Patient 2: A 26-year-old woman, who was diagnosed with psoriasis vulgaris when she was 8 years old, came to our hospital in October 2011. She described how her symptoms got worse every autumn and winter after suffering psoriasis. Although topical steroidal agents could temporarily relieve her symptoms, the psoriasis still relapsed every year. Physical examinations after the patient had been admitted to our hospital showed that salmon-pink plaques were covered by silvery scales and were distributed all over the body (Figure B.1). Initially, we gave her 3 infusions of UC-MSCs (1 × 10^6/Kg each time) over 3 successive weeks. Gradually, her whole body surface turned smooth (Figure B.2). Three months later, we gave her 2 more UC-MSC infusions as consolidating therapies. The psoriasis has been relapse free for 4 years now.

MSCs are heterogeneous cells that can differentiate into various types of cells and secrete cytokines. We gave the first patient MSCs based on 2 reasons: one is that MSCs could support hematopoiesis, the other is that MSCs have already been used in autoimmune diseases. Although auto-HSCT may have played a part in the release of the first patient’s psoriasis, it is still under the risk of relapse. The patient who underwent auto-HSCT and UC-MSCs infusion showed no symptoms of psoriatic relapse after nearly 5 years. In addition, MSCs have a unique advantage in terms of safety. We assume that MSCs may be involved in the following 4 aspects: migration to skin lesions, immunomodulation, limitation of autoimmunity, and local paracrine effects. However, more cases are needed to determine the efficacy of MSCs and their infusion dose, method, and delivery time.
Figure  Clinical images. (A) Patient no. 1: (A1) Pre UC-MSCs infusions: well-defined erythematous plaques with adherent silvery scales symmetrically distributed throughout the body, mainly including the forehead, face, upper chest, abdomen, back, and legs; (A2) Six months after UC-MSCs infusion; (A3) Clearance of psoriasis (12 months after starting UC-MSCs infusion). (B) Patient no. 2: (B1) Pre the first UC-MSCs infusion: drip-like plaques with adherent silvery scales distributed extensively, mainly on extensor aspects of elbows and knees, back, lumbosacral region, and around the umbilicus; (B2) After the third UC-MSCs infusion, the patient’s skin turned smooth without any active lesions (the pigmentation was due to the historical steroidal agent). UC-MSCs = umbilical cord-derived mesenchymal stem cells.

References


