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R117H and IVS8 polymorphism analysis was performed by PCR and followed by RFLP and sequencing. *Results:* Y-chromosome microdeletions were detected in 5% (5 cases of 100: 3 cases AZFc; 2 cases AZFa+b+c). Y-Hg analysis showed that Hg N3a1 and Hg R1a1 were less frequent in the infertile group compared to the control group, however Hg K* was predominantly found in the infertile group ($p < 0.001$). Analysis of *CFTR* gene mutation, delF508, R117H and IVS8 polymorphism did not confirm association with infertility. *Conclusion:* The frequency of Y-chromosome microdeletions in males with idiopathic infertility was 5%. Y chromosome Hg K* may be associated with male infertility. *CFTR* gene mutations, delF508, R117H and IVS8 polymorphisms do not affect the process of spermatogenesis directly.

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ROLE OF C-KIT EXON 11 MUTATIONS AND HLA-G POLYMORPHISM IN LEUKEMIA IN NORTHERN INDIA

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Background: C-Kit gene is a receptor tyrosine kinase class III that is expressed by early hematopoietic progenitor cells and plays an important role in hematopoietic stem cell proliferation, differentiation and survival. The 14bp insertion / deletion of the HLA-G gene has been shown to play an important role in various types of neoplasia. *Methods:* PCR-SSCP followed by direct DNA sequencing. *Results:* Of 31 leukemia patients, 18 were male and 13 were female with ages ranging from 2 to 65 years. The mean age of patients was 32.3 years and $SD \pm 1.03$. A total of nineteen mutations were detected in six patients that include Lys550Asn, Tyr568Ser, Ile571Leu, Thr574Pro, Gln575His, Tyr578Pro, Asp579His, His580Gln, Trp582Ser, Arg586Thr, Asn587Asp and Arg588Met and novel point mutations at codons Ile563Lys, Val569Leu, Tyr570Ser, Ile571Thr and Pro577Ser. Ile571Leu and Trp582Ser substitution was found in two independent cases. The frequency of I/I, I/D and D/D genotype in patients was 19.37%, 48.38% and 32.25% and in controls 24%, 46% and 30% respectively. *Conclusion:* These observations suggest that mutations in exon 11 of the c-kit gene might represent useful molecular genetic markers for leukemia while there is no significant association of HLA-G polymorphism in leukemia.

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RESPONSE TO ATHEROGENIC DIET IN SYRIAN HAMSTERS

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Background: Cost-effective small animal models of atherosclerosis and data on the use of atherogenic diets in non-transgenic animals is important for testing anti-atherogenic therapies. *Methods:* We used Syrian hamsters (*Mesocricetus auratus*) on high cholesterol/high dietary fat atherogenic diet (the Paigen diets' modification) as a model for atherosclerosis. Animals were sacrificed after 14 weeks' diet and histological examination of their organs and tissues was performed. *Results:* The body mass was significantly lower in the test group compared with the control. A severe hepatomegaly was detected in all hamsters in the test group. The maximum liver mass was up to 25% of the whole body mass. Histological features of severe hepatitis were observed. Concentric myocardial hypertrophy was found in the test group. *Conclusion:* Syrian hamsters strongly responded to atherogenic diet and can be used as a model for testing anti-atherogenic therapies.

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PREPARATION AND CHARACTERIZATION OF MONOCLONAL ANTIBODIES TO ADIPONECTIN FOR ITS MEASUREMENT IN HUMAN SERUM

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Background: Low levels of adiponectin are associated with increased prevalence of cardiovascular disorders, including ischemic heart disease. *Methods:* Monoclonal antibodies were prepared against purified recombinant human adiponectin. The reactivity of these monoclonal antibodies on Western blot analysis was restricted to a monomer and