Migraine is one of the most common types of pain associated with sterile inflammatory conditions. Soluble urokinase plasminogen activator receptor (suPAR) is a potential novel inflammatory marker. We aim to determine the association between serum values of suPAR, procalcitonin, fibrinogen, and highsensitivity C-reactive protein (hs-CRP) and migraine disease characteristics. The study involved a total of 60 migraine patients (33 patients in the interictal period, 27 patients in the attack period) and 30 healthy individuals. The serum values of suPAR were found to be significantly higher in migraine patients in the attack period than in migraine patients in the interictal period, and in healthy individuals (p < .01 for both). In addition, levels of suPAR were determined to be higher in migraine with aura patients than in migraine without aura patients. When we subdivided migraine patients according to frequency of attack (attacks/month), significant differences were found between the suPAR and procalcitonin levels (measured during the attack period) of those in the frequent-attack group (4–5 or more) versus those in the less frequent attack group (less than 4). Serum levels of procalcitonin were shown to be significantly higher in migraine patients during the attack period compared with migraine patients in the interictal period and in control subjects (p < .001 for both). Significant differences were found between plasma levels of fibrinogen in migraine patients versus control subjects (p < .01). No statistically significant difference was found between levels of hs-CRP in migraine patients versus the control group. These findings may show that presenting a high level of suPAR in migraine patients with attack and aura results to predisposition to occurring on the symptoms and that high levels of suPAR, procalcitonin and fibrinogen in patients with migraine result in neurogenic inflammation during migraine headaches.