**1283 del A: A Novel Mutation in Exon 8 of the Cystic Fibrosis Gene**

**Description of the Mutation**

We report here a novel frameshift mutation in exon 8 of the cystic fibrosis (CF) transmembrane conductance regulator (CFTR) gene. The mutation is a 1-base (A) deletion at position 1283.

**Source of Material**

A couple of French origin with a history of 2 children with meconium ileus (born in 1956 and 1957, at a time when no information on sweat test, immunoreactive trypsin assay, or albumin meconium test was available) who died within months of birth was referred for genetic counselling for the benefit of a healthy daughter. Parental DNA samples were subjected to CFTR gene analysis. The mother was ΔF508 heterozygous. The father and his daughter were heterozygous for a new frameshift mutation in exon 8 of the CFTR gene. The two CF patients were probably compound heterozygous: ΔF508/1283 delA (fig. 1). DNA of these two patients was not collected forty years ago.

**Method**

In our screening strategy for mutations in the CFTR gene, we have developed conditions for denaturing gradient gel electrophoresis (DGGE) analysis. DGGE was performed using chemical clamps instead of a long GC sequence attached to the 5’ end of one of the primers. PCR was performed in a volume of 50 µl containing 50 mM Tris-HCl pH 8.3, 2.5 mM MgCl₂, 1 mM of all four deoxynucleotides together, 0.5 mM each of the primers (upstream 8i5' ATTAATGCTATTCTGATTCT3' and downstream primer DG8Ì3 5' psoralen-CAGTTAGGTGTAGGAGCAAC3'; Appligène Oncor), 2.5 U Taq polymerase (Perkin-Elmer Cetus) and 200 ng of genomic DNA. Samples were heated at 94°C for 7 min and at
55 °C for 1 min. Afterwards, forty cycles were performed with denaturation at 94°C for 30 s, annealing at 55°C for 30 s, and extension at 72°C for 30 s. DNA synthesis step at 72°C of the final cycle was extended to 5 min. The amplified DNA was irradiated for 10 min at room temperature using a UV source (365 nm) composed of two 6-watt lamps 1 cm above the sample (approximately 1 J/cm²). After irradiation, one fifth of the amplified product was loaded on a 6% polyacrylamide gel with a linearly increasing parallel gradient.


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