This work analyzes the mother-son segregation of MN blood group in malformed and normal newborns. MN blood group was measured in 90 malformed, 70 paired normal newborns and their respective mothers, at the Maternity of the University of Chile Clinical Hospital. The expected values for the different mother-child pairs were calculated according to the ITO matrix method, using maximally probable appraisers. Among malformed newborns, there was an excess of heterozygous sons when the mother was homozygous for the MN system. Among malformed males, there was an excess of MM-MN and MN-MM mother-son pairs. Among control newborns, no distortions were found. These results suggest that there is a strong association between MN heterozygosis, sex and congenital malformations.