Gender verification testing: Necessary for the integrity of international athletics, or inexcusable breach of personal privacy?

Colin Meyer Macauley

Moska Hamidi
Schulich School of Medicine and Dentistry - Windsor Program

Karline Treurnicht-Naylor

Follow this and additional works at: https://scholar.uwindsor.ca/schulichwp-students

Part of the Medicine and Health Sciences Commons

Recommended Citation
https://scholar.uwindsor.ca/schulichwp-students/16

This Article is brought to you for free and open access by the Schulich School of Medicine - Windsor Program at Scholarship at UWindsor. It has been accepted for inclusion in Student Presentations and Publications by an authorized administrator of Scholarship at UWindsor. For more information, please contact scholarship@uwindsor.ca.
Gender verification testing: Necessary for the integrity of international athletics, or inexcusable breach of personal privacy?

Colin Meyer Macaulay (Meds 2012), Moska Hamidi (Meds 2013), and Karline Treurnicht-Naylor (Meds 2013)

Faculty reviewer: Dr. Cheril Clarson, Department of Medicine, UWO

On August 19, 2009, South African middle distance runner Caster Semenya set a world record in the women’s 800m event at the world championships in Berlin. Closely following her stunning victory, the world athletics governing body, the International Association of Athletics Federation (IAAF) ordered her to undergo a process known as “gender verification testing.” A relative unknown just three weeks prior, Caster was unceremoniously thrust onto the world stage and has become a poster victim for a controversial practice that has been going on for decades.1,2 Subsequently, Australian newspapers announced that Caster had no ovaries or uterus, but did have undescended testes, and was in fact “intersex.”6,7 In order to explore the potential social and legal implications of such testing it is important to understand the history of so-called gender verification, as well as its medical advantages and pitfalls.

Science and medicine

The term “gender verification” is problematic because, as was detailed out in an open letter to South African journalist Mercedes Sayagues, gender is “the dominant society’s views on how women and men should look, behave, what roles they should play in society, how they should perform...”4,5 Sex refers to a biological dichotomy, whether one is male or female.5 Normal sexual differentiation is initially determined by chromosomal pattern, XX usually being female and XY usually being male. The presence of the SRY gene on the Y chromosome induces the undifferentiated gonad to commit to testsis generation. The differentiated testis then begins to secrete hormones that lead to the promotion of the male internal genitalia, and the regression of the primitive female internal genitalia. Subsequent conversion of testosterone to dihydrotestosterone (DHT) in the skin of the external genitalia leads to virilization of these structures and a complete male phenotype. The absence of the SRY gene leads to the regression of the male internal genitalia and a female phenotype.9 Of course, sexual differentiation is a complex process, and disorders of sexual differentiation (DSDs) may be chromosomal, gonadal or phenotypic (hormonal), leading one or more of these elements to be misaligned.8,7

In 1968, in an effort to prevent male imposters from competing in the Olympics the IOC implemented mandatory “gender verification” of all female competitors.6,7 The test was a simple buccal smear that was then analyzed for the presence of sex chromatin (inactive X chromosomes or Barr bodies). The Barr-body test, though enticing in its simplicity raised significant concerns in the medical community. The test screened out XY females with no advantage over other females as is the case with complete androgen insensitivity (CAIS) or 46 XY/ XO gonadal dysgenesis, while allowing those athletes with potentially advantageous conditions such as XX females with inadequately treated congenital adrenal hyperplasia (CAH) or XXY males to compete.5,6,7,8 Furthermore, the test was inappropriate in the first place since women with DSDs do not exhibit “characteristics relevant to sports performance...outside the range of possibility for XX females.”6,7

History

Given what we now know to be true of DSDs, it may seem preposterous that the practice of sex verification was routine at the Olympics for more than 30 years. However, instances of subversion are not unheard of. In 1957 Herman Ratjen of Germany confessed he had been forced under the Nazi regime to compete as a female in the 1936 Berlin Olympics.8,9 Suspicion subsequently turned on hypermasculine female athletes from the Eastern Bloc following a number of female athletes undergoing gender reassignment surgery and subsequently living as men in the 1950s and 60s. Finally, in possibly the most high profile example, the 1932 women’s 100m sprint gold medalist Stella Walsh was revealed to have chromosomal mosaicism and ambiguous genitalia during an autopsy following her death in 1980.7,8

Initial attempts at gender verification in 1966 and ’67 involved parading female athletes in front of a panel of medical experts in the nude, or even direct gynecological examination.5,7,8,9 This method of sex verification was fraught with ethical dilemmas and was ultimately abandoned in favor of the simpler and “less demeaning” buccal smear in 1968. The Barr-body test, originally conceived as a screening tool, became the definitive test of an athlete’s femininity was used by the IAAF and IOC until 1992 when the IAAF abandoned the practice.6,8 Rather than follow the IAAF’s example, the IOC switched from chromatin testing to analysis for Y chromosome material using PCR amplification, which it continued unabashedly until 2000. It is worth noting that since the advent of laboratory sex testing, no male imposter has ever been caught trying to infiltrate women’s athletic events.5,9,10

Social and legal implications of sex testing

Dr. Renee Richards, a nationally ranked men’s tennis player, underwent a sex reassignment operation in 1975. In 1976 she attempted to enter the United States Tennis Open as a
woman. The United States Tennis Association (USTA) informed Dr. Richards that in order to enter, she had to pass a gender verification test; the first time such a test had been implemented by the USTA. Dr. Richards argued to the New York Superior Court successfully that the test was adopted for the sole purpose of preventing her from competing in the Open, and that moreover, the medical community regarded the test as "insufficient...and grossly unfair".\textsuperscript{10} Although this is the only case that rules on the issue of gender verification in sports as a matter of law, in 1985 Spanish national hurdler champion Maria Patino was disqualified from the World University Games and banned from international competition. Subsequently she went on to become the first woman to publicly protest this method of disqualification, and was eventually reinstated.\textsuperscript{6,8}

Given the IAAF and IOC's deplorable record of defending the rights of female athletes it should come as no surprise that as recently as 2006 an Indian woman, Santhi Soundarajan, was stripped of her silver medal at the Asian Games after failing a gender test. Ms. Soundarajan was later diagnosed with complete androgen insensitivity syndrome and was so psychologically traumatized by the experience that she has not competed since.\textsuperscript{11,12,13} Further confusing the matter is the fact that in the same year the IAAF released a policy on gender verification listing women with CAIS (among other conditions) as eligible to participate in international competition.\textsuperscript{13} In fact, the IAAF listed women with virtually all DSDs as eligible to compete, even those with conditions that theoretically might accord some international competition.\textsuperscript{(among other conditions) as eligible to participate in}

Gender verification testing

Furthermore, as argued by Pamela Fastiff, gender testing (as it was originally conceived and undertaken between 1968-1992 or 2000 in the case of the IOC) likely violates the fourth amendment of the American Constitution, as well as female athletes' rights to equal protection under the law.\textsuperscript{10} The fourth amendment guarantees "the right of the people to be secure in their persons...against unreasonable search and seizures".\textsuperscript{10} The ruling in the Renee Richards case upheld as a matter of law that the USTA could only use the gender test as a means to prevent fraud, and not to disqualify women with DSDs or transsexuals.\textsuperscript{9} Given this ruling and the arbitrary way in which gender verification testing continues to be applied, there are no valid circumstances under which a female athlete should have to fear disqualification on the grounds of failing a gender test.

Since no man has ever been caught masquerading as a female, it would appear that gender testing in any format is neither achieving its ostensible goal, nor serving athletes' best interests. Singling out young women with rare disorders and publicly humiliating them not only causes lasting psychological damage, but demonstrates the stunning insensitivity of the IAAF and IOC. From this analysis, it is clear that the only valid reason for conducting gender verification of any kind would be to ensure that young women like Caster receive the medical attention and psychological support they need, rather than to expose them to public scrutiny and scandal.

References