



BROUGHT TO YOU BY
YTP CHAIRPERSON
Dr. Neharika Malhotra
 MD(obgyn), DRM Germany
 Rainbow IVF, Agra



Author - Dr Amogh Chimote
 Medical Director, Vaunshdhara Fertility Centre,
 Nagpur, Maharashtra
 Gyn. Endoscopy Surgeon and Fertility Consultant
 ESGE Bachelor in Gynaecological
 Diploma in Gynaecological Endoscopy CICE
 (Clermont Ferrand, France)
 M.D. OBGYN, B.B.S
 Diplomat in Obstetrics & Gynaecology Ultrasound
 Ian Donald School
 Fellowship in reproductive med (Nagpur)

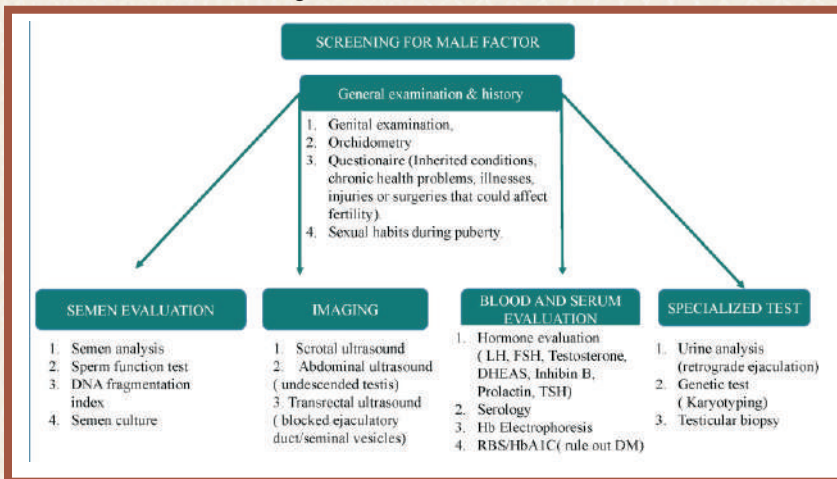
" YTP UPDATE 2020 "

SCREENING FOR MALE FACTOR INFERTILITY

Infertility is one of the emerging and increasing problem in the society all over the world. Around 10% of the entrie population in the world is suffering from some form of fertility issue. Of this 40% is attributed to female factor 40% to male factor and 20% to unexplained factor.

In this male dominated society it is very difficult to subject the male to screening and diagnosis due to the fact that " I have no problem , must be the female factor " which makes it a bigger problem to deal with. Hence a rather clear and straightforward approach should be taken and explained the effect of screening male in a case of infertility.

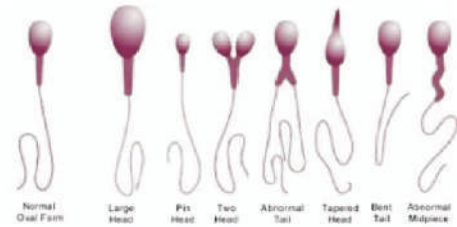
The following is the basic algorithm that we can follow to screen the male and hence have a good and successful outcome of the screening as well as the treatment.



LOWER LIMITS IN SEMEN EVALUATION OVER THE YEARS					
Semen characteristics	WHO 1980	WHO 1987	WHO 1992	WHO 1999	WHO 2010 ¹
Volume (mL)	ND	≥ 2	≥ 2	≥ 2	1.5
Sperm count (10 ⁶ /mL)	20-200	≥ 20	≥ 20	≥ 20	15
Total sperm count (10 ⁹)	ND	≥ 40	≥ 40	≥ 40	39
Total motility (% motile)	≥ 60	≥ 50	≥ 50	≥ 50	40
Progressive motility ²	≥ 2 ³	≥ 25%	≥ 25% (grade a)	≥ 25% (grade a)	32% (a + b)
Vitality (% alive)	ND	≥ 50	≥ 75	≥ 75	58
Morphology (% normal forms)	80.5	≥ 50	≥ 30 ⁴	(14) ⁵	4 ⁶
Leukocyte count (10 ⁶ /mL)	< 4.7	< 1.0	< 1.0	< 1.0	< 1.0

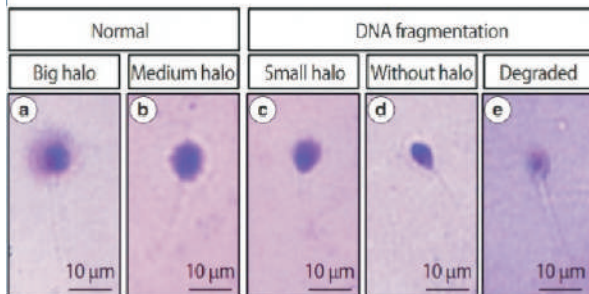
¹ Lower reference limits generated from the lower fifth centile value; ² Grade a = rapid progressive motility (> 25µm/s); grade b = slow/sluggish progressive motility (5-25µm/s); Normal = 50% motility (grades a + b) or 25% progressive motility (grade a) within 60 min of ejaculation; ³ Forward progression (scale 0-3); ⁴ Arbitrary value; ⁵ Value not defined but strict criterion is suggested; ⁶ Strict (Tygerberg) criterion; ND = not defined.

SEMEN MORPHOLOGY

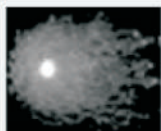


	WHO (2nd edition) [16]	WHO (3rd edition) [17]	Strict criteria [1,13,18,23]
Head	Regular oval Length 3–5 μm , width 2–3 μm Acrosome > 1/3 size of head	Smooth oval Length 4–5 μm , width 2.5–3.5 μm Acrosome 40–70% of head	Smooth and perfect oval 4–6 μm \times 2.4–3.5 μm Well-defined acrosome (40–70% of sperm head)
Midpiece	Straight, regular Width < 1 μm , length 5–7 μm	Slender, regular Width < 1 μm , length 1.5 \times head size	No midpiece defects Slender, regular Width < 1 μm , length 1.5 \times head size
Tail	Slender, uncoiled 45 μm long	Slender, uncoiled 45 μm long	No tail defects Uniform size, 10 \times head length, 45 μm long
Cytoplasmic droplets	< 1/2 the head size	< 1/2 size of the head	No cytoplasmic droplets > 1/2 size of the head
Vacuoles	Not stated	< 20% of head	Up to 4
General	If in doubt = normal	Borderline = abnormal	Borderline = abnormal

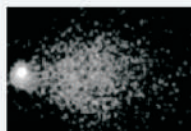
DFI BY VARIOUS TECHNIQUES



HALO SPERM

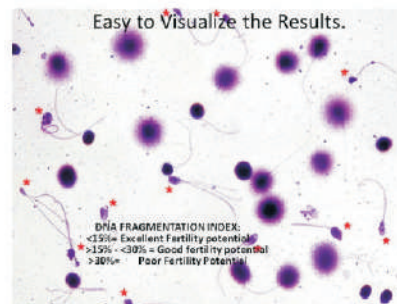


NORMAL SPERM



ABNORMAL SPERM (COMET)

COMET ASSAY



GIEMSA STAINING (FASTEST AND COST EFFECTIVE)

