Cannabinoid receptor 2-63 QQ variant is associated with persistently normal aminotransferase serum levels in chronic hepatitis C


(1) Seconda Università di Napoli, Dipartimento di Salute Mentale e Fisica e Medicina Preventiva, Largo Madonna delle Grazie Napoli
(2) Seconda Università di Napoli, Dipartimento di Scienze Mediche, Chirurgiche, Neurologiche, Metaboliche e dell' Invecchiamento, Piazza Luigi Miraglia, 2 Napoli
(3) Seconda Università di Napoli, Dipartimento Medico-Chirurgico di Internistica Clinica e Sperimentale F.Magrassi - A.Lanzara, Via Pansini, 5 Napoli
(4) Seconda Università di Napoli, Dipartimento di Medicina Sperimentale, Via Santa Maria di Costantinopoli, J6 Napoli
(5) Seconda Università di Napoli, Dipartimento Multidisciplinare di Specialità Medico-Chirurgiche e Odontoiatriche, Via Luigi de crecchio, 6 Napoli
(6) Seconda Università di Napoli, Dipartimento della Donna, del Bambino e di Chirurgia Generale e Specialistica, Via Luigi De Crecchio, 4 Napoli
(7) DIPARTIMENTO DI MEDICINA PUBBLICA, CLINICA E PREVENTIVA, SUN, VIA LUCIANO ARMANI 5 NAPOLI

Parole chiave: Hepatitis C, Cannabinoid receptor 2-63

Coppola N1, Zampino R2, Sagnelli C3, Bellini G4, Marrone A2, Stanzione M3, Capoluongo N1, Boemio A2, Minichini C1, Adinolfi L.E2, Maione S4, Miraglia Del Giudice E5, Sagnelli E1, Rossi F5

1. Department of Mental Health and Public Medicine, Second University of Naples, ITALY
2. Internal Medicine and Hepatology, Second University of Naples
3: Dep. Clinical and Experimental Medicine and Surgery, SUN, Naples, Italy
4. Department of Experimental Medicine, Second University of Naples
5. Department of Pediatrics, Second University of Naples

Aims: To evaluate in anti-HCV-positive patients the clinical impact of the rs35761398 single nucleotide polymorphism (SNP) of the CNR2 gene leading to the substitution of Arg (R) of codon 63 of the cannabinoid receptor 2 (CB2) with Gln (Q).

Patients and Methods: 253 consecutive anti-HCV-/HCV-RNA-positive patients were enrolled, of whom 53 were HCV carriers with persistently normal ALT (PNALT group) and 200 had a history of steadily abnormal serum ALT values (abnormal ALT group). All patients were naive for antiviral therapy and were screened for CNR2 rs357661398 SNP by a real-time assay.

Results: Subjects in the PNALT group, compared with those in the abnormal ALT group were older (58.5+12 vs 50.7 +12.4 years, p=0.001), more frequently female (66% vs. 42%, p=0.003), with lower body max index (24.5+3.1 vs. 26.6+4.6, p=0.003), and more frequently with HCV genotype 2 (43.1% vs 17.7%, p=0.0002) and CB2-63 QQ variant (34% vs. 11%, p=0.0001).

Considering all 253 patients, no difference in the demographic, biochemical, or virological data was observed between patients in the different CB2-63 variants. The logistic regression analysis identified CB2-63 QQ, HCV genotype 2, older age and lower BMI as independent predictors of PNALT (p<0.0001).

Discussion: The CB2-63 QQ variant in HCV patients was independently associated with the PNALT status.