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Original Research Paper

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MOUNTING EVIDENCE IN SUPPORT OF A HYPOTHESIS

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ABSTRACT **Aim:** A study analysis supporting reports on a hypothesis. **Background:** The function of epididymis is considered as responsible for making a meaningful motionless state for spermatozoa assuring sperms do not escape from male genital tract by its motility. A hypothesis stated repeated ejaculation shall lead to increase sperm count and motility. **Review results:** Studies showed frequent ejaculations done by men and similar studies conducted in animals support this hypothesis.
Conclusion: This method should be beneficial to at least patients whose sperm count and motility is less. Clinical significance: when hypothesis is proved, clinician may advice this patients with oligozoospermia, oligoasthenozoospermia to follow repeated ejaculation instead of storing semen for several days as advised currently.

KEYWORDS : Hypothesis, Frequent ejaculation, Oligozoospermia, Oligoasthenozoospermia

Background:
A hypothesis is an assumption, not proved by experiment and lead pathways for sake of testing its soundlessness or to facilitate investigations of a class of phenomenon 1. This is like a theory, assumed to account for what is not understood. A hypothesis is placed with supporting arguments which are based on existing facts and ends with logically tailored conclusions. Verifying such a proposed theory may take years.

Structure of epididymis is studied in detail [2]. As a whole the function of this portion, epididymis, is recognized as responsible for making a meaningful motionless state for spermatozoa which assures sperm cells do not escape male genital tract except during ejaculation [3].

Review result: A hypothesis [4, 5] was presented suggesting a way to improve the total spermatozoa count and motility by increasing the frequency of ejaculation. Considering the period of spermatogenesis as seventy days, this time may be expected as essential for sperm processing to come out of male genital tract [6]. These days are reduced by frequent ejaculation, meaning there by this effect could be visible days earlier; sperms will be released from store. Theory was neatly arranged by the author [4] placing the arguments with the level of inhibin in blood and its influence on sperm production.

According to him [3] motionless state of spermatozoa in epididymis is due to its large population of same in limited space, difference in pH or ratio between sodium and potassium and others. During frequent ejaculation the exposure of spermatozoa to these hostile factors is reduced to minimum time and so the motility is increased. Supporting the theory evidences are placed below from animal and clinical studies.

DISCUSSION:
Olderid et al. [7] reported reduction in sperm count during frequent ejaculation. In a daily ejaculate study conducted for 10 days semen total volume and sperm count were significantly reduced whereas progressive and total spermatozoa motility increased [8].

Elaborated semen study of McAsey et al. [9] on 14 days of daily ejaculation reported reduction in semen volume and total motile spermatozoa but did not result in significant worsening of parameters of semen health including percent motility, DNA integrity, immature sperm, and end damage from reactive oxygen species. This study suggested oligozoospermic men with high DNA damage in sperm may be improved by more frequent ejaculation. Van Zyl et al. [10] reported daily ejaculation improved semen quality among oligozoospermia patients. In their study, 58% of patients with less than 10 million/ml total sperm count could achieve fatherhood after regular sexual contact. At the end of ten days study conducted by Valsa and others [8] on daily ejaculation increase in total spermatozoa motility especially that of progressive was observed. This study also showed decrease in sperm count.

Shen et al. [11] reported increased pregnancy rate after short ejaculatory absence of 1-3 hours. They observed increased motile sperm count, motility and morphology ($p<0.05$). They attributed this as an improvement in protein consistency.

Bahadur et al. [12] concluded their study on repeated ejaculations stating that though there was a decrease in sperm count, the motile spermatozoa were significantly higher.

Kawakami et al. [13] conducted an experimental study on dogs which was supporting the hypothesis on sperm motility. The study did not include sperm count. In their study, eight Beagle dogs with asthenozoospermia and teratozoospermia were included. Ejaculates of canines were frequently collected by manipulation. Results were highly encouraging. Which showed the frequency of ejaculation improved the percentage motility in asthenozoospermia dogs and reduced the percentage of abnormal spermatozoa in teratozoospermia. They [13] considered the disturbance of sodium and potassium concentration and change in osmotic pressure in male reproductive system as responsible for pathology of semen in their studies. Their study results showed the improvement in semen picture reaching the normal level by frequent ejaculation.

During the period of study authors [13] analyzed the level of plasma testosterone and concluded that the improvement in semen quality was not related to androgen secretion. Among infertile patients study conducted by us [14, 15, 16, 17, 18] one study where one case of teratozoospermia was present among 82 male infertile patients[19].

CONCLUSION:
In conclusion increase in frequency of ejaculation promotes spermatogenesis and sperm motility. From the convincing evidence placed by Kawakami et al.[13] we repeat our hypothesis on frequent ejaculation may be beneficial to

improve sperm motility in patient where sperm motility is sub normal. Though evidence is still awaited the technique should equally accelerate sperm production. This method should be considered equivalent to physiological treatment beneficial to at least some patients of Oligozoospermia, oligoasthenozoospermia, asthenozoospermia and teratozoospermia.

Clinical significance: After approval of hypothesis the method of repeated ejaculation could be advised to patients with oligozoospermia and oligoasthenozoospermia. Present known advice, is to preserve semen for days together and not losing it out to increase the sperm count as well as motility. This will also keep these "patients" away from medicine.

REFERENCES:

1. Thomas CL (editor). (1998) Tabers Cyclopedic Medical Dictionary, Bangalore; Jaypee publication, Vol 1, 18th edition.
2. Skandhan KP, Soni A, Joshi A, Avni KP, Gupta BD. Human epididymis: structural pattern, total length and inner surface area. Urologia. 2017; 84, 215-217.
3. Skandhan KP. Hypothesis: epididymis inhibits sperm motility inside male reproductive tract. Med hypotheses 2004; 62, 146-150.
4. Skandhan KP. Can increase in frequency of ejaculation promote spermatogenesis? Med Hypotheses 1989; 30, 81-82.
5. Skandhan KP. Hypothesis: improving the semen quality. ActaEurFertil.1993; 24, 29-30.
6. Burger HG, De Krester DM, & Hudson B. Spermatogenesis and its control. In: Hafez ESE (editor): Human semen and fertility regulation in men. CV Mosby company, Saint Louis. 1976
7. Oldereid NB, Gordeladze JO, Kirkhus B, Puvis K. Human sperm characteristics during frequent ejaculation. J ReprodFertil. 1984; 71, 135-140.
8. Valsa J,Skandhan KP , Gusani PH. Effect of daily ejaculation on semen quality and calcium and magnesium in semen Rev IntAndrol.2013; 11, 94-99.
9. McAseyJ,Contio A, Benson A, Kohler T. The effect of daily ejaculation on semen parameters and sperm DNA damage in normal men. FertilSteril. 2011; 96, 430.
10. Van Zyl JA, Mankveld R, Relief AE, Van Niekerk MA. Oligozoospermia in human semen and fertility regulation in men. In: Hafez ESE, editor. Pp. 363. CV Mosby Company , Saint Louis. 1976
11. Shen ZQ, Shi B, Wang TR, Jiao J, Shang XJ, Wu QJ, Zhou YM, Cao TF, Du Q, Wang XX, Li D. Characterization of the Sperm Proteome and Reproductive Outcomes with in Vitro, Fertilization after a Reduction in Male Ejaculatory Abstinence Period. Molecular & Cellular Proteomics. 2019 Mar 15;18 (Supplement 1):S109-17.
12. Bahadur C, AlmossawiO ,Zaid RZ, IlahibuccusA,Al-Habib A, Muneer A, Okolo S. Semen characteristics in consecutive ejaculates with short abstinence in subfertile males .Biomedicine Online. 2016; 32, 323-328.
13. Kawakami E, Hori T, Tsutsui T. Change in semen quality and in vitro sperm capacitation during various frequencies of semen collection in dogs with both asthenozoospermia and teratozoospermia. J Vet Med Sci. 1998; 60, 607-614.
14. Chaitrali G, Santrupti K, NiranjanK, Skandhan KP, Sukumar N, Prasad BS. Male infertility rate in Belgavi, India.Int J infertile fetal med2019; 20(10) 1-3.
15. Butt F, Akram N. Semen analysis parameters: Experiences and insight into male infertility at a tertiary care hospital in Punjab. J Pak Med Assoc. 2013; 63, 558-62.
16. Skandhan KP, Mazumdar BN. High incidence of male involuntary infertility. Infertility 1982; 5,167-174.
17. Skandhan KP, Vadodaria H, Langalia D, Mazumdar BN. Incidence of male factor in involuntary infertility. Andrologia. 1982; 14, 328-330.
18. Skandhan KP, Patel I, Mehta YB. Rate of involuntary infertility among male partners. Italian J Med; 1986; 2, 71-72.
19. Skandhan KP,Singh G, Prasad BS, Thakar AB, Godatwar PR, Rao N, Pandya AR. Veracity of "Suvarnabhasma"(gold ash) an indigenous Ayurvedic preparation as a therapeutic agent for male infertility. JAyur. 2009; 3,83-86.