



## Male Reproductive Function in Patients with Diabetes Mellitus

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### ABSTRACT

**Introduction:** diabetes (DM) affects a growing range of men in fruitful age. polygenic disorder will impair male replica, tho' changes on the hypothalamus-pituitarytesticular axis, it should cause sexual dysfunction and defective perform of the male accent glands. However, clinical information concerning spermatozoan parameters and different aspects of fruitful perform in diabetic patients area unit restricted. **Objective:** to judge the characteristics and bio-functional variations of spermatozoan in diabetic patients. **Materials and methods:** empiric, comparative cohort study of diabetic patients with a history of physiological state or subfertility, aggregation their main bio-functional spermatozoan parameters, internal secretion levels and metabolic characteristics. **Results:** A sample of ninety patients with DM, with Associate in Nursing age of  $40 \pm 10$  years (mean  $\pm$  SD) and vary between twenty and sixty years previous, the very best proportion of patients being around thirty years previous, with a time of physiological state of  $4.7 \pm 4.2$  years, and a median diabetic illness time of nine.8 years. Patient's sort one depicted 36% of total and sixty three had sort two DM. Up to sixty two you look after patients had suffered from DM for quite ten years. a complete of 199 non-diabetic patients with physiological state aged thirty seven.  $7 \pm 7.39$  years were obtained as management cluster. Age and BMI were higher within the cluster of DM compared to controls. Patients with DM had a significantly lower proportion of spermatozoan with progressive motility, pH, spermatozoan concentration and total spermatozoan count per ejaculate, also as a lower proportion of spermatozoa with traditional morphology than controls. A correlation was ascertained among the quantity of diabetic complications and seed volume ( $R=-0.277$ ,  $p < 0.05$ ). organic chemistry parameters, like triglycerides, steroid alcohol and gonadotropins didn't show any vital variations, whereas creatinine was higher and androgenic hormone was lower within the cluster of DM

compared to regulate cluster. **Conclusion:** impotent patients with DM show a major impairment of the most spermatozoan parameters we have a tendency to compared with non-diabetic impotent patients. These findings could justify why patients with DM have frequent fertility disorders. Several risk factors area unit concerned within the physiological state pathologic process, as unsuccessful gametogenesis a reason behind seminoma, sex cell dysplasia, varicocele, altered spermatozoan transport, environmental factors, also as nonheritable abnormalities, infectious processes, bilateral body structure occlusion, pregnancy-related infections, alterations in purposeful spermatozoan parameters, conjointly the antisperm antibodies (AA). However, there's from 100% to twenty fifth of upset cases during which the reason behind physiological state can not be known. Diabetes mellitus (DM) could be a chronic metabolic illness characterised by symptom. DM is one among the most stressors in fashionable public health thanks to complications that embody retinopathy, neuropathy, uropathy and male physiological state. at intervals these issues concerning fertility, a decline in male fertility, specifically decreasing spermatozoan quality, has received vital attention.

This capability of spermatozoa might also be influenced by a illness related to genetic and environmental factors like the Metabolic Syndrome, as male overweight and/or diabetes (DM). Despite of the direct association between the presence of DM and spermatozoan fertilizing potential drawback in up to date whitens. apart from impotence, which has retrograde ejaculation and ejaculation, that area unit long acknowledged as sequelae of the condition, the impact of DM on male fruitful health remains arguable. Thus, DM can also have an effect on male fruitful perform at multiple levels as a results of its effects on the endocrine management of gametogenesis and gametogenesis itself. A decrease in spermatozoan motility and seed volume in patients with DM sort two has been ascertained, and incompetence, forever joined to the metabolic syndrome. varied factors will contribute to male physiological state in patients with metabolic

syndrome, which can be symptom, arteriosclerosis and / or aerophilic stress, that successively contribute to cell injury . fat has conjointly been negatively associated with seed quality . Studies of spermatozoan quality in polygenic disorder are restricted to microscopic analysis of standard seminal parameters (semen volume, spermatozoan count, motility and morphology). standard seminal analysis has restricted worth in deciding fertility standing unless there area unit marked abnormalities, like oligoasthenoteratospermia or azoospermia. The inadequacy of studies concerning the results of DM on human male fruitful perform and also the conflicting nature of existing information have resulted during a clear lack of agreement in current literature concerning the magnitude of the matter . all the same, the association of DM with shrunken male fertility is far clearer within the numerous animal models that area unit utilized to check the condition: all show considerably shrunken fecundity . In examining the impact of symptom associated to DM within the long run to the progression of a larger vascular and epithelium alteration, besides being to blame for severe comorbidities and complications like dyslipidemia, hyperinsulinemia and hypoglycaemia . Therefore, DM will have a bearing on fruitful functions, like delicate nonetheless necessary changes within the metabolic profile of the {testis|testicle|orchis|ball|ballock|bollock|nut|egg|male fruitful gland|gonad|sex gland} ]; the redoubled presence within the male reproductive tract of a bunch of compounds that area unit concerned in varied diabetic complications as pathology and pathology, and considerably higher proportion of each spermatozoan nuclear and mitochondrial DNA injury. The aims of our study were to judge the connection between diabetes and subfertility, supported the secretion and metabolic check and seminogram study in subfertile patients with these characteristics. Although this study demonstrates that, excluding seminal volume, hydrogen ion concentration and progressive joint motility, different standard seminal parameters of diabetic men don't disagree considerably from management subjects, there's a distinction from a clinical perspective that this can be necessary, particularly given. sort one polygenic disorder patients had a lower proportion of spermatozoan and motility and alteration in morphology.

Keywords: Diabetes mellitus; Male reproductive function