

ACNEIFORM LESIONS IN A FEMALE PERFORMANCE AND IMAGE-ENHANCING DRUG USER: THE FIRST AFRICAN CASE REPORT

Ncoza C. Dlova¹ & Dominic Sagoe²

¹Dermatology Department, Nelson R. Mandela School of Medicine, University of KwaZulu-Natal, Durban, South Africa; ²Department of Psychosocial Science, University of Bergen, Bergen, Norway

ABSTRACT

The literature on performance and image-enhancing drug (PIED) use and their harms is dominated by studies of largely North American, European and Australian males. We present the first case of a non-athlete PIED user from Africa. We describe a 27-year-old South African female of African ancestry who presented with a 9-month history of acne involving mainly the trunk and face. After her initial denial, she confessed a 6-month illicit anabolic-androgenic steroid use. She was also using whey protein supplements. Her motive for PIED use was physique enhancement and endurance. Acne is an underestimated adverse effect of PIED use and health providers need to be aware of this. Polypharmacy and stacking may also exacerbate the risks of experiencing acne and other harms. Health providers must be empathic and open-minded with PIED-using patients to facilitate healthcare provision. This pioneering African case report adds to previous publications from other parts of the world.

Keywords: Anabolic-androgenic steroids; acne; doping; performance and image-enhancing drugs; South Africa

INTRODUCTION

Anabolic-androgenic steroids (AAS) are one of the most popular performance and image-enhancing drugs (PIED). AAS refer to the natural male hormone testosterone and its synthetic derivatives that are illicitly used by some persons

primarily to enhance muscle growth and strength. Long-term and high dosage AAS use has been associated with various physical and psychosocial disorders and premature mortality (Pope & Kanayama, 2012). The preponderance of evidence on PIED use, particularly AAS, and associated harms is based on studies of male

samples from North America, Europe, and Australia (Sagoe et al., 2014). Hence, there is a dearth of evidence from non-western cultural contexts particularly Africa. Against this backdrop, we report the first-ever case (to our knowledge) of a female non-athlete PIED user from the African continent.

CASE PRESENTATION

A 27-year-old South African female of African ancestry presented with a

9-month history of acneiform lesions involving mainly the back and front chest with a few facial lesions (Figure 1).

Severe acne was noted mainly on the trunk with monomorphic lesions and comedones. She was generally healthy with no significant history of note. Drug enquiry was nonsignificant besides use of whey protein supplements. Physical examination revealed a well-built masculine female with no other androgenizing signs besides hypertrophic biceps, triceps and lower body muscles.



Figure 1. A 27-year-old female PIED user with acne on the face and trunk

Due to the morphology, extent and distribution of the acne, the patient was further prompted on AAS use history. She denied initially and was adamant that she had been using only pharmacy-purchased whey protein supplements. On establishing rapport, she confessed a 6-month illicit use of oxandrolone (Anavar) 10 mg and female stack 5 mg tablets. She had purchased them from a person at her gymnasium. Her boyfriend was an injectable AAS user. The patient was not involved in competitive sport and professed an obsession with the appearance of her masculine body. Her motive for using AAS was physique enhancement and increased energy to exercise six times a week.

DISCUSSION

The present pioneering case report of a non-athlete AAS user from the African continent adds to previous publications from other parts of the world on the development of acneiform lesions in AAS users (Kraus et al., 2012; Perez et al., 2016). Acne is one of the most prevalent but underestimated adverse effects of AAS induced in nearly 50% of AAS users (Melnik, Jansen, & Grabbe, 2007; Walker & Adams, 2009). Long term and high dosage AAS use leads to an increase in cutaneous lipids, cholesterol, free fatty acids, and *Propionibacterium acnes* resulting in acne (Kazandjieva & Tsankov, 2017).

Many AAS users also practice polypharmacy (the combined use of AAS and other drugs/substances) and stacking (the combined use of multiple AAS), and whey protein supplements are one of AAS users' most preferred synergistic substances (Sagoe et al., 2015). The intake of whey protein supplements has

been found to induce acneiform lesions (Cengiz et al., 2017, Simonart, 2012). Polypharmacy and stacking, as with our case, may also exacerbate the risks of developing acne (Sagoe et al., 2015). The patient's participation in recreational sports is in line with evidence delineating recreational sportspeople as the largest subpopulation of AAS users (Sagoe et al., 2014) and her motive for AAS use and source is consistent with findings from a systematic meta-synthesis (Sagoe, Andreassen, & Pallesen, 2014).

Acne is an important and common clinical presentation of performance and image-enhancing drug use especially amongst youth (Melnik, Jansen, & Grabbe, 2007) and health providers need to be aware of this association. Many AAS users experience stigmatization from health providers and therefore mistrust them (Sagoe et al., 2016; Yu et al., 2015). Such mutual mistrust may lead to denial of AAS use to healthcare providers as shown initially with our patient, sometimes resulting in adverse consequences and complications (Sagoe et al., 2015). On suspicion of AAS use, healthcare practitioners are encouraged to establish rapport and adopt a non-judgemental approach with patients. This will ensure open and honest disclosure that will facilitate adequate provision of healthcare. Further, targeted interventions are needed to deal with AAS use and its associated harms including the negative stereotype of AAS users among healthcare providers.

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Author contributions

NCD conducted the clinical work. DS drafted the initial manuscript with input

from NCD. All authors contributed to the writing process and approved the final manuscript.

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