Annual Report 2014

Indian Institute of Sexology Bhubaneswar

Annual Report  2014

Stored Inside

Cover Story

Antechinusis, a genus of dasyurid marsupial is indigenous to Australia and New Guinea. They have short hair that vary in colour depending on the species. Sexual dimorphism occurs in most species. Males are larger and heavier than females. The most noteworthy feature about Antechinus is their incredible sexual appetite and strenuous mating sessions. All Antechinus species except A. swainsonii are semelparous. Dying after only a single reproductive event is known as semelparity. Among mammals, it is only known to occur in Antechinus. Breeding occurs in winter. All females come into oestrus at that time, triggering a mating frenzy among males. Mate-guarding occurs in the form of protracted copulation (up to 12-14 hours in some species). Fertilization doesn't take place immediately. Females store sperm for up to two weeks in their oviducts. Sperm from only the strongest males fertilize the eggs. All the males die at the end of each mating season, after vigorous and sustained sexual encounters due to stress, infection or internal bleeding.

Our Story.....

When the journey started, I was alone. Gradually but slowly I started convincing as many as my medico friends and professional acquaintance to join hands with me; at least to spread the message. The initial hurdle was to disseminate the idea to somebody in tangible form, not as imagery mental constructs. And, as expected I got the mixed but interesting result. Many smiled at me; many agreed initially but stepped down later on, many joined hands immediately. But, surprisingly nobody denied the fact that almost all has personal sexual problems and related sufferings at some point of their life time that need to be catered to.

I got unconditional support from Dr. Sujit Kumar Kar and Dr. Satyakam Mohapatra to transform my ideas into reality.

I am obliged to Dr. Santosh Kumar Mishra, for giving us a platform to operate from. Whatever we have achieved in the past one year is just a sand pebble in seashore. We have a long way to go. It's my conviction that many friends will definitely come forward to join hands with us in our endeavor to help people to solve personal problems and social problems at large.

Dr. Saumya Ranjan Mishra

Evolution of Sexology

Dr. Sanjay Swain

Sexology is the interdisciplinary study of human sexuality, including human sexual interests, behaviours and function. In modern sexology, researchers apply tools from several academic fields, such as biology, medicine, psychology, epidemiology, sociology and criminology. Sexologists study sexual development, sexual orientation, sexual relationships and sexual activity, as well as document the sexualities of special groups; for example, child sexuality, adolescent sexuality, sexuality among the elderly and the disabled. The study of sexual dysfunctions and disorders, including erectile dysfunction, anorgasmia, and paedophilia, are also common.

Sexology as it exists today i.e. as a specific research-based scientific field, is relatively new. While there are works dedicated towards sex in antiquity, the scientific study of sexual behaviour in human beings began in the 19th century. Shifts in Europe's national borders at that time brought into conflict, laws that were sexually liberal and laws that criminalized behaviours such as homosexual activity.

Early history

Sexual manuals have existed since antiquity, such as Ovid's Ars Amatoria, the Kama Sutra of Vatsyayana, the Ananga Ranga and The Perfumed Garden for the Soul's Recreation. However none of these treat sex as the subject of a formal field of scientific or medical research.

De la prostitution dans la ville de Paris (Prostitution in the City of Paris), an early 1837 study on 3,558 registered prostitutes in Paris, was published by Alexander Jean Baptiste Parent- Duchatelet has been called the first work of modern sex research.

Sexology as an academic discipline

Despite the prevailing social attitude of sexual repression in the Victorian era, the movement towards sexual emancipation began towards the end of the 19th century in England and Germany. In 1886, Richard Freiherr von Krafft-Ebing published 'Psychopathia Sexualis', which is considered as having established sexology as a scientific discipline.

In England, the founding father of sexology was Havelock Ellis, the doctor who challenged the sexual taboos of his era regarding masturbation and homosexuality and revolutionized the concept of sex during his time. He was a pioneering figure in the movement towards sexual emancipation in the late 19th century. His seminal work 'Sexual Inversion', published in 1897, describes the sexual relationship of homosexual males, which included men with boys. Ellis wrote the first objective study of homosexuality.He did not characterize it as a disease, or an act of immorality, or a crime. He also coined the term homosexuality. The work assumes that same-sex love transcends age taboos as well as gender taboos. Seven of his twenty-one case studies are of inter-generational relationships. He also developed other important psychological concepts, such as autoerotism and narcissism, both of which were later developed further by Sigmund Freud. Ellis pioneered transgender phenomena alongside the German scientist Magnus Hirschfeld. He established it as a new category that was separate and distinct from homosexuality. Aware of Hirschfeld's studies of

transvestism, but disagreeing with his terminology, in 1913, Ellis proposed the term sexo-aesthetic inversion to describe the phenomenon.

In 1908, the first scholarly journal of the field, Journal of Sexology (Zeitschrift für Sexualwissenschaft), was published monthly for one year. The issues contained articles by Freud, Alfred Adler, and Wilhelm Stekel. In 1913, the first academic association 'The Society for Sexology' was founded. Freud developed a theory of sexuality. His theory of stages of sexual development includes: Oral, Anal, Phallic, Latency and Genital. These stages run from infancy to puberty and onwards, based on studies of his clients, between the late 19th and early 20th centuries. Wilhelm Reich and Otto Gross, were disciples of Freud, but rejected his theories, because of their emphasis on the role of sexuality in the revolutionary struggle for the emancipation of mankind.

Pre-Nazi Germany, under the sexually liberal Napoleonic code, organized and resisted the anti-sexual, Victorian cultural influences. The momentum from those groups led them to coordinate sex research across traditional academic disciplines, bringing Germany to the leadership of sexology. Physician Magnus Hirschfeld was an outspoken advocate for sexual minorities, founding the Scientific Humanitarian Committee, the first advocacy for homosexual and transgender rights. Hirschfeld also set up the first Institute for Sexology (Institut für Sexual wissenschaft) in Berlin in 1919. Its library housed over 20,000 volumes, 35,000 photographs, a large collection of art and other objects. People from around Europe visited the Institute to gain a clearer understanding of their sexuality and to be treated for their sexual concerns and dysfunctions. Hirschfeld's books were burned by the Nazis in Berlin for being 'Un-German'. Hirschfeld developed a system which identified numerous actual or hypothetical types of sexual intermediary between heterosexual male and female to represent the potential diversity of human sexuality, and is credited with identifying a group of people that today are referred to as transsexual or transgender as separate from the categories of homosexuality, he referred to these people as 'transvestiten' (transvestites). Germany's dominance in sexual behaviour research ended with the Nazi regime. The Institute and its library were destroyed by the Nazis within three months after they took power on May 8, 1933. The institute was shut down and Hirschfeld's books were burned.

Other sexologists in the early gay rights movement included Ernst Burchard and Benedict Friedlaender. Ernst Grafenberg, after whom the G-spot is named, published the initial research on developing the intrauterine device (IUD).

Post-war expansion

After World War II, sexology experienced a renaissance, both in the United States and Europe. Large scale studies of sexual behaviour, sexual function, and sexual dysfunction gave rise to the development of sex therapy. Post-World War II sexology in the U.S. was influenced by the influx of European refugees escaping the Nazi regime and the popularity of the Kinsey studies. Until that time, American sexology consisted primarily of groups working to end prostitution and to educate youth about sexually transmitted diseases. Alfred Kinsey founded the Institute for Sex Research at Indiana University, Bloomington in 1947. This is now called the 'Kinsey Institute for Research in Sex, Gender and Reproduction'. He wrote in his 1948 book, first edition of 'Sexual Behaviour in the Human Male', that more was scientifically known about the sexual behaviour of farm animals than of humans.

Kurt Freund developed the penile plethysmograph in Czechoslovakia in the 1950s. The device was

designed to provide an objective measurement of sexual arousal in males and is currently used in the assessment of paedophilia and hebephilia. This tool has since been used with sex offenders.

Masters and Johnson released their works, 'Human Sexual Response' in 1966 and 'Human Sexual Inadequacy' in 1970. Those volumes sold well, and they were founders of what came to be known as the 'Masters & Johnson Institute' in 1978.Vern Bullough was a historian as well as researcher in the field of sexology during this era.

The emergence of HIV/AIDS in the 1980s shifted the sexological research efforts towards understanding and controlling the spread of the disease.

Today's Sexology

Technological advances have permitted sexological questions to be addressed with studies using behavioural genetics, neuroimaging and large-scale internet-based surveys. Now one can quantify the sexuality by using different modern methods of sexological testing.

Sexological testing

Sexuality can be inscribed in a multidimensional model comprising different aspects of human life: biology, reproduction, culture, entertainment, relationships and love. In the last few decades, a growing interest towards sexuality and a greater quest to acknowledge the 'right to sexuality' has occurred both in society and individuals. The consequence of this evolution has been a renewed and more explicit call for intervention for those who suffer, or think they suffer from alterations of their sexual and relational sphere.

This has produced an increased attention of medicine and psychology towards sexual dysfunctions and the problems they cause in individuals and couples. Science has gradually adopted already existing research tools, mostly used in other fields of clinical research, to the field of sexology, thus completing and increasing the number of tools in the toolkit of various branches of sexology.

Psychological measurements cannot be considered as accurate as physical ones like weight, height, mass, etc. as the former evaluate those aspects and variables pertaining to an 'individual' whose individuality refers to his/her own psychological, personal and environmental constituents like emotions, expressiveness, senses, feelings and experiences which can greatly vary according to the subjects and time period and environmental settings, even in the same individual.

What is expected of psychological measurements is sufficient accuracy and reliability, i.e. capability to express an indication or the focus with which clinicians can use as a guideline to rapidly and accurately deepen the aspects highlighted by the measurements and check them together with their patients. For this purpose, several statistical validation indexes of psycho-diagnostic tests are provided: from standardization to various constructions of validity (internal, external, face, construct, convergent, content, discriminant, etc.).

There are several sexual dysfunctions and each of them have a different cause. Therefore, the field of sexology provides different psychological evaluation devices in order to examine the various aspects of the discomfort, problem or dysfunction, regardless of whether they are individual or relational ones.

The number of psycho-diagnostic reactives is certainly wide and heterogeneous, nevertheless, the amount of tests specifically meant for the field of sexology is quite limited. The following list (in alphabetical order) is not exhaustive but shows the best known and/or most used reactives in the field of sexological and relational psycho-diagnosis:-

1. ASEX (Arizona Sexual Experience Scale)
2. BSRI (Bem Sex Role Inventory)

3. ASKAS (Aging Sexuality Knowledge and Attitudes Scale)
4. DAS (Dyadic Adjustment Scale)
5. DIQ (Diagnostic Impotence Questionnaire)
6. DSFI (Derogatis Sexual Function Inventory)
7. EDITS (Erectile Dysfunction Inventory of Treatment Satisfaction)
8. EPES (Erotic Preferences Examination Scheme)
9. FACES (Family Adaptability and Cohesion Evaluation Scales)
10. FGIS (Feminine Gender Identity Scale)
11. GRIMS (Golombok Rust Inventory of Marital State)
12. GRISS (Golombok Rust Inventory of Sexual Satisfaction)
13. HSAS (Hendrick Sexual Attitude Scale)
14. IIEF (International Index of Erectile Function)
15. ISS (Index of Sexual Satisfaction)
16. MAT (Marital Adjustment Test)
17. MCI (Marital Communication Inventory)
18. MMPI-2 (Minnesota Multiphasic Personality Inventory)
19. MPT (Marital Patterns Test)
20. MSI (Marital Satisfaction Inventory)
21. PEQUEST (Premature Ejaculation Questionnaire)
22. PREPARE-ENRICH (Premarital Personal and Relationship Evaluation)
23. SAI (Sexual Arousability Inventory)
24. SAS (Sexual Attitude Scale)
25. SBI (Sexual Behavior Inventory)
26. SESAMO_Win (Sexrelation Evaluation Schedule Assessment Monitoring on Windows)
27. SESII–W (Sexual Excitation/Sexual Inhibition Inventory for Women)
28. SFQ (Sexual Functioning Questionnaire)
29. SHQ–R (Clarke Sex History Questionnaire for Males–Revised)
30. SII (Sexual Interaction Inventory)
31. SOC (Spouse Observation Checklist)
32. SOS (Sexual Opinion Survey)
33. TIPE (Test di Induzione Psico Erotica)
34. WIQ (Waring Intimacy Questionnaire)

Notable contributors in the field of Sexology

The new showtime series '*Masters of Sex*'shines light on two remarkable figures in the history of sexology, William Masters and Virginia Johnson. Although most are not aware of their colourful back-story, they might have, at least, heard of 'Masters and Johnson' before. Along with the famous Alfred Kinsey, they were iconic American figures in 20th-century sex research, widely known for shirking the conservative conventions that kept our forebears in the closet of erotic ignorance.

However, the history of sexology runs far deeper than a few charismatic figures. Even though their names may not be familiar, but there are many other fascinating early sex researchers who left their own interesting legacies, though not always entirely positive ones. Some of these forgotten scholars were, Masters and Johnson, angels of sexual healing; yet others, quite frankly, were bigotry only.

Among the galaxy of historical sexologists the most important five early sexologists were;

1. Richard von Krafft-Ebing. Krafft-Ebing was an Austro-German psychiatrist who, back in 1886, wrote the book on abnormal sexuality. His encyclopaedic tome on the subject 'Psychopathia Sexualis' is an absorbing collection of case studies involving every imaginable type and category of deviant sexual desire. On the other hand, Krafft-Ebing set the stage for scholars to pathologize anyone whose erotic interests strayed from the heteronormative. Today's clinical-forensic paradigm in which sexual paraphilia's are usually

interpreted can be traced back directly to him. On the other hand, Krafft-Ebing argued for a humane understanding of such individuals, seeing them as having no control over their own peculiar sexual lot in life.

Some men, he reasoned, suffered from 'satyriasis' (basically, nymphomania's male counterpart) and should be forgiven their insatiable carnal appetites due to their mental and genetic defects leading to lustful excesses.

2. Havelock Ellis. In 1897, this scholar from South London "borrowed" (plagiarized, some say) a bit of the posthumous work of a gay literary critic named John Addington Symonds and authored one of the earliest academic books on homosexuality. Titled 'Sexual Inversion' which reflected Ellis's view of gays and lesbians as having an inside out, or 'inverted,' pattern of erotic attraction—it was a sympathetic portrayal of the naturalness of same-sex desires. One of this sexologist's most important contributions was his clarification that homosexuality is a psychological orientation, not simply a random sex act or behaviour involving same sex.

He didn't personally believe that gays and lesbians were 'perverts', but he used this term to convey how religious moralists wrongly saw homosexuals and other 'deviants' as deliberately 'going against what is right', since for hundreds of years before it ever connoted anything sexual, pervert was an epithet used for heretics and atheists. After Ellis, however, the term stuck crudely to homosexuals, used (almost unbelievably so) even among 1980s-era psychoanalysts as a technical term.

Ellis wasn't without his own unique sexual interests and was completely open about his worshiping of the 'divine stream', as he called it. He celebrated his 'Urophilia' (love of urine, or at least, watching people who are urinating) and saw no reason to hide it. "I may be regarded as a pioneer in the recognition of the beauty of the natural act in women when carried out in the erect attitude," he wrote in his biography. "It was never to me vulgar, but, rather, an ideal interest, a part of the yet unrecognised loveliness of the world." When a female friend forgot her purse at his house, he chided her in a letter: "I've no objection to your leaving liquid gold behind".

3. Wilhelm Stekel. "Variatio delectat!" Stekel marvelled in 1930 in the pages of his nightmarishly titled Sexual Aberrations. "How innumerable are the variations which Eros creates in order to make the monotonous simplicity of the natural sex organ interesting to the sexologist." It was Stekel, who coined the clinical term 'paraphilia'. The first part of the word, para, is Greek for 'other' or 'outside of', and philia translates roughly to 'loving'. Some sexologists have quibbled over this choice, noting that 'paralagnia' is a better fit, since we're dealing with lust (lagnia) not love.

Stekel, the son of an illiterate orthodox Jewish father, had trained briefly under Krafft-Ebing and was a former friend and apostle of Sigmund Freud. Stekel's book is filled with carnival-style clinical studies of sexual deviance that makes those described in his mentor's 'PsychopathiaSexualis' feel tame by comparison.

He had a particular scholarly interest in amputee fetishism (acrotomophilia). The universe doesn't have a sense of humour, but if it did, it would be black humour. To avoid having his own gangrenous foot removed due to diabetes, Stekel committed suicide at age 72, just a decade after he praised Eros's cleverness.

4. Kurt Freund. A prodigious theorist and researcher, Freund's main claim to fame was his invention of the erection-detection machine otherwise known as the 'penile plethysmograph'.

In the early 1950s, Freund—a Holocaust survivor who somehow managed to avoid being deported to

the concentration camps altogether during the Nazi occupation was approached for help with a queer sort of problem by the Czechoslovakian army. Straight recruits were pretending to be gay to avoid their compulsory military service. It occurred to Freund that a soldier's single dumb erection to a pretty naked lady, or the lack of one thereof, would betray his hidden sexual orientation. The specifics have gotten more complicated in the decades since his original erection-detection machine was patented, but the basics of the procedure have remained largely the same: A man sits down in a chair, his penis is connected to an erection gauge that can pick up very subtle changes in penile tumescence (it's so sensitive that it can detect a blood-volume increase of less than one cubic centimetre, which most men wouldn't even experience consciously), and he's then shown randomized images of nude models representing distinct erotic categories. The scientist, meanwhile, measures what's happening with the man's own equipment as these photographs appear. A far cry from its initial purpose, Freund's machine is today used mostly in forensic studies, ascertaining paedophilia in men arrested for sex crimes involving children.

5. Albert Ellis. No relation to Havelock, the psychologist Albert Ellis is best known as the founder of Cognitive Behavioral Therapy. But in 1964, his little-known book, 'Nymphomania: A Study of the Oversexed Woman' hit the shelves, and it was positively dripping with misogyny and homophobia. Co-authored by Edward Sagarin, Ellis reasoned that there are several different subspecies of nymphomaniac female walking among us, introducing a few colourful specimens from his own clinic.

Conclusion

Sexology is an upcoming science with an illustrious history. With the advent of HIV & AIDS and the modern stressful life style, sex education of community is becoming more important.Sex education is nothing but instructions on issues relating to human sexuality, which includes human sexual anatomy, sexual reproduction, sexual activity, reproductive health, emotional relations, reproductive rights and responsibilities, sexual abstinence, and birth control. Sex education can be started at an appropriate stage of adolescence life. Common avenues for sex education are parents or caregivers, formal school programs, and public health campaigns. Proper sex education will assure a healthy sexual life in sexually active human being with less in need of a sexologist.

Human Health and Sexuality: An Indian Approach

Dr. Kirti Sundar Sahu

Though the definition of health is "it is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" as per World Health Organization, a lay person in India still believes that health is absence of illness or disease. It is the concept from the childhood among majority of Indian which hinders the understanding of health in a right direction. Sex is defined as the biological characteristics that define humans as female or male. While these sets of biological characteristics are not mutually exclusive, as there are individuals who possess both, they tend to differentiate humans as males and females. Recent decision of government of India is a historical landmark adding third gender as mandatory option in all documents. In general use in many languages, the term sex is often used to mean "sexual activity", but for technical purposes in the context of sexuality and sexual health discussions, the above definition is preferred. In the same way sexual health is defined as "a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity". Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled." (WHO, 2006). Sexual health cannot be defined, understood or made operational without a broad consideration of sexuality, which underlies important behaviours and outcomes related to sexual health. The working definition of sexuality is "a central aspect of being human throughout life which encompasses sex, gender identities and roles, sexual orientation, eroticism, pleasure, intimacy and reproduction". Sexuality is experienced and expressed in thoughts, fantasies, desires, beliefs, attitudes, values, behaviours, practices, roles and relationships. While sexuality can include all of these dimensions, not all of them are always experienced or expressed. Sexuality is influenced by the interaction of biological, psychological, social, economic, political, cultural, legal, historical, religious and spiritual factors."

Parameters of good health

We have discussed that human health depends on physical, mental/psychological and socio-cultural aspects.Now we will discuss some of the important influence of sexuality on health.

Sexual activity helps to keep the immune system strong. "Sexually active people take fewer sick days," says Yvonne K. Fulbright, PhD sexual health expert. People who have sex have higher levels of what defends your body against germs, viruses, and other intruders. Researchers at Wilkes University in Pennsylvania found that college students who had sex once or twice a week had higher levels of a certain antibody compared to students who had sex less often.

It helps to improve libido. "Having sex will make sex better and will improve your libido," says Lauren Streicher, MD, an assistant professor of obstetrics and gynecology at Northwestern University's Feinberg School of Medicine in Chicago. According to her when women have sex, it increases blood flowand vaginal lubrication, all of which make sex feel better and women crave more of it.

It improves women's bladder control. A strong pelvic floor is important for avoiding incontinence, something that will affect about 30% of women at some point in their lives. Good sex is like a workout for pelvic floor muscles. Orgasm causes contractions in pelvic muscles, which strengthens them.

It reduces blood pressure. Research suggests a link between sex and lower blood pressure, says Joseph J. Pinzone, MD. It has been found that sexual intercourse (not masturbation) specifically lowers systolic blood pressure.

It is a very good physical exercise. "Sex is a really great form of exercise," Pinzone says. It won't replace the treadmill, but it counts for something. Sex uses about five calories per minute, four more calories than watching TV. It bumps up heart rate and uses various muscles.

It lowers risk of heart attack. A good sex life is good for proper functioning of heart. One study shows, men who had sex at least twice a week were half as likely to die of heart disease as men who had sex rarely.

Reduction of pain is also possible by sexual act. "Orgasm can block pain," says Barry R. Komisaruk, PhD. It releases a hormone that helps raise your pain threshold. Stimulation without orgasm can also do the trick. Vaginal stimulation can block chronic back and leg pain, and many women have found that genital self-stimulation can reduce menstrual cramps, arthritic pain, and in some cases even headache.

It may make prostate cancer less likely. Men who ejaculated frequently (at least 21 times a month) were less likely to get prostate cancer found in one study, which was published in the Journal of the American Medical Association. You don't need a partner to reap this benefit: Sexual intercourse, nocturnal emission, and masturbation were all part of the equation.

Sexual activity improves sleep naturally. You may nod off more quickly after sex, and for good reason. "After orgasm, the hormone prolactin is released, which is responsible for the feelings of relaxation and sleepiness" after sex, says Sheenie Ambardar, MD.

It reduces stress. Being close to your partner can soothe stress and anxiety. Touching and hugging can release your body's natural "feel-good hormone". Sexual arousal releases a brain chemical that revs up your brain's pleasure and reward system. Sex and intimacy can boost your self-esteem and happiness.

Indian approach to health

It is commonly observed that the Indian societies are very much conservative though the recent trends show that in urban areas and metros people are getting modernized and changed their perspective towards sex, sexuality and sexual health. The silence of the Indian culture on issues related to sexuality compound many issues including help seeking related to various psychological and physical problems ranging from neurotic and anxiety disorders, the HIV epidemic, reproductive tract infections, sexual violence, contraception, abortion services and female genital mutilation. Indian society is ambivalent about sex education in schools and colleges. The barriers to sexual well-being include issues related to individual empowerment and choice, access to educational and clinical services, social stigma, discrimination and sexual violence. Even professional medical education does not transfer skill and confidence related to sexual health and sexual medicine.

India is a vast country depicting wide social, cultural and sexual variations. Indian concept of sexuality has evolved over time and has been immensely influenced by various rulers and religions. Indian sexuality is manifested in our

attire, behavior, recreation, literature, sculptures, scriptures, religion and sports. In modern era, with rapid globalization the unique Indian sexuality is getting diffused. The time has come to rediscover ourselves in terms of sexuality to attain individual freedom and to reinvest our energy to social issues related to sexuality.

The famous Indian sensuality, quoted incessantly in the world, by mentions of Tantric life styles, Kamasutras and erotic arts will change the face of the world again in coming decades when Indian people find themselves again. A cross-section of Indian people who are adjusted in the less dogmatic and prosperous western societies and their behavior patterns and views reflect that a healthier sexual approach to our lives is eventually healthier for our well-being, our overall progress and of course a new awakening on personal level. The newer generations of India and Indian people worldwide have been trying to define the sexual and sensual vocabulary on their own; rather than being influenced by external and foreign influences. We should start talking about issues and focus light on dark areas, which create ignorance, ill-health and many social evils like failed marriages, rapes, divorces, disrespect to women, abuse of children and in general an unhappy community.

Our Vision

Harmonious existence between male and female leading the mankind towards ultimate bliss

Our Goals

Indian Institute of Sexology Bhubaneswar (IISB)

- Aims to facilitate the integration of knowledge and expertise across various disciplines like medicine, psychology, sociology, law and ethics for greater understanding of complexities of human sexuality
- Aims to adequately address the individual sexual problems and social issues

Our Objectives

- To bring experts of different disciplines to a common platform for sharing of knowledge and views on human sexuality
- To promote research on human sexuality
- To impart training on 'Sexology' and strengthen the discipline of 'Sexual Medicine'
- To encourage medical professionals to choose 'Sexual Medicine' as a career
- To create public awareness on human sexuality and gender issues
- To advocate any social change for betterment of mankind

Influence of Yoga Practises on Sexual Life

Dr. Saroj Kumar Sahu

Introduction

Sex in its real nature is a fundamental energy of life. Universal Nature plays and throws sex-waves on human beings in order to create forms. The sex impulse is perfectly natural and all men have it. Nature has put it as part of her functioning for the purpose of procreation so that the race may continue. When life energy goes downwards towards ignorance and darkness, it becomes lust. When it rises upwards it turns into spiritual love and spiritual strength which is the ultimate bliss[1].

Even in remote past one can find the instinctive desire to extend clan or race. Putraisana (desire for progeny) is one of the primary desires of mankind mentioned in the Upanishads more over to make it more attractive, clanged with it is the pleasure derived from sex. In Ayurveda the science of sexual function and reproduction was duly emphasized under the nomenclature Vajikarana. Another spelialized art of sexology 'Kamashastra' also evolved in India which more vividly dealt with exclusive techniques and enjoyment of sensuous pleasure[2].

Vajikarana / Vrushya(Aphrodisiac therapy) [2]

It is the branch of ayurveda science related with healthy sex life and treatment related to complaints about intercourse etc. Vajikarana is that which potentiates a man to traffic into women like a horse and also sustain in the same. The factors which make a man capable of entering into sexual intercourse with woman with stallion vigour and which makes him capable of performing excessive sexual intercourse are called vajikarana. This branch of ayurveda was designed to promote virility. Of the two aspects of vajikarana, procreation and enjoyment, one or the other has been receiving emphasis from time to time according to sociological condition. Aphrodisiacs are substances that are supposed to increase sexual drive, performance or desire. By resorting to aphrodisiacs, man becomes capable of sexual intercourse with vigour.

Three categories of aphrodisiacs have been defined as follows.

1. Sukravriddhikara / sukrajanaka - factors which increase the quantity of semen like ghee, milk , meat etc.
2. Suhrasrutikara / sukrapravartaka - factors which include the ejaculation of semen or factors which promote discharge of semen namely determination for sex act, seeing and touching of the women wished.
3. Sukrasruti – vridhikara / sukrsjanakapravartaka – factors covering both the above.

In ancient days, it was the routine procedure to take some aphrodisiacs before undertaking sexual intercourse. This idea was to promote in this way the quantity and quality of semen along with the sexual enjoyment.

The Science of Yoga and Sex

Different Yogic techniques[3,4,5]

1. *Asana* - Asanas are various postures done to make the body strong and disease free. One who perfects asanas remains unaffected by the influences of the pair of opposite like heat and cold, comforts and pain etc.

2. *Pranayama* – It is the fourth step of Astanga yoga. Maharsi Patanjali writes, "Breaking of the

continuity of respiration is pranayama." By the regular practice of pranayama, impurities of mind are reduced or minimized. After the impurities are reduced the mind is capable of practicing dharana (concentration).

3. *Mudra* – These are psychic, emotional, devotional and aesthetic gestures or attitudes. These are attitudes of energy flow, intended to link individual pranic force with universal or cosmic force. These are combination of subtle physical movements which alter mood, attitude and perception and which deepen awareness and concentration. These are higher practices which lead to awakening the pranas, chakras and kundalini which can bestow major siddhis, pshychic powers on the advanced practitioners.

4. *Bandha* - It means to 'hold', 'tighten' or 'lock'. Bandhas aim to lock the pranas in particular areas and redirect their flow into sushumana nadi for the purpose of spiritual awakening. These may be practiced individually or incorporated with mudra and pranayama practices. When combined in this way, they awaken the psychic faculties and form an adjunct to higher yogic practices.

5. *Shatkarma* - These are six groups of purification practices. These are Neti (nasal cleansing with water and thread), Dhauti (internal cleansing, head cleansing and thoracic cleansing), Nauli (abdominal massaging), Basti (yogic enema), Kapalabhati (frontal brain cleansing) and Trataka (concentrated gazing). The aim of shatkarma is to create harmony between the two major pranic flows, ida and pingala, thereby attaining physical and mental purification and balance. These are also used to balance the three doshas or humours in the body, kapha (mucous), pitta (bile) and vata (wind). These are practiced in order to purify the body of toxin.

6. Relaxation – Different methods of relaxation are yoganidra, abdominal breath awareness in shavasana, pranavidya and relaxation asanas.

7. Meditation - The perfection of concentration leads to meditation. The flow of similar thoughts in the mind concerning the point of concentration is meditation. The continuous flow of the thought of the object of concentration is dhyana or meditation.

Different methods of meditation are ajapa japa (one pointed concentration on the sponta-neous repetition of mantra without any effort), antar mouna/ vipasana (inner silence), sitting in meditation asanas and concentration on the movement of breath at the navel, kaya sthairyam (a basic practice of concentration on the steadiness of the body), nada yoga (Om is known as Nada Brahman or Sabda Brahman). Nada yoga is a method of tracing sound back through its psychic and more subtle manifestation to the source), japa (thecontinuous repetition of a mantra), chidakasha dharana (the concentration on the chidakasa. Chidakasa is the space of consciousness, located in the region of head, behind the forehead which is the mind screen or viewing screen of ajna charka).

Benefits of Yogic exercises [5,6,7]

Yogasanas improve the mucscle tone and plasticity of muscles, relieve those muscles that are continually under stain or gravity, activate those small groups of muscles that were once important at some stage of our biological evolution from animals but disuse led to their decay when we assumed erect postures and activate the stretch-reflexes at the level of spinal cord, improve perceptual motor coordination. They have reduced risks of muscle and ligament injury. They induce less muscle fatigue than exercises and do not require the use of extra calories because in yogasanas breathing is kept as natural as possible and in case of hyperventilation, the person is supposed to resort to relaxed postures (Savasana).

Asanas have 3 effects on the body and mind

i) local effect,
ii) peripheral effect
iii) central effect.

The static comfortable postures, accompanied by a meditative state, dampen the inflow of sensory impulses to brain. The topsy-turvy postures (e.g. sirsasana or sarvangasana) relieve antigravity muscles and help drainage of venous blood towards head but are also supposed to help in proper positioning of the internel viscera which often show sign of slackening (visceroptosis), prolapsed or hernization etc. The relaxed postures of yoga prevents the hazards of bad postures due to continual gravitational pull, like accumulation of fat over the torso, buttocks or thighs, breasts etc. and drooping of shoulders, lordosis (bulging out tummy or abdomen), double-chin (fat under the chin and around neck) and crease and pouches around the eyes, and/or face etc. The sequential activation of agonists (prime mover muscles) and antagonists (counter-acting muscles) assures suppleness, plasticity of muscles. The asanas emulate postures and movements of animals who are at a lower level than us phylo-genetically. By assuming these asanas, some of the muscles which have gone disuse are re-activated. The asanas are also to be understood as relearning of good relaxed positions for body musculature[6].

In yogic exercises, there is harmonious development of all the muscles of the body, internal organs, nerves and the frame. There are no rapid movements and hence there is no waste of energy. The three important organs viz., heart, lungs and brain with its cerebro-spinal system, are kept in a healthy condition by regular practice of a few important asanas and one or two breathing exercises. These yogic exercises are both preventive and curative in their nature. By yogic exercises the body as a whole is developed, toned up and strengthened. The entire body becomes flexible, thereby preventing stagnation of blood in any part of the body. Another unique feature of these exercises is their influence upon the endocrine system. The malfunctioning of the thyroid, pituitary and pineal glands is corrected by a course of selected postures. By adopting a daily yoga programme to develop mental emotional balance, the pituitary secretions are reduced and the formation of spermatozoa and testosterone becomes manageable[5].

Reproductive organs are associated with lower psychic centres, known as mooladhara and swadhisthana chakra. Regular meditation and yoganidra, in conjuction with asanas specially tone and activate the reproductive organs. They should be practised on a daily basis. The practices of moola bandha, vajroli and ashwini mudra arouse dormant energy and overcome pranic, psychological and mental deficiencies and blockages[7].

Yogic programme for healthy sexual life[3,5,7,8]

The following practices tone up the reproductive organs of both male and female.

1) ***Asana*** – Katichakrasana, tadasana, trikonasana, surya namaskara, paschimottan-asana, bhujangasana. Shashankasana, shasank bhujangasana, marjariasana, sputa vajrasana, ushtrasana, vyaghrasana, yogamudrasana, ardhamatsyendrasana, dynamic padahastasana, bhujangasana, shalabhaasana, sarvangasana, druta halasana, mats-yasana, gomukhasana, dwipadakandarasana, kandarasana, chkrasana, hanumansana, bhadrasana, garudasana.

For males – Mayurasana, brahmacharyasana.

2) ***Pranayama*** – All pranayamas, specifically nadi sodhana and bhastrika with antar and bahir kumbhaka.

3) ***Mudra*** – Pashinee, vajroli, ashwini, vipareetakarani, maha and mahabheda mudra and yoga mudra.

4) ***Bandha*** – Jalandhara, moola, maha and uddiyana bandha.

5) ***Satkarma*** - Neti, nauli, agnisara kriya and laghoo shankhaprakshalana whenever constipation is present.

6) **Relaxation** – Yoganidra and abdominal breath awareness in shavasana, meditation.

7) **Meditation** – Ajapa japa while seated in siddhasana.

8) **Diet** –high protein diet, milk, dairy products, such as ghee, milk etc, honey, fruits and nuts, vitamin E enriched foods such as pure pea nut butter, olive oil, wheat germ, sesame and unrefined cereals and grains.

9) **Further recommendations** – adequate rest, a change of environment away from mental pressures, responsibility, social and family commitments

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If you have scintillating ideas in line with the goals and objectives of IISB, please do share with us at sexualityinfo@gmail.com or write to us at **Indian Institute of Sexology Bhubaneswar,** Sanjita Maternity Care & Hospital, Plot No-1, Ekamra Marg, Unit-6, Bhubaneswar-751001, Odisha, India. For details please log on to www.iisb.org

Caution - Please do remember that the responsibility to carry the ideas forward will fall on your shoulder.

Clinical Approach to A Case of DSD (Disorder of Sex Development)

Dr. T. V. Ram Kumar

There has been a change in definition, approach, investigation and management of ambiguous genitalia over last decade. Recently, the Lawson Wilkins Pediatric Endocrine Society (LWPES) and the European Society for Paediatric Endocrinology (ESPE) have published proposed changes to the nomenclature and definitions of disorders in which the development of chromosomal, gonadal, or phenotypic sex is atypical. The consensus statement has proposed the term "Disorders of Sex Development (DSD)" to denote congenital conditions in which development of chromosomal, gonadal, or anatomical sex is atypical. The proposed revised nomenclature for these is summarized in Table 1. Given that genital anomalies may occur as commonly as 1 in 300 to 5000 births and may not always be associated with a functional abnormality, some have advocated the use of 'differences' in preference to the term 'disorder'[1, 2, 3, 4].

Table 1. Proposed revised nomenclature [5, 6, 7]

Previous	*Proposed*
1) Intersex	DSD
2) Male pseudohermaphrodite, under- virilization of XY male, and undermasculinization of XY male	46, XY DSD
3) Female pseudohermaphrodite, overvirilization of an XX female, and masculinization of an XX female	46, XX DSD
4) True pseudohermaphrodite	Ovotesticular DSD
5) XX male or XX sex reversal	46, XX tesicular DSD
6) XY sex reversal	46, XY complete gonadal dysgenesis

What is genital ambiguity (GA)?

Whenever there is difficulty for the physician (assumed to be knowledgeable of the normal variations of external genitalia) to be able to define a child's sex, there is ambiguity[8, 9, 10].

What is not genital ambiguity?

Genital malformations like epispadias, hypospadias, partial or total penis-scrotal inversion and agenesis of penis or clitoris are not GA

Diagnostic criteria have been long proposed by Danish in 1982[8].

Anyone of these findings is not genital ambiguity:

a) In apparently male genitalia

1) Gonads not palpable,
2) Stretched penile length (SPL) is ⩽ 2.5 S.D. for that age,
3) Small gonads (i.e. largest diameter <8mm),
4) Inguinal mass (rudimentary uterus and fallopian tubes),
5) Hypospadia.

b) In apparently female genitalia

1) Clitoral diameter >6mm,
2) Palpable gonads,
3) Posterior labial fusion,
4) Inguinal mass which could correspond to testicles.

Development of Gonads

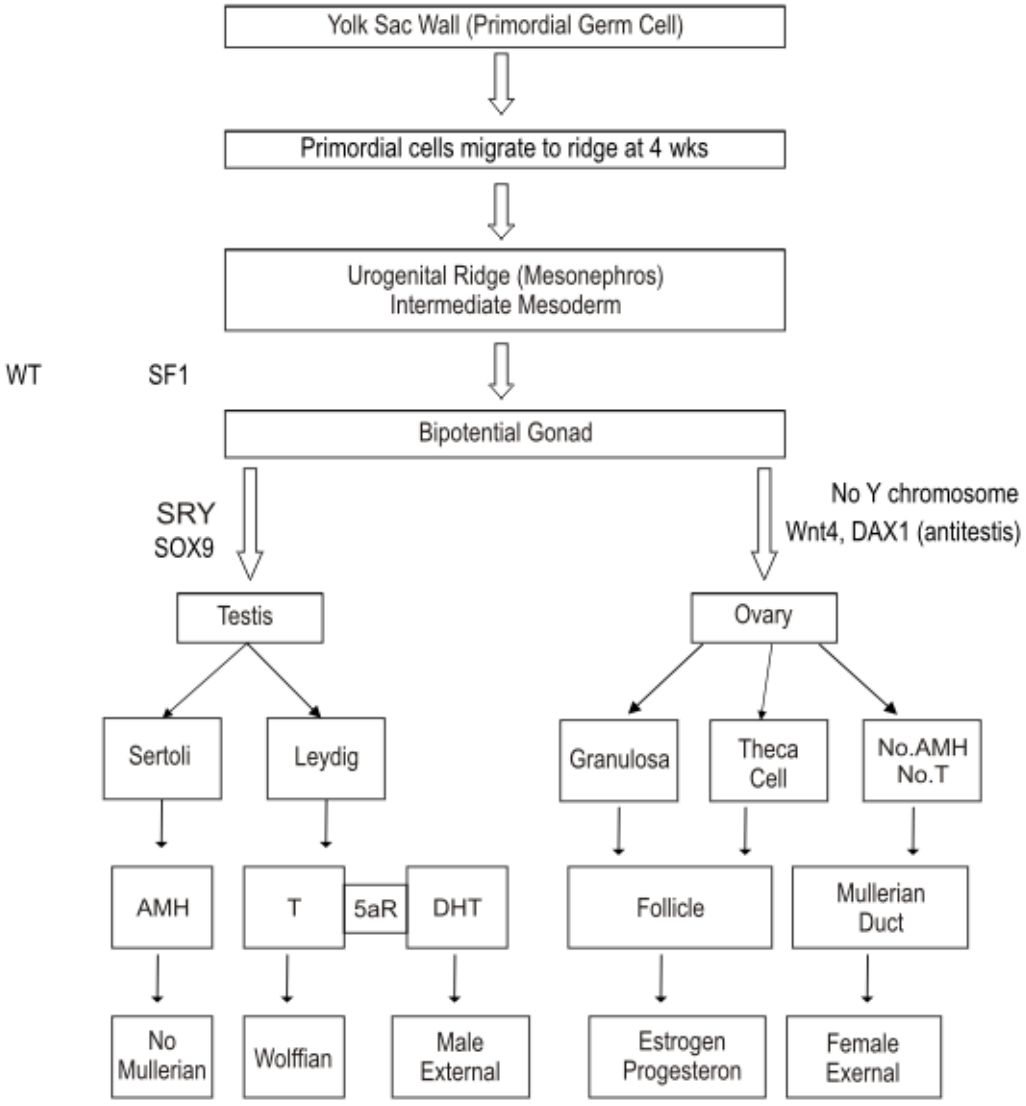

Figure 1: Development of gonads

Till date there is no specific gene has been mapped for development of ovary. It is the absence of SRY that results in development of ovary is probably incomplete [11]. The exact role of "ovarian determining" genes in humans is unclear at present [12]. Testosterone production appears to enhance the inhibition of müllerian duct development produced by AMH, while estrogens may interfere with AMH action, resulting in a degree of müllerian duct development. The normal male external genital develops from primordial parts, the scrotum from the genital swellings, shaft of the penis from the folds, and the glans penis from the tubercle. The prostate develops from the urogenital sinus. The testosterone-related developmental change begins at approximately 6 weeks of gestation with a testosterone rise in response to a surge of luteinizing hormone (LH). Testosterone levels remain elevated until the 14th week. Most phenotypic differentiation occurs during this period. After the 14th week, fetal testosterone levels settle at a lower level and are maintained more by maternal stimulation through human chorionic gonadotropin (hCG) than by LH. Testosterone's continued action during the latter phases of gestation is responsible for continued growth of the phallus, which is directly responsive to testosterone and to DHT [13]. Sex differences in brain structures have been identified across species, some of which coincide with pubertal onset, perhaps suggesting hormonal responsivity. There are sex differences in specific nuclei in the limbic system and hypothalamus [14,15,16].

Terminologies

1) External genitalia gender: It depends on the external genitalia.
2) Internal genitalia gender: It depends on the presence of wolffian or mullerian structures. The type of gonad present determines the differentiation/regression of the internal ducts (i.e., müllerian and wolffian ducts).
3) Gonadal gender: It defines the presence of testes or ovary or ovotestes.
4) Chromosomal or genetic sex/gender: It defines the number of sex chromosomes. Chromosomal sex determines gonadal sex, which determines phenotypic sex [17,18].
5) Endocrine gender: It is the hormonal milieu that influences the secondary sexual characteristics, reproductive capacity, and fetal development.
6) Gender identity: It is the psychological self identity. It refers to an individual self representation as male or female [19].
7) Gender role: This is the social insertion into one/other gender.

There is a major challenge to reach a precise etiological diagnosis in shortest time possible. In all cases diagnosis should be made before gender is established. It needs the team approach including a paediatrician, endocrinologist, geneticist, surgeon, gynaecologist, radiologist, pathologist, forensic physician, psychologist and social workers [20].

Clinical approach

The approach starts with history of antenatal period where the fetus has risk of exposure to any androgens (drugs, maternal androgen secreting tumours like arrhenoblastoma). A history of consanguinity, infertility, atypical genitalia, or unexpected changes at puberty may suggest a genetically transmitted trait. Recessive traits tend to occur in siblings, while X-linked abnormalities tend to appear in males who are scattered sporadically across the family history. History of hypertension during childhood, unexplained deaths during 1st months of life should be sought during the evaluation.

Examination

The clinical examination starts with seeking for any obvious dysmorphism (short broad neck, widely spaced nipples, aniridia). A detailed examination of baby should include anthropometry, blood pressure and anomalies of other systems (skeletal, heart, renal, brain).The baby should be examined in a warm room and placed in frog leg position with both legs free. A detailed examination of the genitalia with description and diagram is a must. It is of importance that no guess work should be made about gender assessment. One should make measurement of SPL (stretched penile length) or clitoral length and diameter. There are norms for their values with gestation, postnatal age and race [21,22,23,24,25]. It needs mentioning the number of openings. The hyperpigmentation of labioscrotal folds may point to the excess corticotrophin levels as apart of CAH. The degree of virilisation is classified (I to V) as proposed by Prader (figure 2) or now more often the case, Quigley's 6–7 stages, which offer the advantage of greater descriptive detail [26, 27].

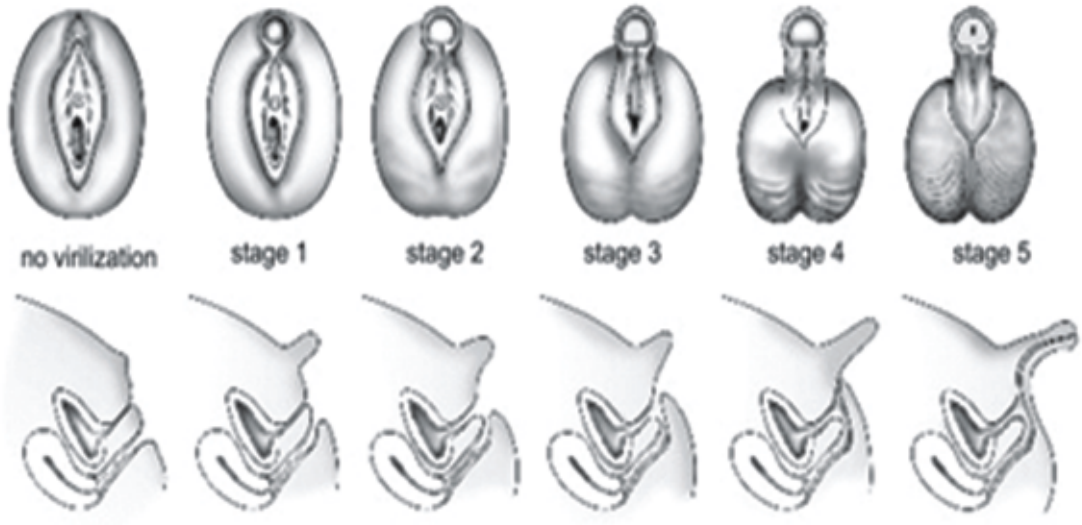

Figure 2: Degree of virilization proposed by Prader.

(Prader Von, A. (1954). "Der genitalbefund beim Pseudohermaproditismus femininus des kongenitalen adrenogenitalen Syndroms. Morphologie, Hausfigkeit, Entwicklung und Vererbung der verschiedenen Genitalformen." Helv. Pediatr. Acta. 9: 231-248.)

Prader 0: Normal female external genitalia. Prader 1: Female external genitalia with clitoromegaly. Prader 2: Clitoromegaly with partial labial fusion forming a funnel-shaped urogenital sinus.Prader 3: Increased phallic enlargement. Complete labioscrotal fusion forming a urogenital sinus with a single opening. Prader 4: Complete scrotal fusion with urogenital opening at the base or on the shaft of the phallus.Prader 5: Normal male external genitalia.

These staging systems do not sufficiently discriminate the full spectrum of variation encountered in the external genitalia. The external masculization score (EMS), which individually scores external genitalia for scrotal fusion, microphallus, location of urethral meatus and location of each gonad, may be a more discriminate and objective method of describing the external appearance (figure 3) [28]. The score ranges from 0-12.

Always look for gonads, their size and their location. The presence of palpable inguinal gonads excludes the diagnoses of a gonadal female, Turner syndrome, and pure gonadal dysgenesis. Per rectal examination may reveal the cervix and uterus (anterior midline cord like structure), confirming internal Müllerian structures. The uterus is relatively enlarged in a newborn because of the effects of maternal estrogen, aids easy identification.

Investigations

1) Electrolytes and blood gases: Serial measurements of sodium, potassium and acidosis. They should be correlated with serial measurements of blood pressure. An elevation of serum potassium is the earliest marker of salt wasting. These may manifest at any time after birth but mostly during 2nd to 3rd week of life.
2) Sex chromatin: It is a test with early results, but it should not be used for diagnosis as it does not correlate with karyotype.
3) Karyotype: It is a must for genetic sex. It includes rapid FISH using probes specific for X chromosome (DAX1) and Y chromosome (SRY). It is of vital role to obtain full karyotype for diagnosis of numerical/structural abnormalities. It must be obtained from different sites of body (genital skin) unlike blood alone. It helps wether there is homogeneous or mosaic (more than one lineage of somatic cells in same individual from one genetic source) or chimera (more than one lineage of somatic cells in same individual from

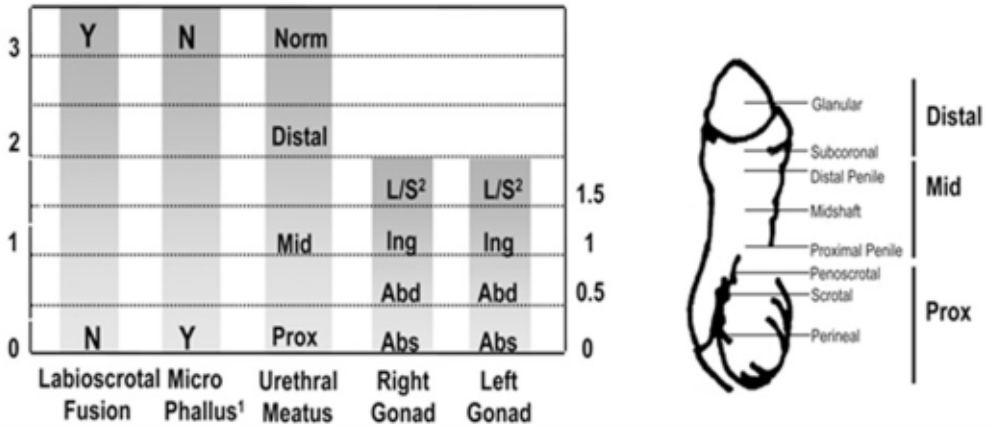

Figure 3: External masculization score (EMS). Adapted from Ahmed et al., BJU Int. 2000;85:120–4. (1.Microphallus refers to a phallus below the male reference range. 2 L/S –labioscrotal.)

different genetic sources). It helps in identification of autosomal anomalies that coexist with the genital abnormalities [17, 29]. The results of karyotype and ultrasound should be available within 48 hours [30, 31].

4) Radiology: Visualisation of internal anatomy like gonads, presence of mullerian structures, prostate, urogenital sinus. It is accomplished with USG with good expertise, CT/MRI + retrograde cystourethrography, laporoscopy + intraoperative cystoscopy [32, 33]. An evaluation for renal anomalies could clinch for conditions like Denys Drash syndrome.

5) Biochemical and Hormonal tests:

The results of hormonal studies and biochemical levels need cautious interpretation with respect to gestation and postnatal age. In the new born infant, detailed dynamic endocrine investigations should only be performed if they can alter the management plan of the child; in most cases these investigations can be performed after 3 months when many reproductive and adrenal-related hormones have reached a status quo and the results are easier to interpret [34,35,36,37].

Following tests are usually performed.

a) Basal and hCG stimulated testosterone.

b) Anti-mullerian hormone (AMH) and Inhibin B levels. The values in boys under the age of 8 years, a serum AMH concentration of approximately 200 pmol/1 may be an appropriate cut-off mark to denote normality, given that it was the approximate 5th centile for this age range. However, AMH concentrations are higher in the young boy before they fall in late childhood [35]. It should also be noted that AMH concentrations tend to rise over the first 3 months in some young infants and may, in some cases, be lower than 200pmol/1 at initial evaluation, although still above 25 pmol/1 which approximately represents the 95th centile for girls [37].

c) Gonadotrophins (FSH, LH)

d) Adrenal hormones and function: Urine steroid profile, synacthen test

e) OC (11-deoxycorticosterone)

g) Corticosterone

h) DHEA (dehydroepiandrosterone) and 17 OH pregnenolone

i) Testosterone: Dihydrotesterone ratio (post hCG stimulation)

j) Androstenedione: Testosterone ratio (post hCG stimulation)

k) Serum hormone binding globulin (SHBG) [38].

6) Skin and gonadal biopsy: Genital skin biopsies (2-4mm) to estimate 5αreductase activity. Gonadal biopsy is essential for diagnosis of gonadal dysgenesis and ovotestes.

7) DNA analysis: It is helpful for diagnosis and genetic counselling. It helps in identification of mutations and prenatal genetic screening.

There are some rare causes of DSD resulting from mutations of genes involved in the differentiation of gonads such as DAX1, SOX9, and WT1. These conditions are associated with other abnormalities in other systems.

Common causes of DSD

A) 46,XXDSD

1) Congenital adrenal hyperplasia:

Overall, CAH is the most frequent cause of ambiguous genitalia in the newborn, constituting approximately 60% of all intersex cases. Excessive androstenedione production results in a gonadal female with a virilized phenotype. The defect is due to enzymatic deficiency that prevents sufficient cortisol production and accumulation of the precursors. Clinical manifestation of CAH depends on which enzymatic defect is present. CAH

presents a spectrum of abnormalities with variable degree of virilization seen in CAH; however the internal müllerian structures are consistently present in genetic females [39,40,41,42,43]. In these children, endocrine stabilization must be individualized, a process that usually takes several weeks. CAH may result from the following metabolic defects:

a) 21-Hydroxylase deficiency: In 90% of patients with CAH, the block is at the 21-hydroxylase enzyme. This leads to a mineralocorticoid deficiency and a buildup of androgenic by-products, resulting in varying degrees of virilization. Biochemically, 75% of patients have salt-wasting nephropathy [44]. The 21-hydroxylase defect is inherited as an autosomal recessive trait closely linked to the human leukocyte antigen (HLA) locus on chromosome 6. The transmitted trait may have 2 varieties, which helps account for the clinical heterogenicity seen in patients with salt-wasting nephropathy. Prenatal diagnosis is confirmed by noting an elevated amniotic fluid level of 17-hydroxyprogesterone (17-OHP) during the second trimester or by HLA typing of amniotic cells. Diagnosis is confirmed by an elevated serum level of 17-OHP. Despite the fact that reference range cord blood levels of 17-OHP can be as high as 900-5000 ng/dL, the serum level rapidly decreases by the second or third day of life. A repeat elevated serum value exceeding 500 ng/dL at this point makes the diagnosis highly likely. The 17-OHP levels may be markedly elevated in the 11-hydroxylase form of CAH, as well as in the rare child with the 3-beta-hydroxysteroid dehydrogenase form of CAH [45].

b) 11-Hydroxylase (CYP11β1) deficiency: These children have increased levels of deoxycorticosterone (DOC) and 11-deoxycortisol. This is characterised by salt retention and hypertension because DOC is a potent mineralocorticoid. This is characterised by mild elevation in 17-OHP level. The diagnosis can be confirmed by a steroid screen of the serum.

c) 3-Beta-hydroxysteroid dehydrogenase (3-βHSD) deficiency[46]

d) Maternal androgens: Drug induced virilization of a female fetus may occur if progestational agents or androgens are used during the first trimester of pregnancy. After the first trimester, these drugs cause only phallic enlargement without labioscrotal fusion. These drugs were previously administered to avoid spontaneous miscarriages in patients with habitual abortion [47]. Endocrine abnormality in the mother is even rarer as these abnormalities usually prevent development of a pregnancy. However, there are reports of various ovarian tumors (eg, arrhenoblastomas, Krukenberg tumors, luteomas, lipoid tumors of the ovary, stromal cell tumors) reportedly have produced virilization of a female fetus.

e) P450 oxidoreductase (POR) deficiency

f) Aromatase (CYP19) deficiency

B) 46, XY DSD

46XY DSD can be divided into disorders of testis development, disorders of androgen synthesis, disorders of androgen action and other conditions affecting sex development. Biochemically, based on AMH and the hCG stimulation test, these disorders can also be divided into conditions where (i) AMH levels are low and testosterone levels do not rise following hCG stimulation – abnormalities of testes development or maintenance, (ii) AMH levels are normal and testosterone levels do not rise following hCG stimulation – abnormalities of testosterone synthesis, (iii) AMH levels are normal and testosterone levels do rise following hCG stimulation – abnormalities of testosterone action, DHT synthesis, PMDS or non-specific disorder of masculinisation, (iv) AMH levels are low and testosterone levels do rise following hCG stimulation – PMDS. However, in many cases, the

biochemical assessment shall not clearly delineate the case into any of these four categories [34].

C) Pure gonadal dysgenesis

They usually go unrecognized in neonatal period because the phenotype is typically completely female and present at puberty with delayed puberty. Girls with Turner syndrome (45,XO) may be detected earlier by noting the characteristic associated anomalies of short stature, webbing of the neck, and wide-spaced nipples. There is no increased risk of gonadal malignancy in Turner syndrome nor the 46,XX type of pure gonadal dysgenesis [48, 49]. The 46,XY type of pure gonadal dysgenesis have bilateral streak gonads with significant potential for malignancy (1/3 cases have dysgerminoma or gonadoblastoma). This disorder merits for genetic counselling. Turner syndrome appears sporadically, suggesting a postzygotic error; however, the 46,XX type of pure gonadal dysgenesis appears to have an autosomal recessive transmission, and the 46,XY type is apparently an X-linked recessive trait.

D) Partial gonadal dysgenesis

Partial gonadal dysgenesis can be classified as either 46,XY DSD or sex chromosome DSD if there is mosaicism (45,X/46,XY). These represent a spectrum of disorders in which the gonads are abnormally developed. Typically, at least one gonad is either dysgenetic or a streak. It includes MGD(mixed gonadal dysgenesis), dysgenetic male pseudohermaphroditism, and some testicular or ovarian regression.

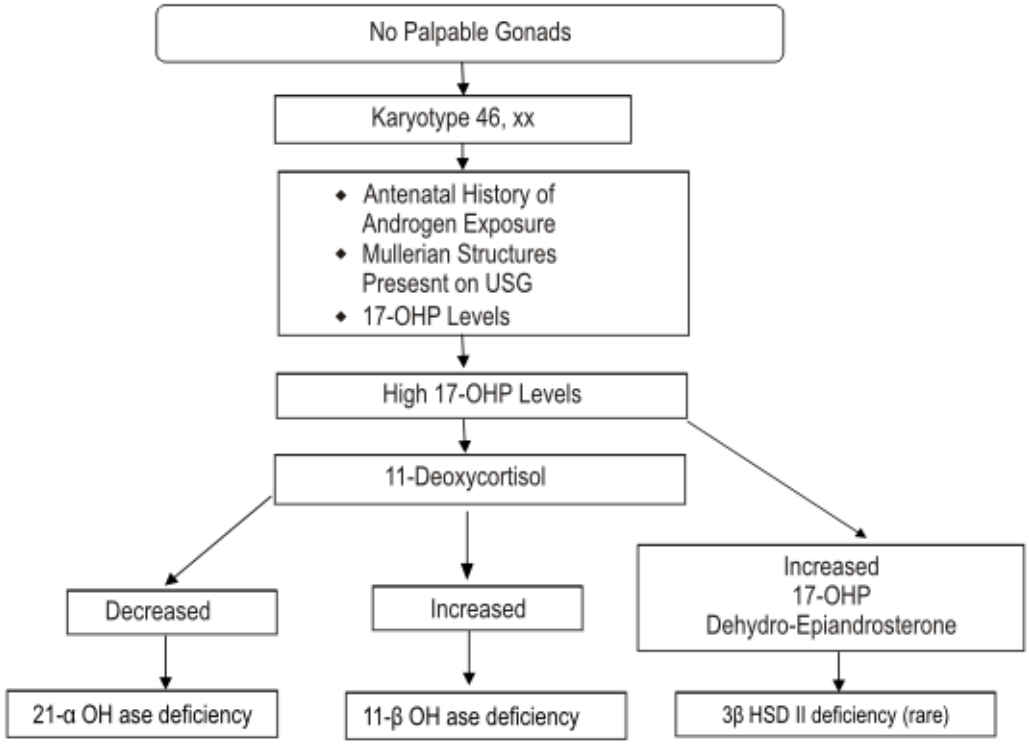

Fig. 4 : Algorithm to babies with DSD without any palpable gonads

E) Ovotesticular DSD

Both ovarian and testicular tissues are present in ovotesticular DSD, and are rare in occurrence. Appearance of the genitalia varies widely in this condition. While ambiguity is the rule, the tendency is toward masculinization.

Algorithms for approach to cases

A) Atypical Genitalia Without Palpable Gonads With 46,XX

Always look for salt wasting by appropriate blood pressure monitoring and serum electrolytes.

B) Atypical Genitalia With Palpable Gonads With 46,XX

Presence of palpable gonads indicates testis and rarely ovotestis. Always note the locationn of gonads. Monitor B.P. and serum electrolytes.

C) Normal female phenotype with palpable gonads (46XY): Complete AIS, Leydig cell hypoplasia, 5α reductase deficiency.

D) Normal female phenotype without palpable gonads (46XY): Reared as female and during adulthood present as primary amenorrhea: SWYER syndrome (pure gonadal dysgenesis).

E) Male phenotype with absent gonads (46XY): Anorchia, extreme degree of virilization

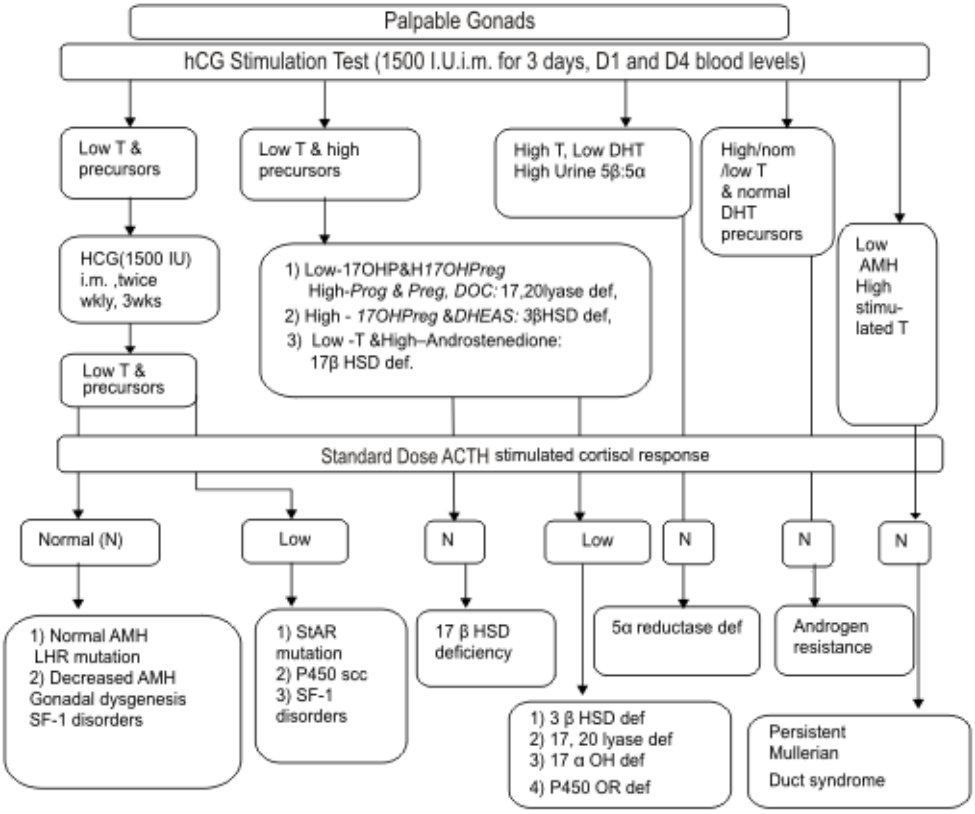

Figure 5: Algorithm to babies with DSD with palpable gonads.

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Approach and Management of Premature Ejaculation

Dr. Aditya Somani

Introduction

Disorders of ejaculation and orgasm are common among men and include premature ejaculation (PE), inhibited ejaculation, anejaculation, retrograde ejaculation, and anorgasmia[1]. The most common one among them is premature ejaculation. The incidence of PE has been reported to range from 3% to 20% [2]. There have been wide variations in the reported incidence of PE across different studies and among people from different cultures, mainly because of lack of standard diagnostic criteria and social stigma associated with this disorder. As a result, lots of patients continue to suffer from this disorder despite being a treatable condition [2].

Definition of Premature Ejaculation

There have been multiple definitions of PE, crafted by various groups of psychiatrists, urologists, etc. The definition being presented here is the latest one given by International Society of Sexual Medicine in February 2013 [3]. As per this definition, PE is a disorder of male sexual function characterized by:

- Ejaculation which always or nearly always occurs prior to or within about one minute of vaginal penetration from the first sexual experience (lifelong premature ejaculation), or, a clinically significant reduction in latency time, often to about 3 minutes or less (acquired premature ejaculation)
- Inability to delay ejaculation on all or nearly all vaginal penetrations
- Negative personal consequences, such as distress, bother, frustration and/or the avoidance of sexual intimacy

While this definition is able to cover shortcomings of various previous definitions, it is still not able to cover oral sex, anal sex and masturbatory latencies. This definition applies strictly to intravaginal sexual activity only.

There is a group of patients who ejaculate even before vaginal penetration, a condition known as 'anteportal ejaculation' and is considered worst form of PE.

There is another group of patients who are distressed about ejaculatory function and seek consultation for same but do not meet criteria of PE as defined above. This condition may be designated as 'variable PE' (short ejaculatory latency which occurs irregularly or inconsistently) or 'subjective PE' (subjective sense of decreased ejaculatory latency or control over orgasm) [3]. These are normal variations of sexual dysfunction and do not represent any disorder.

Etiology

Classically, PE was thought to be a condition of psychological origin only, mainly due to anxiety and conditioning towards rapid ejaculation based on rushed early sexual experiences [4]. Recently, numerous neurobiological causes of PE have been proposed. The list includes hypersensitivity of the glans penis, robust cortical representation of the pudendal nerve, disturbances in central serotonergic neurotransmission, erectile difficulties, prostatitis, detoxification from prescribed medications, recreational drugs, chronic pelvic pain syndrome and thyroid

disorders. However, these causes can explain only a few cases of PE. Psychological factors can be cause as well as effect of PE. These factors may be developmental (e.g., sexual abuse, attitudes toward sex internalized during childhood), individual psychological factors (e.g., body image, depression, performance anxiety, alexithymia), and/or relationship factors (e.g., decreased intimacy, partner conflict).

Assessment of Premature Ejaculation

Diagnosis of PE encompasses seven key steps: (i) Obtaining the patient's general medical and sexual history; (ii) Classifying the symptom on the basis of onset (e.g., lifelong or acquired PE), timing (e.g., prior to or during intercourse), and type (e.g., absolute/generalized or relative/situational); (iii) Involving the partner to determine their view of the situation and the impact of PE on the couple as a whole; (iv) Identifying sexual co-morbidities (e.g., erectile dysfunction) to define whether PE is simple (occurring in the absence of other sexual dysfunctions) or complicated (occurring in the presence of other sexual dysfunctions); (v) Performing physical examination to check the man's sexual organs and reflexes; (vi) Identifying underlying etiologies and risk factors (e.g., endocrine, urological, or psycho-relational/psychosexual-related) to determine the primary cause of PE and any associated comorbidities;(vii) Discussing treatment options to find the most suitable intervention, according to the needs of the man and his partner [5].

Previously, stopwatch assessment was used to diagnose PE. However, its use is no longer recommended in clinical practice as it disrupts the spontaneity and pleasure of sexual activity. As patient`s self-report is the determining factor in treatment seeking and satisfaction, it is recommended that self-estimation by the patient and partner of ejaculatory latency be accepted as the method for clinical assessment [6]. One may also use standardized assessment measures, i.e. validated questionnaires for diagnostic evaluation and evaluation of response to treatment. Two most commonly used tools are Premature Ejaculation Profile (PEP) [7] and the Index of Premature Ejaculation (IPE) [8]. Both of them can be accessed freely on internet.

Management of Premature Ejaculation

Psychological/Behavioral Treatment

Psychotherapy for men and couples suffering from PE has two overlapping goals. First, psychological interventions aim to help men develop sexual skills that enable them to delay ejaculation, increasing sexual self- confidence and diminishing performance anxiety. The second goal focuses on resolving psychological and interpersonal issues that may have precipitated, maintained or be the consequence of the PE symptom for the man, partner or couple. The most frequently used behavioral treatments are the squeeze or stop–start techniques [3]. Both of these therapies were designed to help men recognize mid-level ranges of excitement. Men gain skills at identifying mid-level excitement by a series of graduated exercises beginning with self-stimulation, moving on to partner hand stimulation, then to intercourse without movement, and finally to stop/start thrusting. This process gradually leads to an increase in ejaculatory latency, sexual confidence and self-esteem. Currently, cognitive-behavioural approach is being largely integrated into psychotherapeutic management of PE. Although evidence base regarding use of psychotherapies for management of PE continues to be weak [2], they are still used with reasonable success by practicing clinicians [9].

Pharmacological treatment

Several forms of pharmacotherapy have been used in the treatment of PE. These include the use of topical local anesthetics, selective serotonin re-uptake inhibitors (SSRI's), tramadol,

phosphodiesterase type 5 inhibitors (PDE5I) andalpha-adrenergic blockers [3, 10].

Among these agents, most commonly used agents are SSRI's. Daily treatment with paroxetine 10-40 mg, clomipramine 12.5-50 mg, sertraline50-200 mg, fluoxetine 20-40 mg, and citalopram 20-40 mg is usually effective in delaying ejaculation time. A meta-analysis has shown that when administered on a daily basis, paroxetine causes 8.8 fold delay in ejaculation time. Ejaculation delay usually occurs in 5-10 days of initiation of therapy and full response is seen in 2-3 weeks. When used on demand 3 -6 hours prior to sexual activity, SSRI's bring only a minor benefit.

Dapoxetine is a recently developed SSRI, approved exclusively for treatment of premature ejaculation. Dapoxetine, 30 mg or 60 mg taken 1-2 hours before intercourse is more effective than placebo from the first dose, resulting in a 2.5 and 3.0 fold increases in ejaculatory latency, increased ejaculatory control, decreased distress, and increased satisfaction. It is taken only prior to sexual activity, has been found to be safe and has benign side-effects and minimal drug-drug interaction [3,10,11,12].

Topical local anesthetic agents are modestly effective. PDE-5 inhibitors work best for patients with associated erectile dysfunction. Specific urological treatments are indicated for patients with identifiable organic cause of PE. International Society of Sexual Medicine recommends combined psychological and pharmacological treatment.

Role of primary care physician

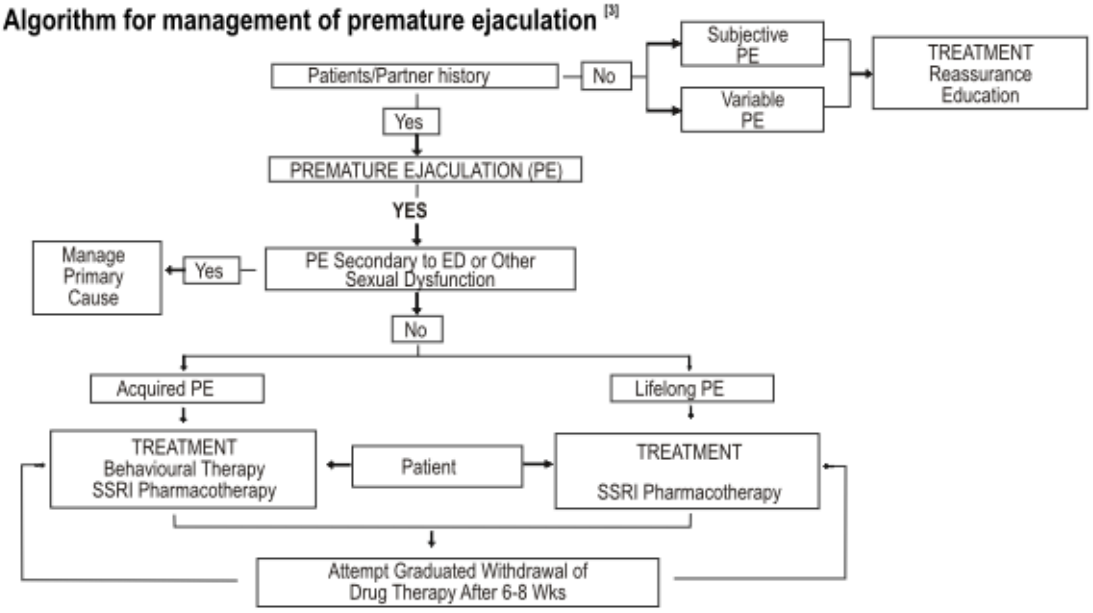
Primary care physicians are usually the first line of contact for a patient with the health care system, including for the diagnosis and management of sexual problems. Their role includes initial recognition and evaluation of any undiagnosed sign, symptom, or health concern (the "undifferentiated" patient); health promotion including disease prevention, health maintenance, counseling, patient education, chronic illness management, and patient advocacy; and coordination of care promoting effective communication with patients and encouraging the patient to be a partner in health. The main responsibility of the primary care physician is to recognize PE and enable the patient to feel comfortable about getting help, either in the primary care setting or through an effective referral [3].

The management algorithms 'ALLOW" can help primary care physicians talk with their patients about sexual health problems and refer patients when appropriate. The physician begins by "Asking" about a patient's sexual life and "Legitimizing" the importance and potential impact of sexual problems to the patient. The physician then considers his/her "Limitations" with regard to managing the sexual dysfunction and may refer the patient to a sexual health specialist for further evaluation and management. Conversely, if the physician feels comfortable managing the patient's issue(s), he/she then "Opens" up the issue(s) for further discussion, and the physician and the patient "Work together to develop a management plan." This methodical approach to giving the patient permission to discuss sexual issues can be accomplished in as brief or as long available time as the physician has [3].

Conclusions

PE causes significant distress to a man and his partner. It is often missed or under-diagnosed in clinical settings. Routine screening in primary care settings in empathetic manner can help a lot of patients to overcome stigma and seek help. Effective treatment in the form of drugs and psychotherapy is available which can alleviate suffering of ailing couples.

Algorithm for management of premature ejaculation [3]



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Inappropriate Sexual Behaviour in Dementia

Dr. Bheemsain Tekkalaki

Introduction

Dementia is a group of progressive irreversible disorders affecting the elderly. It is defined as the progressive impairment of the cognitive functions occurring in the clear consciousness[1]. Apart from neurocognitive functions, the patients of dementia are also commonly affected by various psychiatric and behavioural disturbances[2]. Inappropriate sexual behaviour (ISB) is an important behavioural disturbance, which adds to the management difficulties, treatment outcome, caregiver burden, and stigma attached to the patents. This article is intended to outline the assessment and management strategies of ISB in the dementia patients.

Sexuality in elderly

One common misconception is that elderly persons have no sexual desire left or they don't need any sexual intimacy. In contrary to this belief, elderly have similar sexual needs as that of young. There may be some differences in the frequency, intensity and mode of expresson[3]. Socio-cultural background, religious beliefs and pre-morbid sexual behaviours of the patient also influence the sexual need. These factors need to be kept in mind while assessing any patient with possible ISB.

Definition

There is no universally accepted definition of ISB. Lack of a standard definition makes it difficult to assess and measure any such behaviour. Different researchers have used different definitions, making it difficult to compare the findings of the studies.

The definition proposed by Johnson et al. (2006)[4] could be considered more complete. In accordance with it, ISB are verbal or physical acts of an explicit or perceived sexual nature that are unacceptable in the social context they take place in.

Epidemiology

The prevalence of dementia is around 5% in individuals of 65-69 years age and prevalence increases up to 20% in those older than 85 years age[5]. Up to 90% of individuals with dementia develop behavioural problems that are significant at some point of their illness2. The prevalence of ISB is estimated to be about 7-25%[6,7,8].

Etiology

Etiological factors associated with ISB in dementia patients are varied, ranging from neurobiological causes to psychosocial factors. Neurobiological causes include changes in neuronal tracts controlling the sexual behaviour, damage to frontal or temporal lobes and dementias involving predominantly fronto-temporal lobes[9]. Some drugs can lead to hypersexual behaviour like Levodopa. Benzodiazepines can also lead to paradoxical disinhibiting effects and may lead to SIB[10].

Psychosocial factors like being alone, fear and anxiety may lead to efforts of approximating others[11]. Difficulty in interpreting the situations may also lead to ISB, for example receiving help during some intimate activities of daily living like showering or toileting may be misinterpreted by the patients, who could get sexually aroused[12]. A person with dementia may also misinterpret someone for his or her partner and may try making sexual advances[12].

Apart from the above factors, lack of regular sexual partner, lack of privacy in case of institutionalized patents, or being exposed to sexual content material in shared spaces may also lead to sexually inappropriate behaviour[13].

Assessment

Assessment of patient displaying ISB begins with a detailed clinical history. History should be obtained from a reliable family member or a formal care giver. Wherever possible, patient should also be involved. Assessment of premorbid sexual habits, preferences and practices may help in evaluating the current ISB.

Mental status examination should focus on psychiatric illness like psychotic disorder, mood disorder, and substance abuse. Cognitive evaluation helps in assessing the severity of cognitive impairment and hence the risk of ISB. Treatment history is also important as some drugs are known to cause increased sexual behaviour.

A detailed physical examination and appropriate laboratory tests may be done. The hypersexual behaviour per se should be studied in detail, regarding what is the motive behind the act, nature of the act, the antecedent factors and the consequences of the act, the situations in which the act takes place.

Management

There is dearth of research focusing on the management of ISB in dementia patients. Evidence is limited to few small studies and case reports. Clinicians are required to formulate the treatment algorithm based on this limited evidence.

Both non-pharmacological and pharmacological strategies are shown to be beneficial. Treatment should proceed in a sequential manner. Looking into the on-going treatment of the patient and either reducing the dose or stopping the medications like levodopa, benzodiazepines should be the first step. Non pharmacological treatment should always precede the pharmacological treatment wherever possible[14]. Pharmacological treatment should be started only when non-pharmacological treatment fails to give adequate symptom control, as there are no conclusive evidences of benefit and also side effects are common with all groups of drugs.

Non-Pharmacotherapy

The first step in non-pharmacotherapy is explaining the patient that such behaviour is not accepted. Patient should be explained in a sympathetic manner avoiding confrontation. This strategy works only in patients with minimal cognitive impairment and cannot be applied in those with advanced dementia[15]. Structured non-pharmacotherapy like behavioural modification should be individualised to each patient. If ISB is triggered by a specific situation or a specific person, changes should be made accordingly[12], for instance if ISB is seen only while patient is given shower by a person of opposite sex, a person of same sex should be assigned to do that task. Preventing the reinforcing factors of ISB can be helpful in some cases. Ignoring the act of ISB when it is used for attention seeking will help in reducing the frequency of such acts. However, in some cases where the ISB is too obvious to ignore, like public masturbation, this strategy is not useful.

Distraction techniques have shown to be useful in some patients, for example, keeping the patient busy in crafts to occupy hands in order to prevent touching genitals and public masturbation[12]. Some creative measures, highly individualised to each patient may be successful in some cases. For example, a case report describes the provision of a 3-foot-tall stuffed doll to a man with dementia leading to successful control of his sexual aggression towards females[16].

Educating the care-givers of dementia patients about the nature of the symptoms will help in

dealing with misconception on the part of the caregiver that patient is deliberately displaying sexual behaviour[15]. This will help the caregiver to develop a positive attitude towards the patient. Supportive psychotherapy to the caregivers is also advocated to reduce the burden of care.

Pharmacotherapy

Many groups of drugs are useful in treating ISB in dementia. The choice of the drug depends up on the patient profile and the comorbid conditions. For example antidepressants are useful in a patient with ISB with comorbid depressive and anxiety symptoms, whereas Estrogen should be avoided in a patient with deep vein thrombosis.

Many antidepressants are known to cause sexual dysfunction. They also reduce the impulsive behaviour. These properties are used to treat ISB. Amongst the antidepressants, selective serotonin reuptake inhibitors (SSRIs) are used as first line agents because of their safety and tolerability. Tricyclic antidepressants (TCAs), though useful, are not used frequently because of frequent side effects. Mirtazapine has shown partial improvement in one case report[12].

Hormonal agents like Anti-androgens and Estrogen are used in those who are not responding to SSRIs. Anti-androgenic agent medroxyprogesterone acetate is successfully used in several case reports and a small case series to reduce ISB. Cyproterone acetate in low dose is used in one case report [2] with success. However the symptoms re-emerged after stopping the drug. Finasteride is a 5α-reductase inhibitor that blocks conversion of testosterone to dihydrotesterone, used in benign prostatic hyperplasia. This drug has a potential to cause sexual dysfunction and was used in a case series to treat ISB in 11 patients of vascular dementia. ISB disappeared in 6 patients after 8 weeks of treatment, while the other 5 patients did not respond[12].

Estrogens decrease the secretion of luteinizing hormone and follicle stimulating hormone, leading to reduced testosterone production. In a small double blind placebo controlled study, patients on Estrogen showed reduction in frequency of physical aggression, while the reduction in sexual aggression was not statistically significant[17]. In a case series by Lothstein et al. 38 out of 39 male patients of dementia showed significant improvement in ISB with oral estrogen (0.625 mg) or with transdermal estrogen patch (0.5 to 1.0 mg) therapy[18].

There are no trials to test efficacy of antipsychotics in treating ISB in dementia. Overall benefits of antipsychotics are modest and antipsychotic treatment is often associated with significant side effects and increased mortality. Few case reports have described the use of Haloperidol[19] and Quetiapine[20] in treating the ISB.

Apart from the above described group of drugs, anticonvulsants like gabapentin, carbamazepine, cholinesterase inhibitor rivastigmine, miscellaneous agents like cimetidine, propranolol, pindolol, ketoconazole and spironolactone are also reported to be useful to treat ISB[12].

Conclusion

Inappropriate sexual behaviour in dementia may be due to either neurological disturbances or due to psychosocial factors. Systematic studies on ISB with special focus on management strategies are needed. Current evidences on the treatment modalities are sparse. However based on the available limited evidences, many pharmacological and non-pharmacological treatment options are available to treat ISB.

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If you have any comments or suggestions, please do share with us. Write to sexualityinfo@gmail.com or **Indian Institute of Sexology Bhubaneswar,** Sanjita Maternity Care & Hospital, Plot No-1, Ekamra Marg, Unit-6, Bhubaneswar-751001, Odisha, India.

Homosexuality: A Mental Health Perspective

Dr. Rakesh Yaduvanshi

Introduction

Homosexuality is a sexual preference which arouses a great deal of hostility, is surrounded by myths, and is often viewed as a disease [1]. Research on homosexuality has always been shaped by views of homosexuality as a social problem. Changes in the conceptualization and measurement of homosexuality cannot be separated from changes in broader social, political, or moral concerns [2].

History

Although many people believed that homosexuality is a western concept and was imported into the country with the British Raj, many reference related to it can be found in ancient Indian literature. Early Buddhist and Hindu periods covered in ancient texts such as Manusmriti, Arthashastra, and Kamasutra refer to same sex attraction and behavior. Several sculptures and carvings in Khajuraho depict same sex behavior, including mutual fellatio and orgiastic scenes. A number of 14thcentury texts in Sanskrit and Bengali (including 'Krittivasa Ramayana') narrate how 'King Bhagiratha' was born of the union between two women blessed by Lord Shiva [3].

Various sociological studies reveal that many people living in organized hijra communities practice male homosexual prostitution in present day India [4,5,6].

In Persian and Sufi traditions, love of a man for another man is described, although it can be argued that it is mortal man loving God. Gupta (2008) argues that in Baburnama, the Mughal Emperor Babur is quite clear about his indifferent love for his wife and his preference for a young man [7].Many paintings and works of fiction dating from several centuries depict same sex love and loss. For example, in Siraj Aurangabadi's poem Bustani-i-Khayal the narrator, heartbroken over the loss of his (male) beloved, seeks solace in the company of courtesans who cheer him up [8].

These review indicates that same sex relationships, whether emotional attachments or sexual, have been there in India for a considerable period of time and are not an import from the West [9].

Early history of sex surveys on homosexuality

Early sexologists had an essentially clinical and psychiatric vision of homosexuality, conceiving it as a mental illness. Magnus Hirschfeld, A German physician, perhaps was the first person who defined homosexuality as a natural category. He was also the co-founder of the first homosexual rights movementin 1897. In 1903, he conducted first quantitative surveys to determine the percentage of homosexual men in Germany [10]. His work played a major role in decriminalization of homosexuality in Germany [11].

Around fifty years later Kinsey, a biologist, for the first time treated homosexuality as of equal importance to other forms of sexual behavior. Homosexuality was viewed as one behavior among many (along with nocturnal emissions, masturbation, coitus within, before, and outside marriage, non-coital sexual acts, especially oral sex, and sexual contacts with animals). He conceived homosexuality as a characteristic of acts, not persons. Rather than categorizing individual as heterosexuals or homosexuals, he emphasized a continuum approach ranging from

exclusively heterosexual to exclusively homosexual. As expected, Kinsey's findings on homosexuality (along with other stigmatized behaviors from masturbation to extra-marital sex) provoked much negative reaction at that time [12].

Few other sexual behavior surveys from 1953 until the onset of AIDS included any questions on homosexual activity. Probably, there are very few national surveys from this period based on representative samples that allow estimating rates of homosexual experience in a population. In all three of these surveys homosexuality is treated as an addendum to a focus on heterosexual behavior [13,14,15].

With the appearance of AIDS in the early 1980s, for the first time, homosexuality became a major question in sex surveys of the general population, though one of the main motivations for financing such surveys has been the sexual transmission of HIV [16].

How common homosexuality is?

Due to various factors such as the associated stigma and social repression, the unrepresentative samples surveyed and the failure to distinguish desire, behavior and identity, it is very difficult to estimate the actual prevalence of homosexuality. The figures vary between age groups, regions and cultures [17].

Kinsey reported that 37% of men and 13% of women had had at least one homosexual experience. Interestingly, lifetime rates from the Kinsey research and the 1970 survey are much higher than the rates reported in other surveys. Comparing data from two German surveys on adolescent sexuality collected twenty years apart, Schmidt and his colleagues found a significant decline in reported homosexual behavior for boys between 1970 and 1990 (18% versus 2%), but a stable rates for girls (6%) [18]. However when one examines the two French surveys, collected twenty years apart, the percentages of lifetime homosexual behavior for both men and women are very close. The Finnish survey stands out as the only survey from the 1990s that produced equivalent rates of lifetime same-sex sexual partners for men and women. All of the other surveys in this group produced rates for men that were approximately double the rates reported by women. The Chilean survey found extremely low rates of reporting of homosexuality. Less than 1% of men and women on all of the various dimensions report any same-sex attraction, behavior, and identity. The Brazilian survey found a more substantial rate of same-sex partners in the previous five years, a rate that was the same for men and women. The Australian survey, which is also the most recent, found relatively high homosexuality rates. Strikingly, it is the only survey to find higher rates for women than men for both sexual experience/contact and for lifetime partners [16].

In surveys that have examined the relationship between respondents' socio-demographic characteristics and observed rates of same-sex behavior, overall, for both men and women, one finds higher rates among the more educated, the unmarried or divorced, those without children, and those living in larger cities [19]. These social and demographic factors are associated with a greater social liberalism and a greater degree of independence and freedom from social pressures, especially those associated with marriage and family. It is difficult to separate the degree to which these factors facilitate higher rates of reporting homosexual behavior from the degree to which they facilitate homosexual behavior itself. In addition, inequalities between men and women, which are found everywhere (although in different forms in different societies), condition the possibilities for homosexual expression by men and women. Heteronormativity, the social pressure to conform to norms of heterosexuality especially as regards marriage, reproduction, and family, is

stronger for women than men, which may explain the widely observed higher rates of self-reported homosexual behavior by men [16].

Epidemiological data on prevalence of homosexuality in India are lacking. Verma et al found less than 5% of attendees having had homosexual contact according to data of a sex clinic in north India [20]. While Kalra and Kamath (2009) in an unpublished study reported a slightly lesser figure of 3% homosexual contact and 5% bisexual contact [21]. A survey in India Today revealed that in the northwestern Indian city of Jaipur, 15% of men had sex with men. In Hyderabad, 61% approved of homosexuality. In Ahmedabad, in 2006, 56% reported having had a homosexual experience [22].

What is Homosexuality?

Human sexuality is complex. A person is born with particular biological sexual characteristics i.e. chromosomes, genitalia and secondary sexual characteristics. These biological characteristics constitute a person's sexual identity. Due to infinite series of sociocultural cues from parents, teachers, peers etc, by two or three years of age one has a firm conviction of being male or female. This sense of maleness or femaleness constitutes his or her gender identity. Gender role is a behavior pattern by which a person discloses himself or herself as having the status of male or female. Many people may identify (gender identity) with their own sex (sexual identity) and yet adopt the dress, hairstyle, and other behavioral characteristics of the other sex. Sexual orientation refers to a person's erotic response tendency or sexual attractions. It can be heterosexual (towards opposite sex), bisexual (both sex), or homosexual (towards same sex). All these dimensions may not always be congruent in individuals. Depending on the social and cultural context, a homosexual identity may exist quite independently from behavior, e.g., persons may self-identify as homosexual but not currently or even ever have engaged in homosexual behavior; conversely, persons may engage in homosexual activity without identifying as homosexual. Thus in the context of homosexuality, the distinction between sexual acts or experiences and sexual identity becomes particularly important [16,17,23].

Cause of homosexuality

Medicine and science continue to debate the relative contributions of nature and nurture, biological and psychosocial factors, to sexuality [23]. Essentialist constructs focused more on for biological causes of homosexuality and dismiss personal and social meanings of sexual desire and relationships. On the other hand, constructivists give more emphasis on the role of culture. However, given the complex nature of human sexuality, it is unlikely that a single characteristics or a single pathway will explain homosexuality [17].

Development of sexuality depends on interplay of various biological (e.g., genetic, hormonal), physiological (e.g., genital arousal) and psychological (e.g., psychodynamic, cognitive, behavioral) developmental processes over the years. Similarly sexual behavior is also multifactorial and is the outcome of various psychological (e.g., attraction, desire, fantasy, eroticism, romantic), behavioral, physiological (arousal), emotional and social (e.g., social acceptance, self-identity, sexual politics) aspects [9].

Psychiatric problems in homosexuals

Homosexuals appear to be at greater risk than heterosexual people of mental disorders and suicidal behavior. These people are subject to institutionalized prejudice, social stress, social exclusion (even within families) and anti-homosexual hatred and violence and very often internalize a sense of shame about their sexuality [24,25]. There is also elevated risk for suicide attempts and completed suicide. Michael king in his meta-analyses found that homosexuals have four fold

risks of suicide attempts. Depression is two times more common in these people. Similarly anxiety, alcohol and substance misuse are at least 1.5 times more common. Female homosexuals are at particular risk of substance dependence, while lifetime risk of suicide attempts was especially high in men. A study from India showed that 52.9% of male homosexuals have psychiatric co-morbidity. Higher prevalence of psychiatric morbidity in this group may be because of shame, stigma, discrimination, and presence of STIs [26].

Acceptance of homosexuality as normal variation

Various prevalence studies gave a documented proof that homosexual feeling and behavior are not an uncommon occurrence both in men and women; it is prevalent across cultures and even among almost all non-human primate species. Furthermore researches have also demonstrated that homosexual people did not have any objective psychological dysfunction or impairments in judgment, stability and vocational capabilities. All these evidences lead to a gradual shift in our understanding of homosexuality from sin, crime and pathology to a normal variant of human sexuality [23]. The American Psychiatric Association, in 1973, and the World Health Organization, in 1992, officially accepted its normal variant status. Since then many countries have decriminalized homosexual behavior and some countries also have recognized same-sex civil marriage (e.g., Brazil, Canada, England, France, South Africa, Spain, Sweden and in some states in USA). LGBT (Lesbian, Gay, Bisexual and Transgender) rights laws include government recognition of same-sex relationships, civil unions and marriage, adoption and parenting. They also include anti-bullying legislation, anti-discrimination student, employment and housing laws, immigration equality, and equal age of consent law and hate crime laws providing enhanced criminal penalties for prejudice-motivated violence against LGBT people [17].

Law pertaining to homosexuality in India

The British colonial Government enacted Section 377 of the Indian Penal Code, based on Victorian morality, to criminalize non-procreative sex. The Naz Foundation, a Non-Governmental Organization working in the field of human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) and sexual health, challenged the constitutional validity of Section 377 because it violated the rights to privacy, to dignity and health, to equality and non-discrimination and to freedom of expression. The landmark judgement of The Delhi High Court on 2nd July 2009, which declared that Section 377 of the Indian Penal Code violates fundamental rights guaranteed by the constitution, was in keeping with international, human rights and secular and legal trends [27,28].

However, many religious and community leaders have the anti-homosexual attitudes in India. Individuals and faith-based group appealed against the High Court verdict. The Supreme Court of India, on 11th December 2013, upheld Section 377 and overturned the judgment of the Delhi High Court that had decriminalized adult consensual same-sex conduct [29]. The Naz Foundation and the Government of India have since filed a petition seeking review of the judgment [30,31].

Conclusion

Homosexuality is normal variation in sexual orientation. It has been documented throughout history of mankind in all cultures including Indian culture too. Religion and society have usually been intolerant to homosexuality. This negative societal and religious attitude to homosexuality has contributed to medicalization of this normal sexual variation. The shift in the understanding of

homosexuality from sin, crime and pathology to a normal variant of human sexuality occurred in the late 20th century. Due to our improved understanding of homosexuality, scientific researches and various movements, homosexuality is no longer considered pathological in the field of psychiatry. The decision of the Supreme Court of India regarding section 377 of IPC on 11th December 2013 stating homosexuality 'Unnatural'has been criticized from legal, human rights and psychiatric perspectives. Dr. Abraham Verghese aptly pointed out "Homosexuality is an aberration in the psychosexual development caused by genetic and psychosocial factors. Those with homosexual orientation are not responsible for this aberration. It is not a sin to be discriminated against. It is not a crime to be punished. It is not a psychiatric disorder needing treatment. Hence the freedom of those with a homosexual orientation to live a happy life should not be interfered with" [32].

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Risk Factors of Post Partum Depression: A Critical Appraisal

Dr. Sujit Kumar Kar

Post-partum Depression (Post-natal Depression) is a common pregnancy related psychiatric disorder. There is wide variation in the prevalence rate of post partum depression across the world with a range of 10 to 35% [1-9]. Many potential risk factors are associated with post partum depression, which are summarized below [1,10,11].

Risk factors for post partum depression

1. Poverty (Financial constraints)
2. Interpersonal conflicts (strained relationships)
3. Antenatal adverse life events
4. Poor psychosocial support
5. Gender related issue of the baby
6. Antenatal depression / antenatal anxiety
7. History of abuse (domestic violence, sexual abuse)
8. Low self - esteem
9. Negative cognitive style
10. Unplanned pregnancy

Biopsychosocial model can be used to explain the development of post-partum depression. The plethora of biological changes during pregnancy may attribute the causation of depression in this patient group. Certain psychological factors like coping skills, personality and expectations out of pregnancy also play an important role in the post partum depression. Social variables such as poverty, poor psychosocial support system also increase a person's vulnerability to the disorder.

It is well known that postnatal depression is multi-factorial. Personality and coping styles play a role in causation of depression, however evidences are scarce regarding their role in postnatal depression. In the article entitled "Cognitive style, personality and vulnerability to postnatal depression", Jones et al have attempted to ascertain the role of erratic cognitive styles and maladaptive personality traits to the postnatal depression [12]. Jones et al (2010), in their study found no difference in the cognitive styles and personality factors among women with Postnatal Depression (PND group) and Non Postnatal Depression (NPND) [12]. In this study, it was found that high level of neuroticism, psychoticism, extraversion and dysfunctional belief were prevalent in postnatal depression in comparison to Non Postnatal Depression[12]. It was also found that the level of self -esteem was lower in the postnatal depression group [12].These findings were suggestive of involvement of personality factors as well as cognitive styles in postnatal depression[12]. However it was studied in a specific culture and unique ethnic group which limits its generalizability hence warrants further studies focusing on these psychological parameters across various cultures.

If one looks these psychological factors from the Indian perspective, one may not get a similar association due to cultural diversity, difference in gender roles, expectation of family as well as gender sensitivity. There is a need for further study in this area.

Post natal depression significantly affects the quality of life of the mother as well as adverse consequences on the well being of the child [13]. Post partum depression also deteriorates the mother - child relationship. A mother with post

partum depression will be unlikely to breastfeed and take care of her baby properly. This in turn results in poor bonding with the child.

Navarrete et al (2012), in their study found that peri-natal anxiety has significant correlation with postpartum depression [14]. Untreated anxiety in the peri-natal period increases the risk of postpartum depression [14]. Recognizing anxiety in peri-natal period and early intervention can help in prevention of postpartum depression [14].

Better marital relationship, coherence and planned pregnancy are protective factors of postpartum depression [15]. Identification of risk factors of post partum depression is of utmost importance. For early identification of risk factors, during antenatal and post natal visits, women need to be assessed about the socio-demographic variables, personality, coping styles, psychiatric history and adverse life events (if any) [16].

Post partum depression is treated with both pharmacological as well as non pharmacological methods. Antidepressants are commonly used for the treatment of postpartum depression [13]. Among the antidepressants, selective serotonin reuptake inhibitors are commonly prescribed and found to be effective [17, 18]. Electroconvulsive therapy is usually recommended for patients with suicidal risk as well as poor general health. Presence of psychotic symptoms and impending risk to harm the baby may also need the help of electroconvulsive therapy. Among the non-pharmacological treatments, cognitive behavior therapy and interpersonal therapy are quite helpful [13].

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Protecting Women at Workplaces against Sexual Harassment

Dr. Suresh Yadav, Dr. Saranya Dhanasekaran, Dr. Diwakar Sharma

Introduction

The recent allegations of sexual harassment at the workplace against well known personalities such as an important magazine editor, Supreme Court judges and the many others that followed in their wake, have brought the topic of workplace sexual harassment to the front in the media and more importantly to the notice of the public; employees and employers of various organizations, factories and institutions; and to the government and the law makers.The consequences of sexual harassment at the workplace are grave affecting the victim both physically and psychologically with many long term implications. The importance of protection against sexual harassment at the workplace thus cannot be overemphasized. According due importance to this important topic, a central act 'The Sexual Harassment of Women at Workplace (Prevention, Prohibition, and Redressal) Act, 2013' was brought into force on December 9, 2013. The purpose of this article is to highlight the consequences of sexual harassment, the legislation in place to protect against sexual harassment, its limitations and suggestions for its improvement.

What is Sexual Harassment?

The definition of sexual harassment [1] includes unwelcome sexually determined behavior (whether directly or by implication) such as:

I. Physical contact and advances;

ii. Demand or request for sexual favors;

iii. Sexually colored remarks;

iv. Showing pornography; and

v. Any other unwelcome physical, verbal or non-verbal conduct of sexual nature.

The following circumstances, among other circumstances, if it occurs or is present in relation to or connected with any act or behaviour of sexual harassment may amount to sexual harassment [1]—

I. Implied or explicit promise of preferential treatment in her employment; or

II. Implied or explicit threat of detrimental treatment in her employment; or

III. Implied or explicit threat about her present or future employment status; or

IV. Interferes with her work or creating an intimidating or offensive or hostile work environment for her; or

V. Humiliating treatment likely to affect her health or safety

Types of Sexual Harassment

The U.S. Equal Employment Opportunity Commission Guidelines define two types of sexual harassment: "Quid Pro Quo" and "Hostile Environment" [2].

Quid Pro Quo "This for that"

- When employment decisions or expectations are based on an employee's willingness to grant or deny sexual favors.

Hostile Environment

- Where verbal or non-verbal behavior in the workplace focuses on the sexuality of another person or occurs because of a person's gender or other protected characteristic.
- Where verbal or non-verbal behavior in the workplace is unwanted or unwelcome.

- Where verbal or non-verbal behavior is severe or pervasive enough to affect the person's work environment.

The consequences of sexual harassment

The organizational environment is a critical antecedent of sexual harassment; harassment, in turn, influences work-related variables (e.g., job satisfaction); psychological states (e.g., anxiety and depression); and physical health [3].

Implications of sexual harassment on work performance and the victim [4]

1. Decreased work performance as the victim must focus on dealing with the harassment and the surrounding dynamics and/or effects and due to psychological effects of harassment.
2. Increased absenteeism to avoid harassment, or because of illness from the stress.
3. Retaliation from the harasser, or colleagues/friends of the harasser, should the victim complain or file a grievance.
4. Having one's personal life offered up for public scrutiny - the victim becomes the "accused," and their dress, lifestyle, and private life will often come under attack.
5. Loss of trust in the types of people that occupy similar positions as the harasser or their colleagues.
6. Extreme stress upon relationships with significant others, sometimes resulting in divorce; extreme stress on peer relationships, or relationships with colleagues.
7. Being ostracized from professional or academic circles.
8. Having to relocate to another city, another job
9. Loss of references/recommendations
10. Loss of career

Effect on economy and enterprise

Commission of the European Unionstates various effects of sexual harassment on the economy which are as follows [5]

- "There are also adverse consequences arising from sexual harassment for employers. It has a direct impact on the profitability of the enterprise where staff takes sick leave or resign their posts because of sexual harassment and on the economic efficiency of the enterprise where employees' productivity is reduced by having to work in a climate in which individuals' integrity is not respected."
- "In general terms, sexual harassment is an obstacle to the proper integration of women into the labour market."
- "Sexual harassment also affects third parties, with witnesses and observers frequently leaving the organization in response to their experiences."

Health implications of sexual harassment

Sexual harassment often has a serious and negative impact on women's physical and emotional health. The more severe the harassment, the more severe the reaction. The reactions frequently reported by women include anxiety, depression, sleep disturbance, weight loss or gain, loss of appetite, nausea and headaches [6,7]. Researchers have also found that there is a link between sexual harassment and Post-Traumatic Stress Disorder [8].

THE SEXUAL HARASSMENT OF WOMEN AT WORKPLACE (PREVENTION, PROHIBITION AND REDRESSAL) ACT, 2013 [1]:

When we speak of Indian Criminal Laws, until 1997, sexual harassment of women was not enlisted as a separate category of crime. Related laws in the Indian Penal Code (IPC) are sections 294, 354,376 and 509 of the IPC.

Preamble of the constitution of India and need for the act

Article 14 & 15 of the constitution of India embodies the concept of equality and prohibits discrimination on the grounds of religion, race, caste, sex or place of birth or any of them. Article 19 gives fundamental

rights to all citizens to practice any profession, or to carry out any occupation, trade or business. This right presupposes the availability of an enabling environment for women, which equates, safe and secure in every aspect. Article 21 concerns the right to life and personal liberty, includes the right to live with dignity and in case of women it means that they must be treated with due respect, decency and dignity at workplace. Sexual harassment at a workplace is thus a violation of a woman's right to equality, life and liberty.

The need to pass the act also arose because the Convention on the Elimination of all Forms of Discrimination against Women had been ratified by the Government of India, and it was necessary to make provisions in accordance with the convention.

Purpose

The purpose of the act is 'to provide protection against sexual harassment of women at workplace and for the prevention and redressal of complaints of sexual harassment and for the matters connected therewith of thereto.'

Definitions

The act defines an employee as 'a person employed at the workplace for any work on regular, temporary, ad-hoc, daily wage basis, either directly or through an agent, including a contractor, with or without the knowledge of the principal employer, whether or not for remuneration or working on the voluntary basis or otherwise, whether the terms of employment are express or implied and includes a co-worker, a contract worker, probationer, trainee, apprentice or called by any other such name.'

Workplace is defined as "government owned or controlled establishment, private sector establishment, hospitals or nursing home, any sports establishment, any place visited by the woman employee during the course of employment, including transportation provided by the employer for undertaking the journey, dwelling place or house and Unorganized sector (number of people working less than 10)."

Provisions of the act

This act ensures that no woman shall be subjected to sexual harassment at workplace. Every employer is bound by the law to constitute a committee to be known as "Internal Complaints Committee". This internal committee can at the request of the aggrieved woman take steps to settle the matter between her and the respondent through conciliation provided that no monetary settlement shall be made as a basis of conciliation. If the committee reaches a conclusion that the allegation against the respondent has been proved, it shall recommend to the employer to take action as misconduct in accordance with the provisions of service rules of the organization. There is provision to enable deductionof an appropriate amount from the salary or wages of the harasser. The victim can also request for the transfer for herself or her assailant. The employer is bound to act upon the recommendations within 60 days. The penal consequences of sexual harassment and the order constituting the internal committee must be displayed at conspicuous places by the employer.Organization of workshops and awareness programs at regular intervals for sensitizing employees with the provisions of the act and orientation program for the internal committee is also provided for by the act. Thus the act strives to provide a safe working environment to women.

Limitations of the act

- It is pertinent to mention that according to the law, the first point of resolution is within the organization and not outside of it.Thus, the resolution largely depends on robust internal systems within the organization.
- It may become a challenge for employers to constitute an ICC at all administrative units or offices. Significant time and efforts will be involved in training members of the ICC who are to be replaced every 3 years
- The onus of deciding if a complaint is false or malicious falls on the Internal Committee.

Attempts to bring in more objectivity while deciding the above would have better helped protect the interest of the employers and complainants.

- India is a land of diverse cultures. Within an organization, there may be employers and employees from different sociocultural backgrounds. What might be unwelcome and offensive to one might not be so to another within the same organization. No consideration has been given to these cultural differences in drafting the bill.
- The act covers sexual harassment at the workplace. There is provision for conciliation under this act. However, sexual harassment under Section 354 A is a criminal act punishable with imprisonment. The same act thus has two different punishments under the law. The occurrence of the same act in a different circumstance i.e., the workplace should not make it less serious a crime.
- The act only addresses the issue of protection of women employees and is not gender neutral. Male employees, if subjected to sexual harassment, cannot claim protection or seek relief under the law.

The role of health care professionals

Sexual harassment and sexual discrimination continue to be pervasive problems for women in business, academia, and medicine, with widespread and often serious health, emotional, and economic consequences. Thus there is a need to be sensitized for preventing sexual harassment at medical colleges and hospitals. It is also important that health care providers should become aware of the common physical and emotional symptoms associated with these victimized experiences and serve as supportive and informed resources to their patients [9].

Conclusion

Sexual harassment in the workplace is more a social phenomenon than a personal problem, and that it is the cause of lasting psychological, social and economic after-effects among its victims. Combating sexual harassment is only part of the solution; we must look beyond its legal aspects to find ways of changing male-female relationships, and we must provide support to victims of sexual harassment.

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