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Pattern of seminal fluid analysis in a population of subfertile men attending the Urology clinic, Teaching Hospital, Peradeniya

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Subfertility is defined as a failure to conceive after one year of regular unprotected sexual intercourse. It is a very common presentation in urological practice. Subfertility affects an estimated 15% of couples throughout the world. Male factors are found to be solely responsible for 20-30% of subfertility cases and contribute to 50% of cases overall. Among the male factors responsible for subfertility hormonal factors, disorders of spermatogenesis and obstructive causes play a major role. Timely and well planned investigations are necessary in the management of subfertility as it has major implications on an individual's life. Seminal fluid analysis plays an important role in the assessment of male subfertility. The objective of the current study was to evaluate seminal fluid analysis findings in a group of subfertile men attending the urology clinic, Teaching Hospital, Peradeniya.

This was a retrospective observational study conducted by the Department of Surgery, Faculty of Medicine, from January 2005 to February 2016. Male patients presented to the urology clinic, Teaching Hospital, Peradeniya with a history of subfertility were included in the study. All the patients' seminal fluid analysis findings were reviewed and the findings were compared with WHO standard reference values.

There were 113 subjects between 24 to 48 years. Mean age was 34.51± 5.28 years. Of the study population 86.6% had abnormal seminal fluid analysis findings and 13.3% had normal parameters. 25.7% had a low volume ejaculate while 74.3% had a normal volume of ejaculate. The minimum volume was 0.5ml, the maximum was 5ml with a mean of 2.26± 1.14 ml, mean total sperm concentration was $15.61 \pm 33.18 \times 10^6$/ml, mean percentage of progressive motility was 15.94 ± 22.68, and mean percentage for normal forms was 39.65 ± 44.52.

Abnormal sperm characteristics included Azoospermia (44.2%), Oligozoospermia (10.6%) and asthenozoospermia (9.7%). Combined abnormalities included Oligoasthenozoospermia (11.5%) and Oligoasthenoteratozoospermia (8%). Among the occupational groups, skilled agricultural and fishery workers had the highest prevalence of azoospermia (16%).

Seminal fluid analysis plays an important role in assessment of male subfertility. This study shows a higher rate of seminal fluid abnormalities in subfertile patients, of which the commonest was azoospermia.