PROLEGOMENA

For more than seven decades, since Walter B. Cannon's paper in 1929, there has been a wealth of publications regarding theories and concepts on stress. Today, at the beginning of twenty first century we continue to study stress, its consequences and ways of coping with it. At certain points, word stress have various unclear meaning. For most persons, the word stress implies pressure or load which is being experienced at a given time. The consequence is the resultant effect of stress and coping with it is the adaptation to stress or adjustment with it. Through the passage of time while some understanding of stress research was emerging, one name became synonymous with the word STRESS, that was HANS SELYE (Suggested reading – Experientia 41(5): 559-578, 1985).

Selye, a Austro-Hungarian born in double monarchy, educated in German University of Prague, later migrated to Montreal, Canada where at McGill University he ceaselessly worked for over half a century to put stress research on rolling wheels. In July 1936, Selye published his first brief article in Nature entitled 'A syndrome produced by diverse nocuous agents'. The article described the organism's propensity to react to widely different chemical, physical and biological stimuli. Later, he showed that this holds true also for cold, heat, X-rays, noise, pain, bleeding and muscular work (Selye, 1964). In a dictionary, stress is defined as a force, pressure or strain. Probably, Selye could not find an analogy between technological strain and biological strain and stress. Then what finally is the explanation of stress phenomenon? According to Selye, it is the lowest conceivable kind of exposure, challenge and demand.

In another way, Selye described the phenomenon of stress by referring to what he called 'the rate of wear and tear in the organism. Thus, it seems that Selye and other
workers in the field of research on stress have different perception of the subject. Perception of stress may vary between the species, between the age groups and in the same species, between the environmental condition (e.g. domestic or wild), social status and state of health of the subjects.

Rats are commonly used experimental animals, putting them to stressful conditions are easy, but experiments on rats itself are vast field for exploration. Therefore, only two organs namely adrenal gland and testis were studied. Adrenal secretions are known indicators of stress but its histoarchitecture under the chronic stressed conditions were not well studied. A stereological study might reveal some useful results.

Development and growth of normal rat testis is not any more obscure. A stereological study of testis under normal and stressed conditions through vital stages of postnatal life might reveal some further informations that might be transferable for better causes. Two known stressors namely, maternal deprivation (MD) in preweaning period and electrical FS in post-weaning period are if employed, from day 5 to day 100 postnatal were used in this paradigm. All vital stages of life of rat e.g. early postnatal, young, (pre-and-postweaning) young adult and mature adult were studied.