Abstract: *Introduction*: *JHDM2A* is a histone demethylase that specifically demethylates mono-and di-methylated histone H3 lysine9. *JHDM2A* (JmjC-domain-containing histone demethylase 2A, also known as *JMJD1A* and *KDM3A*) is essential for spermatogenesis. Also, *JHDM2A* binds to and controls the expression of transition nuclear protein 1 (Tnp1) and protamine 1 (Prm1) genes, the products of which are required for packaging and condensation of sperm chromatin.

**Methods:** A non-synonymous SNP, rs2030259, has been selected by bioinformatics studies. Primers were designed by using oligo primer software. Genomic DNA was extracted from the blood of 100 patients with azoospermia and oligozoospermia, matched control and *JHDM2A* gene was amplified. Finally, the samples analyzed by agarose gel.

**Results:** So far we have observed bands in considered length according to designed primers, for patient and control samples, and its relationship with male infertility is under investigation.

**Conclusion:** This study has focused on polymorphic marker of *JHDM2A* gene to evaluate its association with male infertility. The association reported in this study will be necessary to confidently validate this SNP and identify novel SNPs association with male infertility that can have therapeutic purpose.