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Overall Statement: Medical Proof of Circumcision Benefits by Edgar J. Schoen, MD, FAAP

Compelling medical data much of it accumulated in the past 2 decades, have conclusively shown that a boy circumcised as a newborn has multiple lifetime health advantages compared to one with an “intact” foreskin. These include protection against serious kidney infections in infancy, sexually transmitted diseases (STDs) including human immunodeficiency (HIV) infections and human papilloma virus (HPV) in young men, and invasive cancer of the penis in middle and old age. In addition, all through life uncircumcised males are more susceptible to penile infections (balanoposthitis) and a variety of skin disorders of the penis such as eczema and psoriasis, as well as more difficulty maintaining good hygiene. About 1% of boys are born with only a pinpoint opening at the tip of the foreskin (phimosis) preventing retraction, leading to painful erections, and requiring future circumcision, at a time when the procedure is more difficult, risky and costly. Further, women sexual partners of uncircumcised men with HPV infection are at significantly greater risk of developing cervical cancer.

How convincing is the scientific evidence of circumcision advantages? Overwhelming in the cases of infant kidney infections, penile cancer and local disorders, and compelling for HIV, HPV and risk of female partners of uncircumcised men with HPV infections. In the mid 1980’s, Dr. Tom Wiswell, a military pediatrician opposed to newborn circumcision, examined the United States (US) Armed Forces records of over 200,000 newborn boys and to his surprise found that uncircumcised boys were 10 to 20 times more likely to develop severe kidney infections in the first year of life. Since then a dozen published reports confirm this protective effect of circumcision against infant urinary infections and explain how these infections occur. The warm, tight, moist undersurface of the infant foreskin provides an ideal home for the harmful fecal bacteria that cause kidney infections. These bacteria (“uropathic, fimbriated E. Coli”) have tentacles which attach to the foreskin and then climb up the urinary tract to the kidney. The resultant infection leads to kidney scarring in almost half the cases, as well as body salt loss and hormonal changes in some instances. Although there is no proven long-term evidence to date of permanent kidney damage, these effects are disturbing.

All studies on invasive penile cancer from 1930 to the present have shown that this devastating malignancy is almost entirely limited to uncircumcised men. In 1932 it was reported from what is now the Sloan Kettering Institute, that of 120 men with penile cancer none were circumcised; all subsequent studies have confirmed this overwhelming preponderance. In Kaiser Permanente Northern California Region (KP), a large health maintenance organization (HMO), recently published studies found that uncircumcised males are about 22 times more likely to get invasive penile cancer and 10 times more likely to get infant kidney infections as are circumcised males (Schoen, Pediatrics 2000).
In the case of HIV, reports published in the late 1980’s in two of the world’s leading medical journals, the New England Journal of Medicine and Lancet, found that uncircumcised men in Africa had about four times the risk of acquiring the virus following sexual exposure. In the ensuing 14 years this observation on the protective effect of circumcision against HIV has been repeated in over 30 separate series, including all 8 prospective studies (looking forward from exposure, rather than backwards from diagnosis). Further, the likely reasons for the role of the foreskin in the spread of HIV have been clarified. In addition to the risk of the virus entering through foreskin tears, it has been found that the foreskin is rich in special cells, Langerhans cells, which trap and normally help kill invading infectious organisms. But in the case of HIV the trapped virus is not destroyed but binds to these special cells and is introduced into the body.

As for HPV penile infections and cervical cancer, in 2002 a report in the New England Journal of Medicine reviewed over 1900 sexual partners from 7 different studies in 5 countries. It was found that uncircumcised men were 3 times more likely to develop penile HPV infection as were circumcised men and female partners of the uncircumcised men were at significantly greater risk of developing cervical cancer.

During World War II, particularly during the North African desert campaign, the combination of sand and lack of hygienic conditions proved disastrous to uncircumcised men. The loss of these soldiers to active duty in combat areas resulted in prophylactic circumcision being performed on many recruits at training centers. A World War II medical report from the U.S. Army referred to the “enormous man-hour loss from disease peculiar to the uncircumcised man,” and stated that “hospital admission from paraphimosis, phimosis, balanitis and condyloma accuminata during 1942 – 1945 totaled 146,793. Had these patients been circumcised before induction, this total would probably have been close to zero”. A similar though less well-documented loss to active duty occurred in uncircumcised servicemen in Operation Desert Storm during the Gulf War.

If the evidence favoring circumcision is so strong, why is the public given contradictory and misleading information? The reasons are twofold. Probably most important is the lack of interest and objectivity of organized medicine, particularly the American Academy of Pediatrics. The second source of misrepresentation is by the activist, lay anti-circumcision groups, which dominate the media and the Internet and concentrate on anecdotes, testimonials and undocumented opinions.

The problems with the position of the American Academy of Pediatrics (AAP) began in 1971 when the Newborn Section issued a single, undocumented sentence -- “There are no valid medical indications for newborn circumcision”. This statement, unsupported by data or references, revealed an unawareness of the large and growing body of evidence on the protection against penile cancer, as well as the World War II Army data on the elimination of local foreskin problems. Due to dissatisfaction with this 1971 statement, an AAP Task Force was convened in 1975, which, after looking at the evidence, found that there were indeed valid reasons to perform newborn circumcision. But, rather than admit that a mistake had been made, the AAP, still under the Newborn Section, chose to obfuscate the issue by semantics, concluding “there are no absolute indications for newborn circumcision”. Since there are few absolutes in the world, the issue was only further confused. With the misleading position of the AAP and the rapid growth of the lay anti-circumcision groups the newborn circumcision rate fell from 85 – 90% in the 1950’s – 1960’s to about 65% by the late 1970’s. The AAP reassessed its position on circumcision following published evidence in the 1980’s of protection against infant kidney infection and the suggestion of HIV prevention. The report of this AAP
Task Force, published in 1989, confirmed the advantages of circumcision in prevention of penile cancer, foreskin diseases and hygiene promotion, and listed the disadvantages of pain and possible surgical complications. The possible advantages of avoidance of infant kidney infections (UTIs) were considered suggestive but not yet proven at that time. In a non-directional manner the parents and providers were advised to consider these confirmed benefits and risks in their decisions.

With increasing published research showing advantages, the AAP studied the evidence again in a report issued in 1999. In the ensuing years since 1989, the evidence on protection against penile cancer and infant kidney infection had become overwhelming, and prevention of HIV compelling, adding to the advantages of neonatal circumcision. At the same time, local anesthesia has become established as effective and safe, eliminating the pain disadvantage. Unexplainably, in the face of this increased evidence of support for the procedure, documented in the report itself, the 1999 conclusions discouraged newborn circumcision. Proven evidence was referred to as “potential benefits” and the Task Force said it could not recommend newborn circumcision but did not say why. Anti-circumcision jargon was used – circumcision was referred to as “amputation” of the foreskin, and a known anti-circumcision pediatrician appeared before the group and refers to himself as a “consultant”. Further, this anti-circumcision stance, discordant with the evidence, was accompanied by a statement that newborn circumcision is not necessary for the acute management of the newborn, a puzzling and irrelevant statement since newborn circumcision, like immunization, is a preventative health measure, not a treatment for acute illness. The misleading nature of the 1999 AAP report has been challenged by pediatricians and other professionals (Schoen, Pediatrics 2000), and diminishes the credibility of the AAP on this topic.

The lay activist, anti-circumcision groups, beginning in early 1970’s, have dominated the media and recently the Internet, and have been successful in gaining public attention for their cause. They have grown in number, and fringe groups have become increasingly bizarre, with picturesque acronyms. Among the oldest of these organizations are NOCIRC (National Organization of Circumcision Information Resource Centers) and NOHARMM (National Organization to Halt Abuse and Routine Mutilation of Males). Recently, circumcised men desiring replacement of the missing foreskin have joined into groups such as NORM (National Organization of Restoring Males), RECAP (Recovered a Penis) and BUFF (Brothers United for Future Foreskins). In addition to being featured in the print and broadcast media, a slick anti-circumcision magazine (“The Foreskin Quarterly”) was published in San Francisco, which contained a large classified advertisement section with uncircumcised homosexual men seeking partners similarly endowed.

How has the U.S. population reacted to the anti-circumcision groups and the confusing position of the AAP? As a measure of the independence of the public in assessing information relevant to infant health, the circumcision rate of newborn from non-immigrant families has actually risen over the past 2 decades. The Center for Disease Control (CDC) recently published statistics on newborn circumcisions from 1979-1999 and found the total rate rose from 64% to 65%, in this period. But the changes within the various parts and ethnic groups of U.S. are more significant than the totals. Circumcision rates increased from 56% to 64% among blacks, in the Midwest (from 74% to 81%) and the South (from 56% to 61%). The Midwest and the South represent the areas of the country with the fewest immigrants. On the other hand in the West, particularly in California where the majority of newborns are now from immigrant families coming from cultures which do not circumcise, the circumcision rate fell from 64% in 1979 to 37% in 1999. In 1979 the majority of births in California were in non-immigrant whites. By 1999 non-immigrant whites constituted only 31% of California births,
with 6% in Blacks; 47% of newborn births were in Hispanics and most of the rest were in Asians. Since Hispanic and Asian immigrants rarely have their newborn boys circumcised, even if 100% blacks and non-immigrant whites were circumcised the total circumcision rate would be under 40%, offering an explanation for the 37% Western rate. Interestingly, there is a suggestion that even among Hispanics the attitude toward circumcisions changes as they remain in the U.S. longer. In Southern California where the most recent immigrants are found, almost no Hispanic infants are circumcised, while a recent survey at San Francisco General Hospital found that 29% of Hispanic newborn boys were being circumcised. In the 3 years since the misleading 1999 AAP Task Force circumcision report, published studies have reinforced the evidence of circumcision protective effects against HIV and HPV infections and cervical cancer, kidney damage following infant urinary infections and local skin disorders, and confirmed the effectiveness of local anesthesia on pain relief. In the face of this proof it seems likely that the rates of newborn circumcision will continue to rise in the U.S. as the public increasingly realizes the medical benefits of this preventive procedure, which is analogous to infant immunizations in the sense of promoting health and preventing future disease.