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Forensic point of view on proving virginity: A comparative study among a sample of the Egyptian population

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Abstract---Aim: Chastity is a moral virtue, whereas virginity is a physiological state indicated, but not conclusively, by an intact hymen. Sometimes, the post-pubertal hymen can be elastic, and hence some sexually active women were found to have intact hymens. Therefore, the absence of any hymen injuries should be used to rule out the possibility that the adolescent has experienced vaginal penetration. Consequently, a false virgin may claim to be a true virgin. Objectives: The current study aims to establish medico-legal aspects concerning proving virginity among Egyptian candidates. Subjects & Methods: A comparative study of two examined groups of married females coming to private section during the first week after the wedding. One group complained of bleeding, and the other complained of severe bleeding with the first intercourse, discussing the types of hymens found, medico-legal and ethical concerns regarding virginity concepts, and their husbands' feelings and attitudes. Results: The results revealed that of 189 women examined for bleeding with the first intercourse, 82.5% of them were found to have an annular elastic hymen. Only 15.8 % of 114 cases examined for severe bleeding during the first intercourse had a deflorated hymen, and the rest had an elastic hymen.

Keywords---virginity, elastic hymen, less bleeding, severe bleeding.

Introduction

Virginity is an important topic at the intersection of medical knowledge, kinship rules, moral values, and the subjective experience of desire, pleasure, and

prohibitions, and it poses a significant challenge. In addition, it is a subject of investigation in anatomy and physiology. It also offers a recurring, dramatic theme in fictional narratives and the theater, from Homer and Hesiod to tragedy, comedy, and poetry (1). (2) The Elements of Medical Jurisprudence mentioned that "The physical signs of virginity have been the subject of keen discussion among anatomists, physiologists, and forensic pathologists; none of them has led to greater inquiry than the existence of the hymen." As if applying a principle of deontological precaution, Beck illustrated that: ""The general sense of the profession is undoubtedly decidedly opposed to considering it as a non-natural appearance."." The hymen exists, in other words, but it is not there. The definition of female virginity is the inexperience of full vaginal intercourse with a male (3).

Virgin in Islamic cultures is defined as the girl who has not married and never experienced penile penetration of the vagina (4). Virginity revolves around whether a female has ever had sex. It has been noticed that the description ""virgin" itself shows women's subordination to men since the French term ""virgine" is derived from Latin by a combination of the words ""vir," meaning ""man," and ""genere," meaning generated or ""created for." In fact, virginity is a physiological state, indicated though not conclusively by an intact hymen (since some may be sufficiently elastic to allow sexual penetration.). In contrast, chastity is a status of moral virtue (5).

The ignorance about the structure of the hymen can lead to violence, such as 'honor killing' as well as psychological problems, including suicidal feelings. Meanwhile, the physician's testimony about the appearance of the genitalia may be one of the critical factors which determine the outcome of such cases (6).

Materials and Method

Study population

This is a comparative study of two groups of Egyptian married females attending the private section during the first week after marriage. One group complained of bleeding, and the other one complained of severe bleeding with the first intercourse discussing the types of hymens found, medico-legal and ethical concerns regarding virginity concepts, and their husbands' feelings and attitudes. One hundred eighty-nine couples coming to the private section with the husband had asked for an examination of the wife because of her ""bleeding" with the first sexual act compared to 114 female cases coming to the private section during the first week of marriage complaining of severe vaginal bleeding upon penile penetration. The study was done over three months, and the resident examined wives in charge.

The procedures of examination

After obtaining the wife's and the husband's consent, every patient was placed into the lithotomy position. A very strong light was focused on her perineum, the examiner separated the labia after wiping vaginal secretions and discharge in order to visualize the hymen clearly; the hymen is then checked for:

- 1- Presence or absence
- 2- Type (shape of the opening)
- 3- Size (diameter) of the opening
- 4- Presence or absence of tear (defloration); set its number, size, and place.
- 5- Any accompanying wounds or affections in the perineal area.

Results

General overview

In classical Greek mythology, the hymen is named after the God of marriage, "Hymenaios." The term "hymen" is usually synonymous with virgin membrane. This concept was originated in Western cultures since the medieval era when chastity among women was expected. In modern times, adolescents who live in countries with more liberal attitudes about sexuality may change their views about the hymen. The original concept is still predominant among people in Islamic culture.

The hymen is a thin fold of mucous membrane that is located just within the vaginal orifice. It is perforated to allow the egress of the menses. The aperture of the hymen ranges in diameter from pinpoint to one that admits the tip of one or even two fingers. The configuration of hymen differs dramatically from one female to another one. It is commonly annular in shape at birth, while the crescentic configuration is most prevalent in children over age three years. Furthermore, the redundancy of the hymen decreased in 75% of subjects during this period. The adult hymen varies significantly in shape and area. When stretched, it is annular and widest posteriorly. Sometimes it is semilunar, concave towards the mons pubis. Occasionally, it is cribriform (multiple small openings), septate hymen (a residual band, usually in the anteroposterior diameter), or fimbriated (or redundant) hymen) (7).

The hymen may be ruptured by sexual intercourse. The rupture appears as irregular hymenal edges and narrow rims at the point of the injury. Subsequently, the jagged, angular margins appear to be smoothed off. More profound penetrating hymen injuries, on the contrary, may result in defects in the integrity of the hymen located posteriorly or posterolaterally.

In the prepubertal girl, penetration occurs through the hymenal tissue and causes tearing because of the relative size of the structures. However, in the adolescent girl and adult woman, consensual penetration occurs into the orifice, thus stretching, spreading, and indeterminate disruption. Many authors agreed that so-called rupture and bleeding of the hymen is not to be routinely expected after first coitus. Other causes of hymenal rupture, other than sexual intercourse, include vaginal insertion of objects such as tampons and digits, fulminant and eroding local infections, surgical procedures, and falling on sharp objects (8).

Table (1) and Figure (1) demonstrate the results of the examination of 189 women who were checked in private practice for bleeding after 1st intercourse. It was found that (82.5%) had annular elastic hymen, (7.9%) were found to be vaginistic with absolutely no penetration, (4.76%) had perineal abrasions with reflex contraction

of bulbospongiosus muscle with the husband "claiming or thinking" penetration had occurred, and (4.76%) had deflorated hymen (small fresh marginal tears at 4 and 7 o'clock (six subjects had crescentic and annular with a small opening. Furthermore, in the other three cases, a torn thin septum of a septate hymen was supposed to be bleeding or to have resulted in very few drops that were diluted with vaginal discharge or seminal fluid. In contrast, all of the 114 young wives examined for severe bleeding after the first intercourse had perineal tears of varying severity, which resulted in severe bleeding complaints. Table (2): depicts vaginal examination results of the 114 patients; only 18 (15.8%) of them had deflorated hymen besides the perineal tear. On the contrary, the other 96 (84.2%) young weds had sound hymen of different types (mainly annular elastic).

Table (1): Shows the number and percentage of results of the examined bleeding cases

Result of examination	Number of cases	Percentage
Annular elastic hymen	156	82.5%
Vaginismus	15	7.9%
Perineal abrasions with reflex muscle contraction	9	4.76%
Deflorated hymen	9	4.76%
Total	189	100%

Table (2): Shows the number and percentage of results of the examined cases with severe bleeding

	Number of cases	percentage
Deflorated hymen and perineal tear	18	15.8%
Sound hymen mainly annular elastic	96	84.2%
Total	114	100%

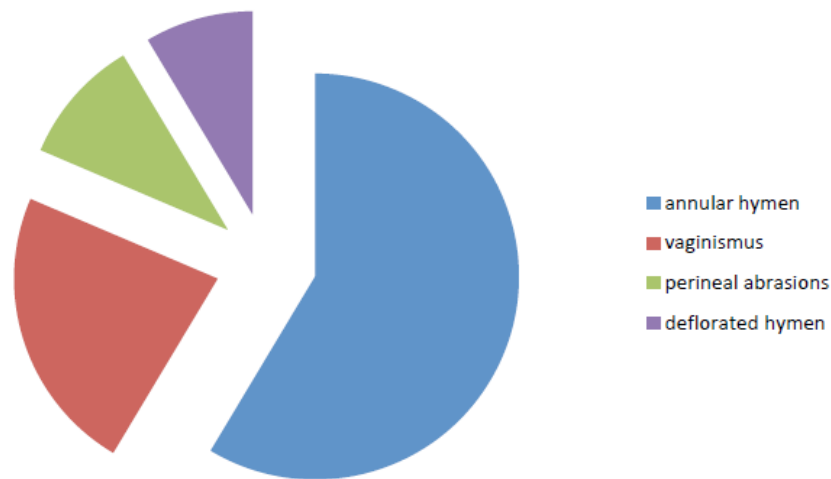


Figure (1): Shows the percentage of results of the examined bleeding cases.

Discussion

Results of examination of 189 women for bleeding after the first intercourse revealed that 156 subjects (82.5%) had annular elastic hymen,, 15 (7.9%) were found to be vaginistic with absolutely no penetration, 9 (4.76%) had perineal abrasions with reflex contraction of bulbospongiosus muscle, and 9 (4.76%) had deflorated hymen. However, among 114 young wives who were examined for severe bleeding after 1st intercourse; ALL were found to have perineal tears with different degrees of severity; which resulted in that severe bleeding complained of, only 18 (15.8%) of them had deflorated hymen besides the perineal tear, on the other hand, the other 96 (84.2%) young weds were having a sound hymen of different types (mainly annular elastic). Husbands of the bloodless wives were in a miserable mood, very nervous, anxious about the results of examination while those coming, accompanying their young bleeding wives were all very proud of what was happening as were the wives' parents having proved that their daughters were well raised, which arose the attention to the necessity of changing these strong beliefs which links virginity to vaginal bleeding upon the first intercourse.

Over centuries, the virginity of the bride was proven by her vaginal bleeding on her wedding night, where the husband proved his manhood and the wife proved her chastity, resulting in a series of lies and allegations with no references, neither medical nor scientific. The investigation of this issue proved that those beliefs resulted in nothing but the aggression of some husbands (bride-grooms) performing the first intercourse to prove sexual ability as well as the good manners of the wives. These wrong beliefs lead to some prohibited procedures such as the hymenorrhaphies, as well as the acts of faking artificial vaginal bleeding by putting a pigeon's liver in the vagina of the bride for guaranteeing the occurrence of bleeding on the wedding night (this procedure is claimed to be having historical pharaonic origins), and the latest device the Chinese artificial hymen in the markets nowadays. The signs of loss of virginity are as follows:

- 1- Labia majora relaxed and gaping
- 2- Labia minora elongated and protruded
- 3- Clitoris enlarged
- 4- Posterior commissure ruptured
- 5- Breasts enlarged and flabby
- 6- Nipple large
- 7- Vagina dilated
- 8- Hymen ruptured

Additionally, Ossman stated that only the last of the eight features, hymenal defloration, is absolute. None of the first seven can be considered definite signs because none can occur from single sexual intercourse. On the contrary, he added that the presence of unruptured hymen affords a presumption of virginity. Still, it is not absolute proof that the diagnosis of virginity is complex, and in many cases, the physical examination of the genital organs may not be helpful. In adolescent and adult women, consensual penetration occurs into the orifice, thus stretching, spreading, and indeterminate disruption. Many authors agreed that the so-called rupture and bleeding of the hymen are not routinely expected after first coitus (8).

Therefore, the case of the 38 bleeding wives has devolved into a simple intra-marital rape following an aggressive act to prove manhood, which is suspended until the first morning of the marital life but has nothing to do with the virginity or the intactness of the hymen. (9) Stated that causes of non-rupture of the hymen despite several intercourses (False Virginity) are elastic hymen, whether fleshy or membranous. The hymen is stretched during intercourse and recedes back to its original position after the sexual mate retaking its intactness. The hymen has an annular or a wide central opening and congenital absence of hymen. In his research, Shariati illustrated that the false virgin may claim to be a true virgin. The post-pubertal hymen is elastic, so some prostitutes have been found to have intact hymens. Therefore, the absence of any injury to the hymen should not be used as a reason to negate the possibility that the adolescent has experienced vaginal penetration (10).

This explains the reason for the bleeding less wedding nights of the 189 young brides subjected to examination for non-bleeding penetration because of the substantial percentage of the elastic hymen among Egyptian girls, which forms the vast majority of the types of hymen in our area. (11) Stated that the vast majority of women do not bleed. No matter what their vaginal corona looks like, fewer than half of all women bleed when they penetrate their vagina for the first time.

Few people bleed because the corona is too tight; instead, there are other reasons. Minor ruptures and bleeding might occur in the vaginal corona if they were not sexually aroused but rather tense, nervous, and too dry. Nonetheless, this has nothing to do with how often you have had sex. The post-pubertal hymen is relatively a bloodless membrane; hence, mostly results in slight bleeding if it is torn. It is a poor indicator of penetrative sexual activity in post-pubertal girls. This bleeding might be unnoticed by the husband, especially after ejaculation, where the color of blood becomes faint after its mixing with the seminal fluid.

Factors that may increase bleeding probability are forced sexual relations, lack of arousal or lubrication, vaginal infection, genital malformation (e.g., imperforate hymen), generalized bleeding disorder, or if the girl is at pre-puberty (6).

Misconceptions regarding virginity may lead to many avoidable social disasters in conservative cultures. The importance of virginity in such cultures is not only a matter of individual wishes or values. Still, it is rooted in traditions regarding the honor of the extended families of the bride and groom. Conceptions about hymen and virginity carry many wrong ideas. Moreover, the traditional proof of virginity is the occurrence of bleeding as a result of defloration. In contrast to these misconceptions, the post-pubertal hymen is elastic so that it may stretch to allow sexual penetration without tears and to bleed (4).

Consequently, from a scientific perspective, an intact hymen is not always a sign of virginity; a deflorated hymen, on the other hand, is a sure sign of non-virginity (but not previous sexual intercourse). The intact posterior fourchette provides better proof of virginity, but it also requires many years of sexual practice to become redundant, so it is not considered solid proof of virginity. The wedding-night bleeding is primarily due to a perineal tear caused by a split posterior fourchette and is not hymenal in origin as previously thought.

Conclusion

According to applied Forensic Medicine, it is not possible to prove or disprove the virginity of the wife after the first intercourse specifically or at any stage of marriage in general -particularly at early stages- as the hymen, which is claimed to have such a big unreal role in this matter varies in shape and type from one female to the other. Furthermore, its presence and even its intactness is not obligatorily a sign of virginity as in cases of false virgins, and its defloration is not a sign of previous sexual activity like in other causes of its defloration, as previously stated. It is also not clear why the girl's virginity is only proven after the consummation of marriage; this is eventually too late.

Declarations

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- Conflict of Interest: The authors declare that they have no competing interests.
- Availability of data and materials: Data will not be shared with public access.
- Consent for publication: Consent forms were given and signed by all subjects prior to participation

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