Atopic eczema (AE) is a chronic relapsing inflammatory skin condition and one of the most common, potentially debilitating diseases with increasing incidence. The complex etiology of AE with multiple systemic and local immunologic and inflammatory responses and interactions between susceptibility genes and environmental factors leading to defects in skin barrier function and eczematous skin lesions is presented. Knowledge of pathogenesis is important for understanding the more innovative treatment approaches discussed. Basic therapy consists of hydrating topical treatment and avoidance of specific and unspecific provocation factors. For acute eczematous skin lesions, anti-inflammatory treatment consists mainly of topical glucocorticoids and topical calcineurin inhibitors (tacrolimus and pimecrolimus). Microbial colonization and superinfection may induce skin exacerbation, which can be treated by either topical or systemic antimicrobial treatment. Systemic anti-inflammatory therapy is limited to severe cases and consists of systemic steroids, cyclosporine A or mycophenolate mofetil. Novel anti-inflammatory concepts that go beyond corticosteroids are in the early phases of development. There are targeted therapeutic approaches, such as cytokine and chemokine modulators and it remains to be investigated how effective they will be and what side effects they may carry. Existing treatment modalities such as barrier repair therapy, topical
immunosuppressive agents, antiseptic treatment as well as systemic treatment options are discussed. The review aims to summarize the most recent findings of more innovative treatment approaches such as modulation of cytokines or chemokines, modulation of T-cell responses or anti-IgE therapy.