PROVIDING PARENTS EVIDENCE-BASED DATA ABOUT INFANT CIRCUMCISION

By

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A male who is uncircumcised is at an increased risk of developing phimosis, paraphimosis, balanoposthitis, penile cancer, and sexually transmitted infections including Human Immunodeficiency Virus. Parents have little understanding about the care of a recently circumcised infant. This manuscript discusses common methods of infant circumcision, methods of pain control, commonly held reasons for and against infant circumcision and the nurse practitioner’s role in educating parents about circumcision and the care of their newborn child.

In the United States, circumcision is usually performed within the first few weeks of life. There are three variations of circumcision surgery practiced today. All three methods use the same principle; separation of the foreskin from the glans of the penis, application of a clamp to help stop blood flow to the foreskin and then surgical removal of the foreskin.
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INTRODUCTION

A male who is uncircumcised is at an increased risk of developing phimosis, paraphimosis, balanoposthitis, penile cancer, and sexually transmitted infections including human immunodeficiency virus (HIV) (American Academy of Pediatrics, 1999; Christakis et al. 2000; Schoen, Wiswell, & Moses, 2000). Balanoposthitis, phimosis and paraphimosis occur only in uncircumcised males. However, of all these conditions balanoposthitis, phimosis and paraphimosis (rare) are conditions seen in infants (Beers & Berkow, 1999).

Parents have many questions about male infant circumcision, including little understanding about the care of a recent circumcision of their infant. Approximately 25% of infants seen for their two-week check-up have developed adhesions or skin bridges at the surgical site (A. Black, personal communication October, 2000). This necessitates the examiner having to manually release the adhesions, causing further unnecessary pain to the infant. According to the Health Belief Model, health-seeking behavior is influenced by a person’s perception of the threat of a health problem, and the values placed on the actions aimed at reducing that threat (Polit & Hungler, 1999).

This manuscript discusses common methods of infant circumcision, methods of pain control, commonly held reasons for and against infant circumcision and the nurse practitioner’s role in educating parents about circumcision and the care of their newborn child.
HISTORICAL ASPECTS

Through Biblical accounts, we learn that Abraham was promised to be a father of many nations. As a sign of being a descendent of Abraham, a covenant was made whereby every man child would be circumcised at eight days old (Genesis 17:10-12 King James Version). The children of Israel who wandered with Moses in the wilderness practiced circumcision (Exodus 12:48; Joshua 5:2). Circumcision was carried out as a covenant with God, and a means of identifying God’s chosen people. To be an uncircumcised male meant that he would not be recognized as a true follower of God (Ezekiel 44:9; Genesis 17:14; Glausiusz, 2000).

Evidence of male circumcision dates back to about 2200 BC in Egypt. Carvings in the necropolis of Saqqara, built around this time, depict temple priests cutting the genitals of young men. Radiographs of 6000-year-old mummies also show them circumcised (Glausiusz, 2000). While there is no clear indication as to why circumcision was done, it is widely believed that it was for maintenance of cleanliness.

According to Glausiusz (2000), Gollaher, (1994), as well as Levenson (2000), in 1870 Dr. Lewis A. Sayre, a leading orthopedic surgeon, was called to examine a young paralyzed boy. He determined that the boy had a very tight and inflamed foreskin. He decided to circumcise the boy and soon the boy was up walking. This effect was seen in other boys who were similarly afflicted and it was then thought that this genital irritation was the cause of many types of paralysis, as well as
epilepsy, hernia development, mental disorders, irritable children, restless sleep and poor digestion. These theories were all based on the thinking that these ailments were caused by the irritation of the nervous system due to the constricted prepuce (Glausiusz, 2000; Levenson, 2000).

In the late nineteenth century Louis Pasteur – considered the father of microbiology – introduced the theory of germs causing infection (Cohn, 1999; Keene, 1999). Along with the germ theory the importance of personal hygiene became recognized. The uncircumcised penis released a thick white secretion, smegma, which at the time was labeled as infectious. At the same time as there was increased concern in washing with soap to decrease the amount of germs on the body, there was also an increase in the number of circumcisions for all men, Jewish or not (Levenson, 2000).

In the late 19th century, there was a concern of masturbation being the root of many ills, i.e., paralysis, convulsions, and even tuberculosis. At that time circumcision was prescribed for its believed effects of decreasing sexual pleasure. Some physicians and moralists even believed that the pain suffered during the procedure would serve as punishment for acts of masturbation and thus discourage further practice of masturbation (Gollaher, 1994).

Class distinction gained growing importance around the turn of the twentieth century. Immigration from Southern and Eastern Europe created a crisis of cultural identity. These foreigners were scorned as racially inferior, or as refuse from the old
world. At this time circumcision was seen as an indication of both a higher and a cleaner class of people. (Gollaher, 1994). Circumcision has evolved to the point of being the most common surgical procedure performed in the United States (Gollaher, 1994; Levenson, 2000).

MEDICAL ASPECTS

At birth the foreskin is mostly attached to the glans of the penis. Over the first five to six years of life, the skin of the glans desquamates and separates from the mucous membrane of the foreskin (American Academy of Pediatrics, 1999).

Benefits of Circumcision

Some health threats that circumcision is believed to treat or prevent are phimosis, paraphimosis, balanoposthitis and the threat of developing penile cancer later in life (Schoen, Wiswell, & Moses, 2000; To, Agha, Dick, & Feldman, 1998). Phimosis is a tightening of the foreskin, such that it cannot be retracted toward the abdomen. This may effectively close off the opening of the penis so that it will be extremely difficult, if not impossible to urinate. Phimosis makes good hygiene to the penis difficult.

Paraphimosis, rarely seen in infants, is an inability to slip the foreskin back over the glans of the penis after it has been retracted. This inability results from the foreskin constricting after it had been retracted. If the foreskin is left in this retracted and constricted state, tissue damage to the penis is possible due to loss of blood supply to the area.
Balanoposthitis is an infection of the glans and the foreskin. Bacteria or yeast growing under the foreskin of an uncircumcised male usually causes this infection. Infection predisposes the male to meatal strictures, phimosis, paraphimosis and cancer (American Academy of Pediatrics, 1999). Circumcision to treat these three acquired problems may be done at any time in a male's life. However, while the circumcision is done using local anesthesia in the newborn, circumcision performed later in life requires general anesthesia (American Academy of Pediatrics, 1995).

In addition to prevention of phimosis, paraphimosis and balanitis, as well as general cleanliness there are several proposed benefits of circumcision. Among these are a decrease in the number of urinary tract infections (UTIs) during the first year of life; protection from penile cancer; and a reduced risk of developing sexually transmitted diseases (STDs), such as syphilis, herpes, gonorrhea or human immunodeficiency virus (HIV) (Christakis et al., 2000; Schoen, Wiswell, & Moses, 2000). It is believed that the presence of the foreskin provides a warm, moist area for organisms causing urinary tract infections and sexually transmitted diseases to flourish. In several studies, it is reported a 10 in 1,000 chance of an uncircumcised child developing a urinary tract infection as opposed to a 1 in 1,000 chance of a circumcised child developing a urinary tract infection (Harrison, 1999; Lannon et al., 2000; Lowen, 1998; Napoli, 1999; Rose, 1999; Schoen, Wiswell, & Moses, 2000). Another study stated rates of less than 2 urinary tract
infections for every 1,000 circumcised boys and 7 urinary tract infections for every 1,000 uncircumcised boys during the first year of life (To, et al., 1998).

In the U.S., uncircumcised males are approximately three times more likely to develop penile cancer (invasive penile cancer and carcinoma in situ), than circumcised males (Harrison, 1999; Rose, 1999; Schoen, Oehrli, Colby, & Machin, 2000). However, Schoen, Oehrli et al., report that when looking at invasive penile cancer alone, uncircumcised males are approximately 22 times more likely to develop this life threatening disease. However, protection from penile cancer is seen mostly in men who were circumcised as newborns (Harrison, 1999; Schoen, Oehrli, et al., 2000; Schoen, Wiswell, & Moses, 2000). The rate of penile cancer in uncircumcised men is 1 case per year for every 100,000 men (Lowen, 1998). Schoen, Oehrli, et al., (2000) report penile cancer rates vary from 0.1 per 100,000 men in Israel where almost all men are circumcised, to 4.2 per 100,000 in poorer countries, such as Paraguay where few men are circumcised and hygiene is poor (see Table 1). While this rate is relatively low, the evidence is that infant circumcision may provide some protective effect.

The issue of whether a man is at increased risk for HIV if uncircumcised, has proponents on both sides of the issue. Many argue that risky sexual behavior has a greater indication for the development of HIV and not whether a man is circumcised or not. There are others who challenge this notion. One researcher, Maina Kahindo, a Kenyan microbiologist, studied whether levels
of risky sexual behavior influence the incidence of HIV in males. His study compared Kenya and Zambia, where HIV rates are 25% of the population, to Benin and Cameroon where HIV rates are below 6%. The only important difference in sexual behavior was that risky sexual behavior was more prevalent in Cameroon. Kahindo reported that the real difference in incidence was in male circumcision. He reported that greater than 98% of the men in Benin and Cameroon were circumcised compared to 30% in Kenya and 10% in Zambia (To snip, 1999).

There appears to be three hypotheses to explain the increased likelihood for HIV infection in uncircumcised males. One hypothesis is that the highly vascularized prepuce contains a higher density of Langerhans cells. These cells are target cells for the transmission of HIV (American Academy of Pediatrics, 1999; Halperin & Bailey, 1999; Schoen, Wiswell, & Moses, 2000). A second hypothesis is that the foreskin is more susceptible to tiny tears in the skin, which may increase vulnerability to HIV infection. A third hypothesis is that the circumcised penis has a tougher glans and this tougher skin is more resistant to tiny microtears in the skin surface, thus less likely to give HIV and other STDs an entry point (To snip, 1999).

Reasons Against Circumcision

There are also conditions when circumcision is not recommended. These conditions include epispadias, when the opening of the penis is on the top of the penis, or hypospadias, when the opening is on the underside of the penis, or anytime a
defornity is present and the foreskin may be needed to correct of the problem. Circumcision is also not recommended, if there is a family history of hemophilia or other bleeding disorders or if the mother has been taking anticoagulants including long-term aspirin therapy (Beers & Berkow, 1999).

There are also reasons proposed that support the choice to not circumcise. Among these reasons are the risks of surgery, no matter how minor; the belief that the foreskin is a protective covering for the penis; the belief that circumcision decreases the sensitivity of the penis, thus decreasing sexual pleasure and the assertion that all boys can be taught proper hygiene of the penis and foreskin (American Academy of Pediatrics, 1995).

Schoen, Wiswell, and Moses (2000) point out that the increased risk of surgery is the only reason that is evidence-based. All other reasons are anecdotal.

The possible risks of infant circumcision are rare and usually minor. The most common risk is that there can be some prolonged bleeding. Other risk factors are: (1) surgical site infection; (2) cutting the foreskin too short or too long and (3) a risk of improper healing (American Academy of Pediatrics, 1995).

In addition, opponents of circumcision will point out that the infant does not have a choice in circumcision. They argue that it violates medical ethics to perform surgery to remove normally healthy tissue in a procedure that has no clear and immediate benefit or the procedure is nonessential for the
child’s current well-being (Prescott, Milos, & Denniston, 1999). However, this line of thinking seems to argue against other preventative measures such as immunizations, dental care, and nutrition. These measures also can be seen as nonessential for current well-being (Schoen, Wiswell, & Moses, 2000).

Comfort Measures

Tactics used to help consolability during and after the surgery are the use of a pacifier dipped in a sugar solution and use of a well-padded restraint chair (O'Mara, 1998). These methods appear to be helpful in decreasing crying during circumcision (Easing the pain, 1999; O’Mara, 1998). Use of acetaminophen is believed to provide analgesia after the operative procedure (American Academy of Pediatrics & Canadian Paediatric Society, 2000). It should be noted that neither of these tactics have research-based evidence of sufficient pain relief, if used alone during the procedure.

SURGICAL ASPECTS

In the United States, male circumcision is usually performed within the first few weeks of life. There are three variations of circumcision surgery. All three methods use the same principle; separation of the foreskin from the glans of the penis, application of a clamp to help stop blood flow to the foreskin and then surgical removal of the foreskin.

Surgical Methods

The methods of performing circumcision are use of a plastic ring called the plastibell® device and use of the Gomco® or Mogan® clamp. The plastibell® device is a plastic ring that is
placed over the end of the penis to stop blood flow and left in place after the foreskin is removed to help control post-op bleeding. The Gomco® or Mogan® clamp is used to hold the foreskin and stop blood flow during the removal. After removal of the foreskin a petroleum saturated gauze dressing is wrapped around the penis to provide protection of the raw edges and to keep the tissue soft during healing (Krames Communications, 1997).

**Pain Control**

Historically, it was erroneously believed that an infant’s nervous system was not fully developed enough to allow transmission of pain signals. Recent studies have firmly refuted this opinion and provide evidence that pain is very much present (Porter, Wolf, & Miller, 1999). The American Academy of Pediatrics (1999) recommends the use of anesthesia and analgesia during and following circumcision. Several methods of pain control are available and have shown varying levels of relief.

Application of a eutectic mixture of local anesthetics (EMLA cream) is one way of providing anesthesia. This cream consists of 2.5% lidocaine and 2.5% pilocaine. One half of a gram to two grams of this mixture is applied to the distal half of the penis 60 to 90 minutes before the circumcision (Taddio, Ohlsson, Einarson, Stevens, & Koren, 1998). Infants given this type of anesthesia cry for shorter time and have less change in their vital signs during the circumcision procedure. However, there appears to be a limited anesthesia effect during the phases of the procedure that involve tissue trauma, notably the
application of the clamp and dissection of the foreskin (American Academy of Pediatrics, 1999; Olson & Downey, 1998; Veltman, 1999). There are some adverse effects that have been observed with the use of EMLA cream. These adverse effects are limited to skin irritations such as blanching, redness and small superficial blisters (Holiday et al., 1999; Taddio, et al., 1998). There appears to also be some concern about using EMLA cream on neonates due to a risk of methemoglobinemia from pilocaine metabolites that oxidize hemoglobin, a potential condition caused by a deficiency of the enzyme that reduces methemoglobin (Taddio, et al., 1998). However, in 12 studies reviewed by Taddio et al., there were no statistically significant levels of methemoglobinemia found in infants given a single 1.0 to 2.0 gram dose of EMLA cream prior to circumcision.

The more common method of anesthesia in use today is that of a Dorsal Penile Nerve Block (DPNB). Four-tenths of a milliliter of 1% lidocaine is injected into the skin at the base of the penis. When compared to infants receiving no anesthesia or receiving normal saline injections, infants given this type of anesthesia cry 45% to 76% less, have 34% to 50% smaller increases in heart rate and have smaller decreases in oxygen saturation (American Academy of Pediatrics, 1999; Veltman, 1999). Holiday et al., (1999) and Olson and Downey, (1998) also reported DPNB showed better anesthesia than EMLA cream.

A third method of anesthesia is a Subcutaneous Ring Block (SRB). This method uses about 0.8 ml of 1% lidocaine without epinephrine injected just under the skin around the
circumference of the penis at midshaft. Two studies found this method (SRB) to be more effective than EMLA cream or DPNB (American Academy of Pediatrics, 1999; Veltman, 1999). The ring block method appeared to prevent crying and increases in heart rate better than EMLA cream or DPNB. Such evidence was observed in all phases of the circumcision (American Academy of Pediatrics, 1999).

ANECDOTAL ASPECTS

The newborn period is the optimal time for circumcision. The procedure is quick, safe, economical, and has maximal effectiveness if done at this time in a boys' life (Schoen, Wiswell, & Moses, 2000).

One mother wrote about her observations of the thoughts and feelings of her son who had a circumcision performed when he was 7 years old. The surgery was proposed to counter several UTI infections the boy had had, presumably due to phimosis. After discovering that several of the other boys at school had had this "special" surgery, he was fairly comfortable with the proposed surgery. However, immediately after surgery the boy was shocked and angry at the change to his penis, which was quite swollen and bruised. Then, over the weeks following the surgery while healing took place the boy frequently talked about how doctors and nurses were mean and only served to torture children and cause them pain (McFadyen, 1998).

Several people have questioned if the foreskin is not needed, why is it there in the first place. Thus it must have a purpose. The purpose most easily proposed is that it is there
for protection of the glans (American Academy of Pediatrics, 1995).

As for the sensitivity issue, it is thought that there are sensitive nerve endings on the prepuce, which contributes to the pleasure of sexual activity. The glans of the circumcised penis is dry and tougher than the uncircumcised penis. This toughness is thought to also decrease the sensitivity. All these views have not been scientifically proven (American Academy of Pediatrics, 1995). Two articles state that surveys indicate women prefer sex with circumcised men and that circumcised men have less sexual dysfunction (American Academy of Pediatrics, 1999; Schoen, Wiswell, & Moses, 2000).

ROLE OF NURSE PRACTITIONER

Education Pro/con

There are many reasons for and against circumcision. Among the reasons for are the beliefs of better cleanliness, the possible reduction in the threat of disease, the desire for the boy to look the same as other boys, and the desire to have the boy look like dad. The reasons against are that boys can be taught to provide their own good hygiene, there is not enough evidence to fully recommend circumcision, and that since circumcision is being performed less frequently, there is less of a chance of boys looking different.

There are many beliefs about the benefits versus the lack of benefits of circumcision. Nurse practitioners caring for infants or for families expecting a new infant should educate
parents about their options with regard to circumcision and the care of the circumcised or uncircumcised penis.

Obstetricians, pediatricians, or family physicians most often perform circumcision surgery. Each physician has his/her preferred method of circumcision and type of anesthesia, if any, which is used. Nurse practitioners should be sure to encourage those parents seeking circumcision to discuss these options with the physician who will perform the surgery. While most nurse practitioners do not perform surgery, they are frequently involved in the care of the child after the circumcision. Table 2 addresses guidance that should be given parents as to when to call their healthcare provider should problems arise in their circumcised infant. Table 3 addresses guidance for parents of uncircumcised infants. Nurse practitioners provide assessment of the genital area at subsequent well-baby exams. These exams are an opportune time to not only assess that the penis is healing properly but to also reassess the parents understanding of their baby’s care.

Absence of personal values

Circumcision in the United States is currently on a slight decline. This is believed to be related to the limited hard evidence of circumcision being medically necessary. When discussing circumcision options with parents, the practitioner should give information based on the evidence that is available. Informing parents of the possible threats to the future health of their son and the available actions aimed at reducing that threat.
Frequently asked questions

Questions asked by parents considering circumcisions are:
What is circumcision? Is circumcision painful? What should I expect for my son after circumcision? Are there problems that can happen after circumcision? (American Academy of Pediatrics, 1995). Table 4 addresses care of the genital area of circumcised infants.

A few of the common questions asked by parents of uncircumcised boys are: What is foreskin retraction? What is smegma? Does my son’s foreskin need any special cleaning? Is there anything else I should watch for? (American Academy of Pediatrics, 2000). Table 5 addresses care of the genital area of uncircumcised infants.

SUMMARY

There appear to be many conditions that are influenced by whether a male is circumcised or not. Likewise there appear to be many arguments for and against circumcision. Therefore, according to the Health Belief Model the choice of parents to circumcise or not circumcise their child is based on their perception of the possible risks (both socially and physically) and the value they place on the actions to reduce that risk.

Research shows that the greatest benefit of circumcision is when the circumcision is accomplished in infancy. Among these benefits are the decreases in the incidence of UTI’s during the first year of life, the prevention of balanoposthitis, phimosis, and paraphimosis, and later in life the reduced risk of STD’s and invasive penile cancer.
Although male infant circumcision is a fairly common surgery in the U.S., many questions remain in the minds of parents. Healthcare providers should engage parents in a discussion about circumcision prior to the birth of their baby. Healthcare providers should provide clear non-biased information about what circumcision is; the methods used to perform circumcision, including the types of anesthesia; the method of circumcision/anesthesia preferred by the healthcare provider who will be performing the surgery; what behavior and appearance to expect in their infant after the circumcision and how to care for the penis during healing. For those parents who choose not to circumcise their child, education regarding good hygiene of the genital area is necessary. This information should be reinforced after the birth and before discharge from the hospital. A return demonstration of their understanding of the care of their son is recommended.
References


Hollister Incorporated. (1995). Now that your baby has been circumcised [Brochure]. Libertyville, IL: Author.


Table 1

Incidence of penile cancer based on rate of circumcision and adequate hygiene

<table>
<thead>
<tr>
<th></th>
<th>Rate of cancer per 100,000</th>
<th>Circumcised / uncircumcised</th>
<th>Adequacy of hygiene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Israel</td>
<td>0.1</td>
<td>Almost universal circumcision</td>
<td>(Not reported)</td>
</tr>
<tr>
<td>Denmark</td>
<td>1</td>
<td>Uncircumcised</td>
<td>Good</td>
</tr>
<tr>
<td>Paraguay</td>
<td>4.2</td>
<td>Uncircumcised</td>
<td>Poor</td>
</tr>
</tbody>
</table>

(Schoen, Oehrli, Colby, & Machin, 2000)
Table 2
When to call the healthcare provider

<table>
<thead>
<tr>
<th>Circumcised</th>
<th>Call during office hours if:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Call promptly if:</td>
<td>- the circumcision looks swollen and red.</td>
</tr>
<tr>
<td>- the urine comes out in dribbles</td>
<td>- If a plastibell® is used and;</td>
</tr>
<tr>
<td>- the head of the penis becomes blue or black</td>
<td>- the plastibell® falls off before 2 days</td>
</tr>
<tr>
<td>- the incision line bleeds more than a few drops at a time</td>
<td>- the plastibell® ring has not fallen off by 14 days</td>
</tr>
<tr>
<td>- the circumcision looks infected, usually red and swollen</td>
<td>- the plastibell® ring slips onto the shaft of the penis</td>
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<tr>
<td>- the baby develops a fever</td>
<td>- there are any other health concerns</td>
</tr>
<tr>
<td>- the baby is acting sick</td>
<td>(Hollister Incorporated, 1995; Krames Communications, 1997; Schmitt, 1999).</td>
</tr>
</tbody>
</table>

Table 3

<table>
<thead>
<tr>
<th>Uncircumcised</th>
</tr>
</thead>
<tbody>
<tr>
<td>Call provider if:</td>
</tr>
<tr>
<td>- the stream of urine is never heavier than a trickle</td>
</tr>
<tr>
<td>- the baby seems to have discomfort when urinating, after the first day</td>
</tr>
<tr>
<td>- the foreskin becomes reddened, swollen or a foul smelling drainage is present</td>
</tr>
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</table>

(American Academy of Pediatrics, 2000)
<table>
<thead>
<tr>
<th>Infant Genital Care</th>
<th>Circumcised Infant</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Gently retract the loose skin just behind the glans so that you can see the rim of the glans. (This helps to prevent this loose skin from becoming attached to the base of the glans, a condition known as adhesions. If adhesions are allowed to form it may require your provider to have to release them causing further discomfort for the infant. In severe cases the adhesions may necessitate further surgery.)</td>
<td></td>
</tr>
<tr>
<td>- The surgical site should be kept clean and the diaper changed often.</td>
<td></td>
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<tr>
<td>- Wash gently with water three times a day.</td>
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<tr>
<td>- Use of soap should not be necessary, although commercial baby wipes may be used.</td>
<td></td>
</tr>
<tr>
<td>- Petroleum jelly or an antibiotic ointment should be applied to the site after cleansing to keep it soft during healing.</td>
<td></td>
</tr>
<tr>
<td>- During the first few days after a circumcision there may be a yellowish discharge that forms a crust. This is a sign that it is healing (Jussim, 2000; Schmitt, 1999)</td>
<td></td>
</tr>
<tr>
<td>- If no plastic ring is present there may be a gauze dressing saturated with petroleum jelly wrapped around the surgical site.</td>
<td></td>
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<tr>
<td>- This dressing should be removed with warm compresses after 24 hours. (Schmitt, 1999).</td>
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</tbody>
</table>
Table 5
Infant Genital Care

<table>
<thead>
<tr>
<th>Uncircumcised Infant</th>
</tr>
</thead>
<tbody>
<tr>
<td>- It is important to know that the foreskin of young boys does not fully retract for several years and should never be forced.</td>
</tr>
<tr>
<td>- During this time all that is required is gently washing the genital area with warm water as part of his regular bath, there is no need for special cleaning at this time (American Academy of Pediatrics, 2000).</td>
</tr>
<tr>
<td>- As the foreskin separates from the glans of the penis skin cells are sloughed off. These cells combined with moisture under the foreskin and create a white cheesy-like substance called smegma.</td>
</tr>
<tr>
<td>- Smegma is often found in lumps resembling pearls. This is normal and requires no care beyond regular bathing (American Academy of Pediatrics, 2000).</td>
</tr>
<tr>
<td>- At around 5 years of age (some boys may take until adolescence) the foreskin is fully separated from the glans and can be fully retracted. At this time he should be taught to clean the penis and foreskin by gently pulling the skin toward the abdomen and away from the head of the penis.</td>
</tr>
<tr>
<td>- The penis and foreskin should be rinsed with soap and water.</td>
</tr>
<tr>
<td>- The foreskin needs to then be pulled back over the head of the penis to its original position.</td>
</tr>
<tr>
<td>- After puberty he should retract and clean the foreskin on a daily basis (American Academy of Pediatrics, 2000).</td>
</tr>
</tbody>
</table>