

The Medicalization and Resultant Decline of Circumcision in Canada

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Abstract

The transition of circumcision from ritual to a prophylactic treatment began in 1870 through orthopedic surgeon, Dr. Lewis A. Sayre (1820-1900). After successfully treating paralysis and hip-joint disease in a few young boys, he used his influential position as president of the American Medical Association to propel his claim that paralysis, epilepsy, hernias and even lunacy could be cured by circumcision. This led to a meteoric rise of circumcision in the first half of the 20th century until it became routine. However, doubts and criticisms over the medical basis of circumcision soon arose supported, most notably, by Gairdner in 1949 and Preston in 1970. The Canadian Pediatric Society (CPS), following the American lead, stated in 1975 that “there is no medical indication for circumcision during the neonatal period.” The CPS reaffirmed the statement in 1982, 1989 and 1996, despite contrary evidence by Warner and Wiswell showing decreased risk for penile cancer and urinary tract infections.

All provinces and territories of Canada, from British Columbia in 1984, to Manitoba in 2005, discontinued insurance coverage for routine circumcision. Consequently, circumcision in Canada has fallen from 47.4% of male infants in 1973 to 13.9% in 2003.

However, as the practice in Canada continues to decline, medical evidence supporting its benefits is growing.

Most notably in 2007, Dr. Stephen Moses, from the University of Manitoba, demonstrated a 53% reduction in risk of acquiring HIV infection in circumcised men. Now with WHO and UNAIDS recommending circumcision as an intervention to reduce the spread of HIV, as well as evidence showing reduced incidences of urinary tract infections, penile cancer, phimosis, and HPV infection, the pendulum might be swinging back in favour of circumcision. Consequently, the CPS is in the process of revising their statement for 2008 – yet another example of history moving in cycles.

The practice of male circumcision has been prevalent in our society throughout history. Although cloudy, its origin has been dated back as far as 4000 BC in ancient Egypt, and the procedure is still practiced among the Jewish and Muslim faiths. The accompanying medical benefits of this procedure, however, have been shrouded in controversy. Ethical issues aside, the balance of medical evidence supporting and disputing its practice has seesawed over the past century.

Introduction

The transition of circumcision from ritual to a prophylactic treatment first began in the late 19th century. The belief of the medical community during that time is best illustrated in Peter Charles Remondino's *History of Circumcision*, published in 1891. In it, he outlines the commonly held views that circumcision prevented phimosis (constriction of the foreskin preventing retraction), syphilis and other venereal diseases, penile cancer, and gangrene of the penis. He follows by arguing that the foreskin, much like the appendix, is not a physiological condition as it has no known function and there is no valid reason for its existence. He concludes that it is therefore a serious pathological condition causing phimosis, preputial adhesions, and a short frenum. In his book Remondino also supports the theory of reflex neurosis, claiming "Lewis A. Sayre was to medicine what Columbus was to geography."

The most prominent advocate of male circumcision during this period was Dr. Lewis A. Sayre, an orthopedic surgeon practicing in New York City. He first became convinced of its benefits in 1870, when he was asked to consult on a young boy unable to walk due to paralysis in his legs. On examination of the boy he found a tight, painful foreskin constricting the glans, and decided that by performing a circumcision he could treat the paralysis. Incidentally, the procedure "worked", and Sayre was able to successfully treat paralysis and hip-joint disease in a few young boys. He then used his influential position as president of the American Medical Association to propel his claim that paralysis, epilepsy, hernias, and even lunacy could be cured by circumcision. The reasoning behind this was his theory of reflex neurosis, which proposed that irritation of a nerve in one area could transmit through a neural web and affect other areas of the body. Other influential figures of the time also supported circumcision, most notably Dr. John Harvey Kellogg (1852-1943). In addition to being the inventor of the popular corn flake cereal, he also proposed in 1877 that circumcision prevented masturbation and even advocated against the use of anesthetic during the procedure.

With these proposed benefits of circumcision entrenched in the medical community, a number of articles soon appeared in prominent medical journals supporting its practice. Most notable of these were by Freeland, Wolbarst, Gay, and Cockshutt. In the *Lancet* in 1900, Freeland argued that universal male circumcision reduced the incidence of syphilis by 49%. In the *Journal of the American Medical Association* in 1914 and 1928, Wolbarst and Gay, respectively, argued that it prevented syphilis, penile cancer, phimosis, and masturbation. And, in 1935, Cockshutt argued in the *British Medical Journal* that because circumcision prevented masturbation it should be used as an incentive for chastity.

Dr. Abraham Leo Wolbarst on Circumcision

At first one might think that there was now a wave of medical evidence supporting the practice of routine male circumcision, but a closer look shows that most of these claims were observational and not evidence-based. For instance, in his article "Universal circumcision as a sanitary measure," the New York physician Abraham Leo Wolbarst (1872-1978) argues that circumcision prevents masturbation. During its publication, this was already a commonly held view and so was not generally questioned. But if one considers the implications of this, it becomes apparent that to statistically prove such a claim among young boys would be virtually impossible. This is why Wolbarst's evidence

consisted of what he called “authoritative observations” from other respected practitioners in the field.

A closer look at the article “Circumcision as a preventive of syphilis and other disorders” by E. Harding Freeland reveals a similar lack of evidence-based research. In his publication, he uses four different examples to demonstrate his argument. First, he reasons that the space between the foreskin and the glans is the “*beau ideal*” place for bacterial growth and infection. Next, he includes the following table, using data from an article by Hutchinson in 1855, to numerically argue his case.

-	Total Venereal Cases	Gonorrhoea	Syphilis
Not Jews	272	107	165
Jews	58	47	11

Freeland outlines that there are more cases of syphilis in the male non-Jewish (or non-circumcised) population than the Jewish (or circumcised) population. He also argues that the higher number of gonorrhea cases in the Jewish population demonstrate that this is not due to them being less promiscuous or sexually active. Statistically, however, this argument is flawed as there are no p values showing if these results are statistically significant. Freeland goes on to say that “my own experience completely bears out the idea that syphilis is less prevalent among the circumcised, although unfortunately I have no figures to adduce.” Finally he uses an anecdote to illustrate the increased spread of syphilis from a non-circumcised man to his various sexual partners. As one can see, although the medical literature during this time supported circumcision, the evidence behind it was lacking.

Debate in the Medical Community

The perceived medical benefits of circumcision soon began to influence medical practice. During the First World War, the United States military endeavored to circumcise all soldiers and sailors to reduce their susceptibility to venereal diseases. While these men were circumcised in their late teens and early 20s, the tipping point for routine neonatal circumcision appeared in 1935 with the Gomco clamp. Developed by obstetrician and gynecologist Dr. Hiram Yellen (1894-1969) and Aaron Goldstein (1899-1945), an inventor, they claimed in the instruction manual that “with the use of this clamp we never employ sutures, no bleeding is encountered and it leaves a clean cut incision which heals perfectly in 36 hours.” With an easy to use, fast, and purportedly bloodless procedure that eliminated the risk of hemorrhage or infection complications, there was a meteoric rise in circumcision until it became routine practice. In fact, Yale psychoanalyst Dr. Benjamin Spock (1903-1998), author of the bestselling *Dr. Spock’s Baby and Child Care Guide*, recommended the procedure for all neonates in the first edition of his book in 1946, as he believed that it prevented the possible psychological trauma involved with circumcising an older boy.

Despite the exponential rise in routine male neonatal circumcisions, doubts and criticisms over its medical legitimacy soon arose, supported, most notably by Gairdner in 1949 and Preston in 1970. A re-evaluation of the literature began in Britain, when Dr. Douglas Gairdner published his article “The Fate of the Foreskin” in the *British Medical Journal*. In it, he reviewed the supposed medical benefits and concluded that none of the commonly advanced reasons for circumcising infants were convincing,

including prevention of phimosis, balanitis, enuresis, venereal disease, penile cancer, and cervical cancer. Gairdner also corrected the misunderstanding regarding infantile phimosis, showing that it was a normal and healthy process in infants. Later in 1965, Dr. William Morgan from London, Ontario wrote a letter to the *JAMA* titled "The Rape of the Phallus." In it he claimed that "98 times out of 100 there is no valid indication for this mutilation other than religion." In fact, his letter was so scathing of the procedure he was labeled a "Nazi" in some circles. In 1969, an article was published in the *NEJM* by Dr. Robert Bolande, in which he compared circumcision to tonsillectomies and argued that it was not justified to routinely perform a preventative surgery. Finally in 1970, Dr. Noel Preston's article "Whither the foreskin? A consideration of routine neonatal circumcision" was published in the *JAMA* and concurred with Gairdner's article from twenty years earlier, and the reputed benefits of circumcision were considered debunked.

In 1975 the Canadian Pediatric Society (CPS), following the American lead, stated that "there is *no* medical indication for circumcision during the neonatal period." After thoroughly reviewing the literature, the CPS concluded that the risk of potential complications such as infection, bleeding, gangrene, general sepsis, partial amputation, and death outweighed the weakly supported benefits. They stated that although there appeared to be a lower incidence of penile cancer among circumcised men, the cancer was remote, curable, and only appeared during very old age. The association between an increased susceptibility to venereal diseases and thus, transmission causing cervical cancer was found to have no substantiating evidence. As well, it was believed that there would be major savings to the health care system by removing circumcision from routine practice.

With the consensus of the medical community now against circumcision, new research utilizing the scientific method to accurately assess its utility soon appeared questioning the statement by the CPS. The first notable article appeared in the *Canadian Medical Association Journal* in 1981, titled "Benefits and risks of circumcision." In it Dr. Ellen Warner and Dr. Elliot Strashin concluded that circumcision facilitated penile hygiene, prevented penile cancer and lowered the incidence of genital herpes. They also disputed the view made by Gairdner regarding phimosis, claiming that 10% of males not circumcised at birth would eventually require therapeutic circumcision. Despite the potential complications of the neonatal procedure, which they claimed were easily treated or very rare, therapeutic circumcision they argued had a higher risk of morbidity and mortality, as well as higher operational costs (due to use of anaesthetics and recovery time). The CPS responded the following year with an official statement upholding their stance from 1975. The statement outlined the reduced incidence of penile cancer in Sweden and certain African tribes in which there was an extremely low prevalence of circumcised men. It also mentioned a study by Osler in which only 0.15% of non-circumcised boys required a therapeutic circumcision, a sharp contrast to the 10% used by Warner and Strashin.

Modern Statistical Approaches

Then in 1985 and 1986, two articles by Dr. Thomas Wiswell appeared in the *Journal of Pediatrics* which again brought the issue into the limelight. Wiswell followed infants born in US Army hospitals and compared the incidence of hospitalizations for urinary tract infections among circumcised and non-circumcised males in the first year of life. He

found a 10-20x increase in non-circumcised males ($p < 0.001$) and concluded that circumcision helped prevent urinary tract infections. In 1989, the CPS issued a new statement maintaining that the evidence was not sufficiently compelling to justify a policy change.

Over the next decade further research appeared outlining the medical benefits of circumcision. In response to the growing uncertainty, the CPS issued a new statement in 1996 which concluded that “the overall evidence of the benefits and harms of circumcision is so *evenly balanced* that it does not support recommending circumcision as a routine procedure for newborns.” It is apparent that once again the view regarding circumcision was shifting, as over a span of 20 years the CPS had changed its stance from there being no benefits to the benefits equaling the harms. They also concurred with Wiswell that there is a 12-fold reduction in the incidence of urinary tract infections as well as a reduction in penile cancer. Notably, the CPS also concluded that although evidence showed a reduction in HIV transmission among circumcised men, there was insufficient information to recommend the procedure prophylactically.

The implications of the first statement by the CPS in 1975, although not immediate, eventually had ramifications that changed the practice of medicine in Canada. Although the incidence of male neonatal circumcision was already declining, over the next few decades it would drop from 47.4% in 1973 to 13.9% in 2003. One of the main factors in this decline was the discontinuation of health insurance coverage for routine male circumcision. The first province to do so was British Columbia in 1984, and gradually all of the provinces and territories would follow suit, with Manitoba finally discontinuing coverage in 2005, over 20 years later. In fact, the *College of Physicians and Surgeons of Saskatchewan* in 2002 and *British Columbia* in 2004 would even issue statements recommending their physicians not perform the procedure on infants. One pediatrician practicing in Kingston, Ontario during this period clearly illustrates the change in attitude among the medical profession towards circumcision. When asked by parents on her opinion regarding the procedure, Dr. Ruth Galbraith would respond that “circumcision made sense if you believed that all male children were born defective and needed immediate surgery.”

However, as the practice in Canada continues to decline, medical evidence supporting its benefits is growing. Most notably in 2007, Dr. Stephen Moses, from the University of Manitoba, demonstrated a 53% reduction in risk of acquiring HIV infection in circumcised men through a randomized controlled trial. To bring the issue into full circle, a Point/Counterpoint article was recently published in the *Canadian Urological Association Journal* in November 2007. In it, Dr. Andrew MacNeily and Dr. Anne-Marie Houle debated the merits of circumcision, using key points such as the prevention of urinary tract infections, sexually transmitted infections, penile cancer, cervical cancer, and phimosis. The intriguing feature being that these are the same sticking points which have been used to debate circumcision for the past century.

Conclusion

In conclusion, the medical literature pertaining to circumcision has seesawed between support and rejection. The late 19th and early 20th centuries brought with them observational evidence endorsing the procedure. A critical enquiry into that research would then rebuke these results and lead to the decline of circumcision in Canada. Now

with WHO and UNAIDS recommending circumcision as an intervention to reduce the spread of HIV, as well as evidence showing reduced incidences of urinary tract infections, penile cancer, phimosis, and HPV infection, the pendulum might be swinging back in favour of circumcision. Consequently, the CPS is in the process of revising their statement for 2008 – yet another example of history moving in cycles.

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