occur, starting with the newborn group, and the proper administration of the correct pharmacological agent. It has been determined in a study, which was conducted in France, that the rate of neonatal surgery, which was performed with adequate pain relief, was less than 50% [22-24].

The use of the correct pharmacological agent requires accurate identification and grading of pain. Accurate identification is possible starting from the neonatal period, and it is based on some reliable principles. Communication challenges due to the unlucky nature of the neonate and the inability to express her/his problem should not be a cause for her/his pain [25].

It has been highlighted in numerous studies that pain management should start before the procedure, should continue during the procedure, and should go on until the acute pain is completed [20,23]. Today, painless circumcision can be performed with effective and accurate planning. There are more than 40 pain parameters and standardized and accepted pain scales. In these techniques, it is attempted to reach the accurate pain measurement by using different parameters from the facial expression of the baby to MRI examinations and values such as cortisol level in the blood. Here, the data obtained by the mother's observation of her baby must be more valuable. The significance of these measurements, which could not be included in circumcision plans and procedures yet was emphasized by AAP, and their effective use was recommended [26,27].

The Neonatal Facial Coding System, Premature Infant Pain Profile [PIPP], Neonatal Pain and Sedation Scale, Behavioral Infant Pain Profile, and Douleur Aiguë du Nouveau-né, which are considered to be reliable in infants with communication difficulties, have been identified based on the physiological responses and behavioral changes [26-30].

Non-pharmacological pain relief

The pharmacological/non-pharmacological pain relief threshold is uncertain. This uncertainty can be overcome by using pain assessment scales. It has been stated that the baby should not be allowed to suffer due to too much reliance on non-pharmacological measures, and it has been stated that these methods, which are applied to the infant, weaken the pain response of the infant despite feeling the pain. These measures include breastfeeding, giving sugared water, positioning, massage, and empty bottle breastfeeding [28-30].

Pharmacological agents

The number of pharmacological agents that can be used safely, as the circumcised child gets younger, is easily accessible in various guidelines. However, it has been revealed that it should not be forgotten that renal GFR and liver elimination rate are lower in the first 40 days of life and that overdose might be easier [30-34].

Where should circumcision be performed?

Circumcision is a sequence of surgical procedures that require serious planning. Selecting the right place to be operated is the answer to the question of how to avoid complications. It is widely accepted that circumcision should be performed under sterile conditions, which have emergency service with cardiopulmonary resuscitation equipment against anaphylaxis and various complications, and a healthcare professional who knows how to use this equipment is on the team. Pediatricians play a crucial role in preventing circumcision in improper conditions with typical rituals [35,36].

Who should perform the circumcision?

It is generally the pediatric surgeon who performs the circumcision procedure, although it varies depending on the country where the practice is performed. In some countries, pediatricians and gynecologists perform circumcision [5].

From the age of surgeon barbers to today, the "scientific circumcision", popular among non-physicians, Mohels, and physician Mohels, which are popular among the Jews and ultimately, the right person has been reached as a procedure limited only to the practice of physicians [11].

While the goal of proper circumcision was adequate in the past, today a painless circumcision and a circumcision that is performed by a team capable of intervening in the complications, which might occur, are recommended.

Does circumcision have a proven benefit?

What stands out as the medical benefit of circumcision is its protective feature against urinary tract infections, which occur under one year old. However, what is globally popular in circumcision is its significant contribution to the prevention of HIV infection, the condition which is most strongly emphasized by WHO as well [37].

Circumcision, which has not yet taken place in the first degree of evidence-based recommendations, has been defined in the 1999 and 2005 guidelines of AAP and the 2007 and 2013 guidelines of Urology Society. Many recent studies have revealed that neonatal circumcision can reduce the risk of urinary tract infections, penile cancer, and some sexually transmitted infections, including heterosexually acquired HIV, syphilis, herpes, and human papillomavirus [8].

Based on the previous research, the protective effects of circumcision have reduced HIV cases by 40% to 60% in the region of South Africa where the cases of HIV are very common. Other protective benefits include a 28% to 34% lower incidence of Herpes simplex virus type 2 among circumcised men and a 30% to 40% reduction in HPV infection [38].

Disadvantages of circumcision

In addition to having medical benefits, it should be known that circumcision might have complications as well. No evidence has yet been shown that the preputium protects the glans by covering it, preventing the glans sensitivity from declining over time and adversely affecting sexual function or sensitivity. It is also known that some circumcised men resort to glans-covering surgery because of the decreased sexual pleasure. Considering the topical anesthetics applied to the glans to prolong the duration of sexual activity, it is understood that this issue needs to be investigated further [37-39].

The incidence of circumcision complications is 1.1% in the neonatal period and 9% in non-newborns. For both newborns and non-newborns, the most common risk is bleeding and infection. Dealing with these complications is easy and possible [40]. Buried penis, glans necrosis, urethral fistulas, skin loss, and scrotal Lymphedema, which are less common, as well as deep anemias, which are common in cases of bleeding diathesis, can also be considered as complications. Many of these are due to improperly performed procedures [41].

Social impact

Perhaps the last issue to consider when deciding on circumcision is the role of circumcision in a child's participation in social life. The stress of not being circumcised can be more severe than acute pain stress that can easily be tackled with medication when circumcised [29,36,42].

Informing

Until the 2000s, it had been reached from the statement that "it may be of little benefit" to the belief that "circumcision protects the baby". Regardless of the reason, a physician is required to inform the parents impartially. In such uncertainty, bringing the parent closer to or away from the circumcision procedure depends on the physician's impartiality. In accordance with these uncertainties and the policy of "taking evidence-based action" and "keeping the patient on the safe side", the point where the physician should be is to support the choice of the parent. In today's medicine, where evidence-based pharmacology agents that are used safely can be banned, and medical practices can be abandoned, this should be the best thing the physician can do about circumcision, where uncertainties are broad [43].

Conclusion

While informing the parents, the risks and benefits should be presented together, and it should be ensured that they participate in this medical and social ritual, the boundaries of which are not medically clear. The parent has a right to know that there are risks, whether permanent or not. The fact that these risks are less than 10 times under the age of 1 might be a situation that physicians should consider and emphasize for their patients. Although the prevalence of circumcision is increasing in some developed countries and decreasing in some countries creates doubts about the future of circumcision, there is no doubt that the circumcision procedure, which is widely on the world agenda, should be performed properly, at least today.

The fact that the world's oldest surgical procedure should be made less painful, the pain that may occur should be identified correctly, the pain should be relieved without medication, if the use of medication is required then it should be in minimal doses, and new and widespread study groups are needed will not change.

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