AFRICAN WOMEN EXPERIENCING PERIMENOPAUSE:

MENSTRUAL CYCLE CHANGES

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A Paper Presented in Partial Fulfillment

of the Requirements for the International PhD

World Information Distributed University (WIDU)

Original Paper February 2014

Revised June 2015

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This paper focuses on women in the poorer nations, such as in Africa, who experience perimenopause and are coping with symptoms associated with perimenopause. Changes in menstrual cycle are symptoms associated with perimenopause, a condition that involves changes in the hormones ("Perimenopause Symptoms," n.d.). The association of changes in menstrual cycle with dysmenorrhea and HIV experienced by African women will be further discussed and natural approaches aimed to help women who experience these symptoms will be presented. Analyzing the DNA of the menstrual blood may give rise to how pain is linked to the expansion of the blood vessels and how cancer is linked to the mutation of red blood cells.

Menstrual Cycle Association with Dysmenorrhea and Migraines

Women experiences menstrual cycle changes throughout their life. Phases of the menstrual cycle include: the follicular phase, ovulation phase, and luteal phase (Always, 2014). Irregular periods are common in adolescent women, women approaching menopause, experiencing stress, extreme emotion, and weight change, and performing extreme exercises (Women's Health Queensland Wide, 2009). Physical and emotional premenstrual syndrome (PMS) symptoms, thus, is associated with the menstrual cycle in the luteal phase of the ovulation cycle (Cabrera, n.d.; Othmer & Othmer, 2007).

Many women have irregular menstrual cycles to include experiencing migraines or cramps ("labor-like" pains), referred to as dysmenorrhea (Dawood, 2006; Kaye, 2012; Mago, 1997). Dysmenorrhea occurs mostly in 40-50% of young women aged 20-24 lasting 2-3 days resulting from the increase of natural chemicals (prostaglandin) in the lining in the uterus (American College of Obstetrician and Gynecologist, 2012; Dawood, 2006). The chronic pain associated with the menstrual cycle impacts the daily function of individuals by bringing about depression or anxiety (Donaldson, 2011). When Nigerian women experience cramps or

migraines during their menstrual cycles, the women most likely will seek spiritual healing (N. Kelley, email communication, January 20, 2014).

Although chronic pain that is associated with migraines comes mostly around the time of a woman's menstrual cycle, one may debate if the pain derives from changes in the oestrogen level or the widening of blood vessels (e.g., vasodilate; Kaye, 2012). "Brain mast cells activated by acute stress lead to increased vascular permeability" (Theoharide & Cochran, 2004). Because nerve cells are woven around blood vessels, migraines form when the axons from the nerve, mast, or endothelium (skin of) cells release substances [vasoactive prostanoid (fatty acid/ enzymes) secretion] that trigger pains and stimulate the widening or inflammatory of blood vessels (Dawood, 2006; Stanimirovic, Bacic, Uematsu, & Spatz, 1993; Theoharide & Cochran, 2004). When blood vessels (endothelium) widen or vascular permeability is increased, more cells may travel to or leak into the tissues and bloodstream (Roberts & Palade, 1995).

Menstrual Cycle Association with Cancer

Cancer is formed by the continuous division of cells (somatic) as a result of DNA changes or mutations (i.e., of repair enzymes) in the cell genome producing proteins that disrupt the normal cellular balance between cell division and quiescence (Hejmadi, 2014). DNA copies itself forming identical cells (Hejmadi, 2014). Cancer derives from alterations of the DNA found in the nucleus of cells that derives from fertilized eggs (Hejmadi, 2014). The DNA found in the menstrual blood is formed in stem cells, which trigger other cells to replicate uncontrollably, causing tumors (Harvard Stem Cell Institute [HSCI], n.d.).

Table 1 shows the 2005 percentage of South Africa women who were diagnosed with four types of cancer (Cancer Association of South Africa [CANSA], 2013). Ovarian cancer

derive from epithelium (lining covering ovary), germ (protected by the endoderm form eggs in ovaries), or stromal cells (release hormones; American Cancer Society, 2013).

Table 1

2005 South African Women Diagnosed with Cancer

Most common	Cancer	Percentage	Age group
First	Breast	1 in 33	20-94
Second	Cervical	1 in 39	35-55
Third	Uterus	1 in 128	60-70
Fourth	Ovarian	1 in 394	55
Fifth	Vulvar	1 in 556	Over 55

Cancer does not derive from infections; DNA is altered as a result of lifestyles, the environment, age, or long-time exposure to certain forms of viruses (Hejmadi, 2014). In regards to hormone levels, long time exposure to oestrogen may cause breast (invasive/non-invasive) or uterine cancer and exposure to testosterone may cause prostate cancer (Hejmadi, 2014). If the mental cycle rids the body of dead cells and tissues, then the monthly menstrual cycle phases are associated with the process of apoptotic (Li, Felix, Hao, Minoo, & Jain, 2005). Apoptotic , a programmed process of cell death that is different than cell death by necrosis (injury), involves cells cropping up their own DNA to rid the body of unproductive, excess, damaged, or benign cells (Jiang, Reich, & Pisetsky, 2003).

"The risk of developing certain types of cancers is also increased by infectious agents like viruses, hepatitis B virus (HBV), human papillomavirus (HPV), human immunodeficiency virus (HIV)" (Hejmadi, 2014, Exploring Risk Factors slide). Cervical Squamous Cell Carcinomas and

Kaposi's Sarcoma (KS) are two types of cancers associated with having HIV (Bower, Lewis, & Stebbing, 2005). Endometrial "is the most common type of uterine cancer" (MedlinePlus, 2012).

> A native of Africa (Bulawayo, Zimbabwe) living in London shared, You still get people who think HIV can be helped through root medicines and they won't take AVR's and spiritual healing. Especially in the rural areas like the villages, some still rape children because the spiritual healers tell them if they sleep with a virgin, they get healed. (L. Masuku, social media communication, January 20, 2014)

The HIV virus changes the immune system, and as a result, the maintenance of different hormones, such as testosterone, estrogen, and progesterone, becomes affected ("Menstrual Change," 2013). When the HIV virus affects the immune system (e.g, macrophages/leukocytes/ white blood cells [WBC], which is made of nucleated blood cells surrounded by a buffy coat) and the cells associated with the immune system does not adjust, repair, adapt or transform (i.e., due to differentiation), cancer cells most likely will not be destroyed or suffer a death (Affymetrix, 2011; Doornbos, Hennink, Putman, De Grooth, & Greeve, 1993; Kuma, Abbas, & Aster, 2012). As the menstrual cycle progress, the uterine NK (uNK) cells, activated by macrophages, "produce immunoregulatory cytokines that contribute to early host defense against several types of viruses" spread through the endometrium (Eriksson et al., 2006, p. 6219). During the luteal phase of the menstrual cycle, the NK cytotoxicity has been reported to become lower than in the follicular phase, however, reversed for postmenopausal women (Souza, 2001). No correlation exists between NK activity and levels of progesterone. Thus, in the absence of, decrease of, or change in NK cells or activities, women who have HIV or cancer derived from long-term exposure of the HIV virus may experience changes in the menstrual cycle (Eriksson et al., 2006; "Menstrual Change," 2013).

Suggestions Associated with Charges in the Menstrual Cycle

Hejmadi (2014) cited that 90% of all cancers derive from environmental factors and 60% of all cancers are associated with age (i.e., over 65). Frahm and Frahm (1992) cited that 30-60% of all cancers derive from poor nutrition. Because perimenopause is a condition that spans from the ages 20-45 ("Perimenopause Symptoms," n.d.), this condition association with cancer needs further exploration by medical scientists before sound recommendations can be made:

1. Does the widening of the blood vessel signify that cells will start to divide at an uncontrollable rate?

2. Does neurogenic inflammation give spacing for cells to divide at an uncontrollable?

3. Does a normal or healthy vascular permeability allow for white blood cells to control the passage of destructive cells from entering into the tissues and blood stream?

4. Consider women diagnosed with cancer (based on the division of the NK cells) are between the ages of 20-45. Are the women more susceptible to experience menstrual cycle changes that can be associated with the condition of perimenopause?

5. Consider women who have been diagnosed with perimenopause and are experiencing menstrual cycle changes. During the changes, how can the normal functions of NK cytotoxicity be maintained?

6. Consider women who are diagnosed with perimenopause and have a decrease in NK cells or activities. How can medical scientists stimulate macrophages naturally to differentiate and form normal functioning NK cells?

7. Consider women who are diagnosed with perimenopause and have a decrease in macrophages activities, however, not diagnosed with cancer or HIV. How can the NK cells be activated to sustain a normal function?

8. Consider women who are diagnosed with perimenopause. How likely will a certain type of cancer develop if the menstrual cycle changes; in what timeframe?

9. Consider women between the ages of 20-45 who have been diagnosed with perimenopause and are experiencing migraines. What is the importance of mast cells when the cervix becomes inflamed due to having cervical cancer?

10. When women are diagnosed with perimenopause and cancer simultaneously, should age precede 65 as an association with cancer?

The following suggestions aim to help women, to include women in Africa or other nations, who experience menstrual cycle changes associated with perimenopause and are not aimed to diagnose, prescribe, treat, or cure. Natural techniques discussed aim to enlighten women on lifestyles and healthy living. Women who believe their condition results from a medical disease are recommended to seek assistance from an MD and naturopathic doctor (ND).

Dysmenorrhea. Vitamins A, B_6, B_{12}, C, and E, magnesium, iron, folic acid, including herbs, are various nutritional factors that help dysmenorrhea (Dawood, 2006; Mago, 1997). Vitamin A helps maintain healthy secretory tissues in the cervix, vagina, and uterus (Mago, 1997). Herbals have traditionally helped balance hormones, relax muscles, reduce excess bleeding, and control inflammation (Mago, 1997). Fish oil, sweet fennel seeds, rose tea, and blue cohosh herbs may be taken to "relax the uterine muscle by acting as antispasmodics and are used to relieve cramping" (Dawood, 2006; Mago, 1997, p. 3). Clients with cancer may need to refrain from consuming blue cohosh, as this bitter herb, containing saponin, may disrupt or dissolve the wall of red blood cells (Pedersen, 1994).

Biofeedback may help clients manage their pain by controlling certain internal bodily processes that normally occur involuntarily, such as muscle tension (Anderson, 2010;

Donaldson, 2011). EEG biofeedback has been documented as an effective holistic technique for cycle change because the technique addresses a broad spectrum of symptoms, such as migraines, stress, anxiety, and depression (Othmer & Othmer, 2007). Feldenkrais may be another method that clients use to approach chronic pain (Strauch, 1996). By monitoring feedback, practitioners may determine if clients acquire the appropriate knowledge while gaining control of their involuntary activities (Donaldson, 2011; Strauch, 1996).

Some North African women who take oral contraception (COCS or OCS) injections or insert a progestin releasing vaginal ring have short bleeding or spotting episodes (Best, 1998). Rutin, found in the leaves of Ruta graveolens (rue) and buckwheat spouts, is a flavoinoid isolated from different herbs may be taken to control bleeding (Mago, 1997; Hsu, Chiang, Chen, Yang, Liu, 2008, Abstract section). Ruta graveolens is grown in Northern Africa and its extracts have also been used to treat inflammatory conditions and inhibit cell proliferation associated with cancer (Fadlalla, Watson, Yehualaeshet, Turner, & Samuel, 2011).

Cancer. Additional research is highly recommended focusing on the association of the menstrual cycle or changes in the cycle with cancer and approaches that have been effective in maintaining healthy white blood cells and enzymes that involve programmed process of cell death. White blood cells (macrophages) "patrol the body looking for infections" and carries the dead cells from the body (Hejmadi, 2014, Understanding the Lifecycle of a Normal Cell section).

Micronutrients (vitamins, minerals) found in plants (herbs) and fruits have been used to approach cancers and symptoms associated with cancer. Fruits and vegetables, however, have yet to be validated as protective effects on cancer *overall* (Boffetta et al., 2010, Abstract section; McGillX, 2013). Suggestions include but are not limited to consuming:

- In additions to treating inflammatory disorders, pomegranates have been reported useful in cancer preventions and treatments (Ismail, Sestili, & Akhtar, 2012). Pomegranates, which contain antioxidant to fight abnormal cell, are grown in South Africa (Citrogold, 2011).
- Lignans stored in flax seeds, which are newly grown in the Western Cape Province of South Africa, may reduce breast cancer risk (AmeriFlax, 2006; Cotterchio, Boucher, Kreiger, Mills, & Thompson, 2008; Republic of South Africa, 2012).
- Vitamin D with calcium has been found to have a protective effect associated with breast and ovarian cancers (Garland, 2006; McGillX, 2013). Vitamin D is stored in sardines and tuna, which are farmed in South Africa (Dietitians of Canada, 2013; Seafish, 2013).

Based on meta conversational and literature analysis, an abundance of discussions focus on breast and ovarian cancers (e.g., BRCA 1/2 mutation; Welcsh & King, 2001). The metadata--ovarian, cervical, uterine, and vulvar cancers--should not be used interchangeably. Multi-facet conversations fail to indulge in the assurance of healthy layers or membranes, which shape the environment of which uNK, apoptotic, and macrophage cells live, repair, adapt, and adjust. Quality assurance involves ensuring normal DNA structure is present.

Although intakes of micronutrients may not have been proven by human researchers to show a cause and effect with some conditions, such as dysmenorrhea and diseases, such as cancer, Scripture shows not only an association exists, but a cause and effect. The Creator said, “Every herb bearing seed and tree bearing fruit is granted to man for his sustenance” (Genisis 1:29). Because the body cannot live, function, maintain, or reproduce without the proper nutrients, researchers may consider further exploring not only which enzymes trigger which activity(ies) or how endothelial cells block tumor cells, but how macrophages effectively restore

its chemicals when energy is high (stressed) without adapting, adjusting, or experiencing death (Alberts, 2002; Kuma et al., 2012).

Scripture, which is Biblical law, states, "I will take my rest on my bed in peace, because you only, Lord, keep me safe" (Psalm 4:8). Preservation based on Scripture, thus, may include ensuring that the bed is protected from external factors; for example, when the wood of a bed swells due to moisture, the bed becomes wet and decay. Thus, it may be important to ensure that the anatomy/blood vessels, which are transporters, do not swell, that is during the *natural moisture cycle*.

- Viewing the white blood cells as the protector of all cells, the application to Scripture may read, "I [hemoglobin, iron, amino acid, DNA] will take my rest [gene expression] on my bed [cell membrane enclosing the proteins/chromosomes] in peace, because you only, Lord [white blood/endothelial cells], keep me [red blood cells] safe" (Psalm 4:8).
- Viewing the white layer (buffy coat) of the white blood cells as the protector of the chemical in the white blood cells, the application to Scripture may read, "I [chemicals of the white blood cells] will take my rest on my bed [nucleated cells, which shape the buffy coat] in peace, because you only, Lord [buffy coat], keep me [white blood cells] safe" (Psalm 4:8).
- Viewing the body as the protector of all internal systems, the application to Scripture may read, "I [skin tissues] will take my rest on my bed [environment, nutrients] in peace, because you only, Lord [the body], keep me [immune system] safe" (Psalm 4:8).

To find that case and effect, researchers may have to consider performing a self-study using natural remedies (e.g., NRSS, the meta tag), known as *Natural Research Secretes Souls*, a meta-metadata declaration coined by Dr. Brenda Nelson-Porter, author and founder of Brigette's Natural Healthcare Advisory and Research Firm. Because most if not all bodies have abnormal

cells (Frahm & Frahm, 1997), medical researchers will be the ideal candidate to assess the self. What is more natural than analysing one's self to heal one's self? Note, individuals taking medications should consider consulting a doctor prior to taking supplements, as a combination of supplements may cause harmful side effects when taken with medications (Nihira, 2012).

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