

Editorial

Diffident Andrological Research and the Men Ejaculatory Conditions

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It is very exciting to receive the inaugural volume of Austin Andrology and I would like to congratulate the journal staff for the big efforts to initiate this intellectual project. I am honored to be on the board members and excited to see Austin Andrology positioned to address essential themes related to Men's health.

Men's health is an in progress subject continuously influenced by social, environmental and technological aspects that significantly impact the well-being. Although the state of the art of men's health regardless of the great scientific advances is not dimensioned until now, andrological research have significantly contributed to outline it. Several topics in the field of Andrology that deserve special attention are awaiting for amply investigation i.e. reproductive technology, gamete technology, age and men's health and the masculine sexual responses and its complaints. With respect to the male sexual function, the studies in the field of Andrology have provided significant knowledge, but masculine sexual complaints persist highly prevalent among sexually active men.

Experimental and clinical data on masculine sexual function have focused predominantly on the erectile function and its dysfunctions, while the ejaculatory response and the so-called ejaculatory dysfunctions such as premature and retarded ejaculation, have received less attention. Until now, the unsystematic classification of the ejaculatory ailments varies depending of the subpopulations of sexually active heterosexual men enrolled, but the data on the true prevalence is not robust to define indeed the existence of ejaculatory dysfunctions, since the forthcoming subpopulations of sexually active homosexual and the aged men are not firmly included.

Most professionals interested in the so-called ejaculatory dysfunctions classify these conditions into four categories according to the latencies for ejaculation following intravaginal penetration: premature ejaculation, delayed ejaculation, retrograde ejaculation and an ejaculation [1-3]. The concept of ejaculatory dysfunctions is controversial [4] and evidence has been presented to account the existence of ejaculatory conditions instead, based on a Gaussian distribution in the general population of ejaculating males. Thus, derived from preclinical and clinical studies, it has been postulated

that the rapid and retarded ejaculations are not physiological disorders but part of the 'normal' biological variability of intravaginal ejaculation latencies [5]. According to this notion, there are men who have rapid ejaculations throughout their live, men who always have retarded or even no ejaculation, and men who always ejaculate within a latency range that can be considered as 'normal' [5]. As a result, in a given population there are endophenotypes of ejaculating males categorized giving their ejaculation latencies and in this manner should be considered as ejaculatory conditions, not ejaculatory dysfunctions [5]. This notion suggests that each 'normal' endophenotype of ejaculating males have well-defined sensorial, motor and autonomic features that characterize their ejaculatory responses, a subject that deserves experimental and clinical support.

The control of ejaculation is poorly comprehended. Even though many significant information in this topic has been provided, including the existence of a spinal generator for ejaculation, the partial identification of afferent and efferent pathways to the genital structures and the partial identification of the neurotransmitters systems involved in its modulation, the control of the ejaculatory threshold remains as the central riddle. The ejaculatory threshold largely depends of the genital sensory stimulation and includes the participation of learning processes, but the sensory mechanisms directing ejaculation are seldom taking into account when establishing the ejaculatory conditions.

The sensory information targeting the ejaculatory circuits in the central nervous system to evoke ejaculation is critical, but instead systemic drugs are primarily recommended to treat ejaculatory ailments, followed by local anesthetics and training of the pelvic floor muscles, despite up till now, the disadvantages of these elective treatments are under intense evaluation, with no tangible conclusions.

The sensory genital field plays an important role in ejaculation and during copulation, genital afferent information synchronizes a constellation of somatic and autonomic events that results, when appropriately applied, in the ejection of semen and orgasm. Preclinical studies have shown that when men have sex, the stimulation of genital structures initiate several genital reflexes [6], all targeting reflex circuits at different levels of the central nervous system, which in turn activate the inhibitory and excitatory feedback mechanisms of ejaculation. Besides, the ejaculatory function is sensitively strengthened by learning. Accordingly, for instance teenagers and men can realize their sexual responses when masturbate and learn the ejaculatory control with the stop-start method and the squeeze technique, but the ejaculatory control initiated at the early stages of the life changes when copulation takes place and the social component of sexual response commences. As a consequence, the coital activity brings about the sexual complaints, showing a lack of education and training of the ejaculatory response as the sexual experiences go forward. With an adequate training, the amount

of sensory stimulation could be administered and the ejaculatory threshold could be controlled, along the neural processes in the circuits of ejaculation that could initiate the necessary adjustments to achieve a mature, well-controlled ejaculatory response. In line with this notion, recent studies published in *Austin Andrology* on the different subpopulations of ejaculating rats show that the ejaculatory training that involves constant genital stimulation, can improve motor features of the ejaculatory motor pattern [7].

Costs of the masculine sexual complaints are high and unquantifiable and particularly rapid ejaculation has become the center of a multimillion dollar business; here there are new opportunities for andrologists to be less diffident and reconsider basic research to offer insights for the ejaculatory ailments, taking into account the sensory aspects of ejaculation.

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